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SIGNIFICANT NATURAL AREAS IN THE COASTAL ENVIRONMENT OF BAY OF PLENTY REGION

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SIGNIFICANT NATURAL AREAS IN THE COASTAL ENVIRONMENT OF BAY OF PLENTY REGION

Contract Report No. 2837

February 2013

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1. INTRODUCTION

Bay of Plenty Region extends along the coast from Orokawa Bay (near Waihī Beach) in the west, to Taungakawa Bay, on the eastern side of Cape Runaway. It includes Tauranga Harbour, estuaries, river mouths, sandy beaches and rocky headlands. Section 6(c) of The Resource Management Act requires the Bay of Plenty Regional Council (BOPRC, the Council) to provide for the protection of significant indigenous vegetation and significant habitats of indigenous fauna. In the coastal environment, this requirement is addressed in Chapter 6 of the Regional Coastal Environment Plan (RCEP or the Plan) (2003) and through mapping of significant sites.

A mandatory review of the Plan must be initiated by the tenth anniversary of the plan (RMA Section 79(2)), i.e. by 2013. The Council decided that significant sites in the coastal environment are to be reviewed because:

- Additional, site-specific information has been published or otherwise become available since 2003;
- Change No. 1 to the Bay of Plenty Regional Policy Statement (Criteria) became operative in June 2008 and introduced new criteria for determining the significance of indigenous vegetation and habitats of indigenous fauna;
- The Council has acquired additional responsibilities, by way of an amendment to Section 30 of the RMA (August 2003), to maintain indigenous biodiversity; and;
- A new version of the New Zealand Coastal Policy Statement (NZCPS) was released in 2010, and Policies 1 and 11 have potential implications for the identification and classification of significant sites in the coastal environment.

Accordingly, the council instigated a review of the RCEP (2003). As a component of this, in 2006 Wildland Consultants was commissioned to prepare an inventory of significant sites in the coastal environment (Wildland Consultants 2006g and 2007a). That study included both desktop assessments and field assessments. In 2010, Wildland Consultants Ltd was commissioned to review the locations, extents, and assessments of sites of indigenous vegetation and habitats within the coastal environment in the Bay of Plenty Region. However, that work preceded the release of the NZCPS.

Following the release of the NZCPS, Wildland Consultants was commissioned to:

- Review significant sites in the coastal environment, to align site identification and site classification with Policy 1 and Policy 11 of the NZCPS;
- Incorporate ecological information that has become available since the last review (e.g. Wildland Consultants 2008a, Beattie 2011).

This report was prepared in 2012 and presents information on ecologically significant sites within the Bay of Plenty coastal environment in the form of site data sheets, each of which relates to a mapped area within an accompanying GIS data layer.

This report remained in draft format until the Regional Digital Aerial Map (RDAM) 2010 was available. This report was finalised in February 2013, via the steps outlined below:

- Update site boundaries using the 2010 RDAM;
- Insert site extent (ha) in each site information sheet;
- Finalise Section 5.5 of the report, which identifies sites where boundaries have changed since the RDAM 2003.

2. PROJECT OBJECTIVES

The objectives of this project were as follows:

- To review and update the location, extent, and ecological information relating to sites of significant indigenous vegetation and significant habitats of indigenous fauna in the coastal environment using aerial photographs, information from local experts (i.e. Department of Conservation staff) and recently-published information (e.g. Beattie 2011).
- To compare and evaluate sites determined previously to be significant using other criteria sets, using the criteria now available in Policy 11 of the NZCPS.
- To identify any significant sites not previously included in the RCEP (2003) because, for example, they meet criteria in Policy 11 of the NZCPS or are within the extended boundaries of the study area (refer to Section 3.2). For each site, to provide a map and site-specific information, and assess the level of relative significance and the relevant clause of Policy 11of the NZCPS.
- In undertaking the above assessment, apply Criteria Set 3 of Appendix F, Regional Policy Statement Change Number 1 (Criteria for assessing Indigenous Vegetation and Habitats of Indigenous Fauna in the Bay of Plenty Region) (refer to Appendix 1 of this report).
- For each site, update the information on "condition/pressures", based on aerial photography and any other available information.

3. METHODS

3.1 Collation of existing information to update site information

Published and unpublished digital and hardcopy information was collated and reviewed and used to update the site information sheets. The information sources are cited in the 'References' section and include:

- Regional Digital Aerial Mosaic (RDAM 2010), based on aerial photography flown in 2010/2011.

- The Regional Coastal Environment Plan (2003), which includes descriptions of 41 sites in the Coastal Habitat Protection Zone (CHPZ) that are internationally, nationally, or regionally significant; 57 Significant Sites in the Coastal Marine Area (SSCMA) that are of local significance; and 121 Sites of Significance on Land (SSL) range from local to international significance. There are also 24 Areas of Significant Conservation Value (ASCV), some of which overlap with CHPZ, SSCMA, or SSL sites.

- Digital maps of CHPZ, SSL, SSCMA, and ASCV zones (RCEP 2003).

- An inventory of significant indigenous vegetation in the Bay of Plenty coastal zone (Wildland Consultants 2006g). The report identified a 'Significant Vegetation and Habitat Zone' (SVHZ) based on 214 individual sites with a total extent of 35,048 ha. Each site in the zone was described and mapped at a scale no greater than 1:3000 using ESRI ArcGIS8.3.

- The 2007 addendum to the inventory of sites which revised the assessments of seven sites, and identified an additional four sites (Wildland Consultants 2007a).

- Natural heritage reports (and digital data layers) commissioned by various local government agencies such as Ōpōtiki District Council (e.g. Walls 1998, Wildland Consultants 1999a) and Tauranga City Council (e.g. Wildland Consultants 2009).

- Protected Natural Areas Programme (PNAP) survey reports and digital layers relating to ecological districts that extend into the study area (refer to Figure 1), for the following ecological districts:

  - Motū (Clarkson *et al.* 1986);
  - Pukeamaru (Regnier *et al.* 1988);
  - Waihī (Humphreys and Tyler 1995);
  - Taneatua (Beadel *et al.* 1999);
  - Ōtānewainuku (Beadel 2006);
  - Tauranga (Wildland Consultants 2008a);
  - Te Teko (Beadel *et al*. 2011).

  Most of these reports were either complete or available as a draft when the RCEP was published in 2003, but the report on Tauranga Ecological District is more recent. Therefore, it was particularly important to utilise relevant information from the Tauranga report in the current assessment.

- Stand-alone ecological reports on particular areas.

- Data held by the Department of Conservation and the Ornithological Society of New Zealand.

- Marshbird habitat surveys, e.g. Owen (1993, 1994a), Beattie (2010).

- A threatened plant survey of Ōhiwa Harbour (Wildland Consultants 2011b).

- Information on sensitive sites gathered in relation to the grounding of the Rena (BOPRC 2012).

- Information on bird roosts in the Bay of Plenty (Owen *et al*. 2006). This document had not been published when the previous inventory of coastal sites was completed (i.e. Wildland Consultants 2006g, 2007a), although much of the information in Owen *et al*. (2006) had been made available for inclusion in the 2006 inventory.

- Schedule 1 of the Bay of Plenty Regional Water and Land Plan, which lists the habitats and migratory pathways of indigenous fish (BOPRC 2008).

- In 2006 and 2007, local experts from the Ornithological Society of New Zealand (OSNZ) were consulted about bird distribution and habitat use, and any other information which they could provide on flora and fauna. Staff from the Department of Conservation were consulted in 2006, 2007, 2010, and 2012.

- Regionally uncommon plants were identified using Beadel (2009).

- National threat classifications follow:
  - Allibone *et al* (2009) for freshwater fish;
  - de Lange *et al* (2009) for vascular plants;
  - Miskelly *et al.* (2008) for avifauna;
  - Hitchmough *et al.* (2007) for other fauna.

3.2 Study area boundaries

In the RCEP (2003) the coastal environment is defined as "all coastal marine areas, all offshore islands, and the area of land one kilometre inland from mean high water springs, of the Bay of Plenty Region". The Council has subsequently redefined the extent of the coastal environment to reflect Policy 1 of the NZCPS by identifying a 'zone of coastal dominance' which is generally narrower than 1km (Boffa Miskell 2011). A 'zone of coastal influence' was also identified which is generally much wider than 1 km.

Thirty of the sites described in 2006 (Wildland Consultants 2006g) extend further inland than the 1 km limit of the coastal environment. The names of these sites are followed by the suffix "part" to indicate that the natural area extends further inland than 1 km, e.g. Ohinekoao (Part), Oroi (Part).

BOPRC has determined that the 'zone of coastal dominance' is to be used to define the extent of the coastal environment. Most of the 214 significant sites identified in Wildland Consultants 2006g lie wholly or partly inside the 'zone of coastal dominance' but the Council has advised that no sites should be decreased in extent in this technical report because they all lie within the 'zone of coastal influence' (J. Noble, Bay of Plenty Regional Council, pers. comm. 2011).

At 16 locations, the 'Zone of Coastal Dominance' extends further inland than the 1 km boundary within which sites were originally identified. These 16 locations range in area from *c.*2 ha to *c.*483 ha, encompassing a total area of *c.*758 ha. Parts of these areas may meet criteria in Policy 11 of the NZCPS.

3.3 Location and extent of sites

Digital aerial photographs flown in 2010/11 were used to update site boundaries and site boundaries were adjusted (as required) using these photographs. Prior to the 2013 work on the GIS layer, and except for new sites or where sites had been adjusted based on new information, site boundaries were based on the 2003 RDAM

3.4 Identification of additional sites

Additional sites were identified by using the following approach:

- Review of information published since 2006 (e.g. Beattie 2011, Wildland Consultants 2008a, Wildland Consultants 2009b).
- Consulting with relevant experts, e.g. Department of Conservation staff.
- Inspection of aerial photographs for areas within the 'zone of coastal dominance' that were not within the study area as it was defined in 2006.
- Analysing the criteria in Policy 11 of the NZCPS (2010) and adding, for example, the mouths of rivers and streams as far inland as the limit of the coastal marine area (using the GIS layer entitled Coastal Plan_River Mouths supplied by BOPRC in March 2012) or, if a stream was not included in that data layer, as far inland as the limit of the vegetated parts of the site.

3.5 Review of the condition and pressures at each site

A "conditions/pressures" field is included in each site information sheet. This field provides an opportunity to include information on threats to biodiversity values at each site associated with, for example, weeds, pest animals, grazing of domestic stock, vehicles, altered hydrology, and surrounding land use. Management actions at a site may also have been included, e.g. fencing, pest or weed control programmes, restoration planting. Conditions and pressures for each site were reviewed and updated based on recent aerial photography, published information, and consultation with relevant experts familiar with specific sites.

3.6 Completion of site data sheets

A data information sheet was completed for each site. At the top of each sheet, information is provided on the location and extent of the site, geology-landform class (refer to Section 3.8 below), and, if applicable, a High Value Ecological Site (HVES) Number[1]. HVES Numbers were derived from a GIS layer supplied by Bay of Plenty Regional Council in March 2012. Not every site described in this report is a HVES, but if all or part of any coastal site includes all or part of a HVES, the applicable HVES Number is included in a field near the top of each site information sheet.

[1] Two hundred and six (206) HVES have been identified throughout the Region. These sites were identified by the Regional Council on the basis of having the greatest ecological value in the Region. They include Category 1 sites identified in PNAP survey reports, and/or sites identified as being of international, national, or regional significance in more recent assessments. HVES were identified for BOPRC operational purposes as priorities for management under the Biodiversity Programme and attract a higher grant rate than non-HVES.

Site location diagrams are presented in each site data sheet. These are indicative of site location and generally show the site to be slightly larger than reality. Following the site location diagram there are descriptions of vegetation and habitat types, records of nationally Threatened or At Risk[1] species of plants or fauna[2], conditions or pressures that the site may be subject to (refer to Section 3.5 above), and key features of the site. Each sheet also includes assessments of relative ecological significance (refer to Section 3.9 below). A description of each field in the data sheet is provided in Appendix 9.

3.7 Ecological context

Each site was evaluated within the relevant ecological district (Table 1).

Table 1: Ecological regions and ecological districts relevant to coastal environments of the Bay of Plenty Region.

Ecological Region	Ecological District
Coromandel	Waihī Mayor Island
Northern Volcanic Plateau	Tauranga Mōtītī Ōtānewainuku White Island
Whakatāne	Te Teko Taneatua Ōpōtiki
Raukūmara	Motu
East Cape	Pukeamaru

3.8 Geology-landform classes

Broad geology/landform types present in the study area were identified, to provide a further spatial framework for ecological evaluation.

Assessment and identification of geology and landform units was based on a combination of geological maps and professional knowledge. Three geological maps were used: a geology shapefile supplied by Bay of Plenty Regional Council (dated 2009), and hard copy maps from Owen (1962) at a scale of 1:500,000, and Healy *et al.* (1975) at a scale of 1:250,000.

The following geology-landform classes were used:

- Volcanic hard rock
- Volcanic soft rock
- Sedimentary (volcanic) unconsolidated
- Greywacke hard coast
- Sedimentary coastal hinterland

[1] Threat classifications follow de Lange *et al.* (2009) for vascular plants, Miskelly *et al.* (2008) for avifauna, Allibone *et al*. 2010 for fish, and Hitchmough *et al.* (2010) for reptiles.

[2] A small number of very sensitive records have not been included, at the request of Department of Conservation, to protect particular species from illegal collectors.

- Sand
- Alluvium beaches
- Low gradient alluvium
- Estuarine

Geology-landform class or classes were mapped using GIS for each site at a scale of 1:1,000 (for sand dune sites in Tauranga Ecological District) and 1:5,000 for all other sites in 2010 based on the 2006/2007 RDAM. If more than one geology-landform class was present in a site, each class within the site was delineated (see example provided in Figure 2). In 2013 this layer was updated to include all new sites, and changes to site boundaries, based on the 2010 RDAM. Ecosystem boundaries within sites have not been updated. A GIS shapefile depicting all sites and their respective geology-landform classification has been provided to BOPRC.

3.9 Evaluation of ecological significance and NZCPS Policy 11

Following the review of each site and the updating of the site data sheets, three sets of criteria were used to assess each site:

- Indigenous Vegetation and Habitats of Indigenous Fauna criteria presented in Set 3, Appendix F, of the Bay of Plenty Regional Policy Statement (Environment Bay of Plenty 2005a). This provides criteria for the identification and assessment of significant indigenous vegetation and significant habitats of indigenous fauna. A set of guidelines was developed to assist with assessment of the degree to which each criterion is met. These were developed in accordance with the 'User Guide' for these criteria (Environment Bay of Plenty 2008) (see Appendix 1).

- The relative significance of each site was assessed using criteria presented in Appendix 2. The criteria were used to classify each site as being nationally, regionally or locally significant, and are consistent with the criteria set used to identify the sites in the 2003 plan. Each site was assessed against criteria for national significance, then regional criteria, and finally local criteria.

- The criteria and process developed to assess each site in terms of Policy 11 of the NZCPS (Appendix 11) as presented in the assessment form in Appendix 12. The assessment process was developed in consultation with BOPRC (Wildland Consultants 2012).

4. OVERVIEW OF THE BAY OF PLENTY COASTAL ENVIRONMENT

Sand dunes line the Bay of Plenty coast from Waihī to Ōpape, broken only occasionally by river and harbour mouths, volcanic landforms (e.g. Bowentown and Mauao), and rocky headlands (e.g. Kōhi Point). Harbours and estuaries are also a feature of the Region (e.g. Tauranga Harbour, Maketū Estuary, Waihī Estuary, and Ōhiwa Harbour) and include saltmarshes and estuarine wetlands dominated by mixtures of oioi (*Apodasmia similis*), sea rush (*Juncus kraussii* var. *australiensis*), and/or mangroves (manawe, *Avicennia marina* subsp. *australasica*)[1]. Freshwater

[1] Common and scientific names of plant species referred to in the text are presented in Appendix 3.

wetlands were originally common around the harbour margins, and inland of sand dunes. Some of these were previously very extensive (e.g. Rangitāiki Swamp, Kawa Swamp, and Waihī Swamp) but most wetlands in the Region have now been drained and developed for farming. Low coastal hills and headlands adjoin Tauranga Harbour and Ōhiwa Harbour and the coast between Pukehina and Matatā.

Between Ōpape and Raukōkore there are steep, rugged, greywacke headlands, interspersed by gravel beaches on long exposed reaches, and finer sand and pebble beaches in the numerous small secluded bays. North-east of the Raukōkore River there is a series of narrow coastal terraces. The rugged, cliffed coastline is broken only by a few small sandy beaches and the wide, flat-bottomed valley floor of the Whangaparaoa River.

There are four relatively large islands and several smaller islands and stacks in the Region, in three ecological districts. The islands are virtually all of volcanic origin and one, Whakaari (White Island), is an active volcano. Geothermal activity on Moutohorā (Whale Island).

In the past, sand dunes would have been dominated by indigenous sand binders including spinifex (*Spinifex sericeus*), pingao (*Ficinia spiralis*), and sand tussock (*Poa billardierei*, hinarepe), with tall forest extending on to the dunes. Mangroves, sea rush, and oioi would have dominated estuarine wetlands, grading into saltmarsh ribbonwood (*Plagianthus divaricatus*) and manuka (*Leptospermum scoparium*). Raupo (*Typha orientalis*), sedges, harakeke (*Phormium tenax*) and ti kouka (cabbage tree; *Cordyline australis*) would have dominated freshwater wetlands, with local swamp forest. Coastal hillslopes and headlands would have been forested, dominated by pohutukawa (*Metrosideros excelsa*) or mixed coastal forest including pohutukawa, puriri (*Vitex lucens*), karaka (*Corynocarpus laevigatus*), tawa (*Beilschmiedia tawa*), rewarewa (*Knightia excelsa*), kohekohe (*Dysoxylum spectabile*), and (locally) hard beech (tawhai raunui, *Nothofagus truncata*). Steep coastal cliffs would have supported an array of coastal trees, shrubs, and herbs, including pohutukawa, manuka, whaririki (*Phormium cookianum*), New Zealand ice plant (*Disphyma australe*), kanuka (*Kunzea ericoides*), mingimingi (*Leucopogon fasciculatus*), and *Ficinia nodosa*.

Vegetation in the Bay of Plenty coastal environment has had a long history of modification and disturbance by humans, starting with extensive modification by Polynesians during pre-European times, mainly by large-scale burning. Modification continued following the arrival of Europeans and much of the original vegetation has been substantially modified or removed. However, there are remnant examples, albeit modified, of the major vegetation associations e.g. sand dune vegetation is widely distributed along the coastline; coastal forest remains on some hillslopes and headlands (e.g. Mauao, Matatā Scenic Reserve, and Ōhope Scenic Reserve), and estuarine wetlands remain in Harbours and Estuaries. It is notable, however, that no examples of relatively unmodified primary forest remain on the margins of estuaries or on dune systems. The natural character of the coastal environment in each ecological district is described in more detail in Sections 6-9 below.

In the past, the Bay of Plenty coastal environment would have supported a much richer assemblage of fauna. Coastal hills and cliffs would have supported extensive colonies of seabirds including, but not limited to, species which persist on the offshore islands of the

region such as grey-faced petrel, flesh-footed shearwater and diving petrel[1] (c.f. Holdaway *et al.* 2001). Large nutrient inputs provided by these seabird colonies would have influenced the structure and composition of coastal vegetation and supported rich and varied reptile and invertebrate communities, including species such as tuatara, Duvaucel's gecko, Whitaker's skink (Towns and Daugherty 1994), and probably northern giant weta species (Sherley 1998). A wide range of forest birds would have inhabited pohutukawa-dominant forests on hillsides and headlands, including species such as North Island saddleback, North Island kākā, North Island kokako and stitchbird, which are now either confined to the offshore islands of the region or occur in a few places on the mainland within the region.

The Bay of Plenty coastal environment contains extensive areas of wader and shore bird habitat in large harbours such as Tauranga and Ōhiwa, and numerous estuaries, lagoons, sandspit and beach sand dune systems, particularly where the major rivers disgorge into the sea. Some Threatened or At Risk species, such as northern New Zealand dotterel are scattered across the coastal environment, but other species which were formerly widespread, such as brown teal, have suffered range contractions or local extinctions.

Freshwater and saline water bodies associated with the Bay of Plenty coastal environment still contain some of New Zealand's rarer and Threatened fish species. Giant kōkopu (At Risk-Declining) are found in the coastal streams, swamps and lake margins of the Region. Shortjaw kōkopu (At Risk-Declining) are present in forested streams, and longfin eels are also present in various waterways throughout the region. Inanga (*Galaxias maculatus,* At Risk-Declining) is a culturally important species because it forms a large proportion of the whitebait catch. It uses vegetation around the upper limits of tidal riverine areas for spawning, and a number of such spawning sites have been identified in Bay of Plenty rivers (Mitchell 1990). Threats to freshwater fish in the Bay of Plenty coastal environment include habitat reduction and modification, barriers to passage, and competition from introduced species (Department of Conservation 2005).

5. FINDINGS

Two hundred and thirty (230) sites of significance were identified in the Bay of Plenty coastal environment. Eighty-two (82) of these sites are consistent with Policy 11a of the NZCPS (2010) and 148 sites are consistent with Policy 11b. Site data sheets are presented in Sections 6-10 of this report, arranged by ecological district (Table 1), with sites generally listed from west to east. A list of sites by ecological district is provided in Appendix 10.

5.1 New sites

Twenty-one sites additional to the 2006 review of significant sites in the coastal environment (Wildland Consultants 2006g) have been mapped and described in this study:

- Eight sites identified in the study of natural areas in Tauranga Ecological District (Wildland Consultants 2008a).

[1] Scientific names of fauna species mentioned in the text are presented in Appendix 4.

- One site identified in the Tauranga City State of the Environment report, 2008 (Wildland Consultants 2009b).
- Eight sites in Ōhiwa Harbour identified by Beattie (2011).
- One river mouth (Tōrere River Mouth).
- One site (Kaituna Wildlife Management Reserve) within the zone of coastal dominance that was not within the study area defined in 2006.
- One site (Rangiwāea Island Sandspit) identified in the current study as providing significant habitat for fauna.
- One site identified on Matakana Island in 2011: Tahunamanu Pohutukawa (Wildland Consultants 2011d).

5.2 Sites amalgamation

Thirteen sites identified in 2006 (Wildland Consultants 2006g) were amalgamated into four larger sites (Table 2). In some cases, minor changes were also made to the boundaries of these sites. Sites were amalgamated where there was a consistency in ecological significance levels and to recognise ecological linkages.

Table 2: Sites from Wildlands Consultants (2006g) which have been amalgamated in the current study.

Current Study (2012)		Former Site Names and Numbers (Wildland consultants 2006g)
Site Number	**Name**	
223	Te Ranginui-Oruaiti-Whangaparaoa-Tapuaeharuru (Part)	Te Ranginui SVHZ-192 Oruaiti SVHZ-194 Whangaparaoa SVHZ-196 Tapuaeharuru SVHZ-195
215	Haparapara River-Te Kaha (Part)	Haparapara River SVHZ-184 Te Kaha (Part) SVHZ-185
067	Opureora	Opureora Spit SVHZ-84 Opureora Islet SVHZ-86 Motungaio Island SVHZ-87
055	Tauranga Harbour-unvegetated and sparsely vegetated intertidal and subtidal areas	North Tauranga Harbour SVHZ-9 Tauranga Harbour SVHZ-14 Mid Tauranga Harbour SVHZ-34 Tauranga Harbour at Motungaio Island SVHZ-94

5.3 Division into separate sites

Three sites identified in 2006 (Wildland Consultants 2006g) were divided into separate sites (a total of seven sites), reflecting the reassessment of ecological significance within different parts of the larger sites (Table 3).

Table 3: Sites identified in 2006 which have been divided into two or more sites in the current study.

Current Study (2012)		2006 (Wildland Consultants 2006)	
Site Number	**Site Name**	**Site Number**	**Site Name**
135	Ōtamarākau-Matatā-Whakatāne Dunes A	SVHZ-115	Ōtamarākau-Matatā-Whakatāne Dunes
130	Ōtamarākau-Matatā-Whakatāne Dunes B		
138	Ōtamarākau-Matatā-Whakatāne Dunes C		
014	Tanners Point	CHPZ-3	Tuapiro
005	Tuapiro		
100	Rangataua Bay A	SVHZ-66	Rangataua Bay
101	Rangataua Bay B		

5.4 River mouths

Policy 11(b)(v) of the NZCPS identifies "areas and routes important to migratory species". Therefore, river mouths that had not been included within sites in 2006 (Wildland Consultants 2006g) were added to existing sites (Table 4). For one river mouth (Tōrere River), a new site was created (refer to Section 5.1 above).

Table 4: Waterways (rivers and streams) added to sites in the current study in accordance with Policy 11(b)(v) of the New Zealand Coastal Policy Statement.

Waterway	Site Name	Site Number
Waiau River	Athenree	021
Tuapiro Creek	Tuapiro	005
Tahawai Stream	Katikati Inlet	002
Uretara Stream	Katikati Inlet	002
Ngutuuru Stream	Te Rereatukahia	001
Aongatete River	Aongatete Estuary	020
Wainui River	Wainui Estuary	023
Waipapa River	Waipapa Estuary	041
Te Puna Stream	Te Puna Estuary	047
Wairoa River	Wairoa River Wetlands	068
Kopurererua Stream	Waikareao Estuary 2	082
Waimapu Stream	Waimapu Estuary	080
Kaitemako Stream	Kaitemako Stream Mouth	090
Waitao Stream	Waitao Stream	102
Hāwai River	Hāwai-Motū River (Part)	212

5.5 Boundary revisions

Based on the 2010 aerial photographs, the boundaries of 226 sites were revised. No changes were made to four of the 230 sites. Changes were made where:

- Minor changes were made relating to the use of higher quality aerial images, or due to working at a more detailed scale - 224 sites;
- Vegetation had been cleared or removed - 51 sites;
- Indigenous vegetation has increased in extent - 19 sites;
- Recent, higher quality images showed that vegetation previously identified as indigenous is actually exotic - 18 sites;
- It is apparent that vegetation previously identified as exotic is actually indigenous - 31 sites;
- Boundary revision achieves consistency in boundary definition across similar types of sites - sand 85 sites and rock 16 sites.

In addition, for many of the sites containing sand dunes, there were minor changes to site boundaries (i.e. 1-2 m in places) due to the dynamic nature of the dune environment, but these small changes have not been included in the sites identified above as having changed in extent.

For many sites there was more than one factor contributing to boundary changes. For 159 sites, changes to boundaries were a consequence of the use of better quality aerial photographs, and do not indicate 'real' changes on-the-ground. For 65 sites, the boundary changes were a result of real, on-the-ground changes to the extent of the natural areas, due to vegetation clearance or the increased extent of indigenous vegetation.

The high number of 'real' changes, such as changes in vegetation extent, highlight the need for regular updates to this data set. Further evaluation of the changes and the extent of change, to identify where change is occurring and in what type of habitats, would provide useful information for State of the Environment reporting.

COROMANDEL
ECOLOGICAL REGION

6. COROMANDEL ECOLOGICAL REGION

6.1 Overview

Coromandel Ecological Region comprises nine ecological districts, including Great Barrier Island and Little Barrier Island in the north, and all of the Coromandel Range to the end of Te Hunga Ridge on the Kaimai Range. Of these, only Mayor Island Ecological District and a small part at the southern end of Waihī Ecological District are within the study area. The other Ecological Districts are either outside the Bay of Plenty Region or do not reach the coast (Te Aroha Ecological District).

The Coromandel Ecological Region is a peninsula bounded by sea, with the Hauraki Plains to the southwest and the lowlands of Tauranga Harbour to the southeast. *"The most strongly unifying features of the five mainland districts are the distinctive kauri* (Agathis australis) *element from near sea level to a little over 800m asl; the volcanic origins of most of the country rock and the steep Coromandel Range"* (Regnier 1987). The Coromandel lies within a zone characterised by high levels of regional endemism in the woody flora (McGlone 1985).

For a detailed description of the ecological region and an assessment of conservation values see Humphreys and Tyler (1995).

6.2 Waihī Ecological District

The Waihī Ecological District comprises mainly hilly to steep country of moderate altitude reaching approximately 750 m asl, but there is rolling to undulating country and alluvial plains in the south-east of the district. The coastal bioclimatic zone largely comprises a band of hills bounded by steep ignimbrite cliffs on the seaward margin. Most of the larger, eastward-flowing rivers disgorge into the Otahu estuary. Only a small portion of the southern end of the Ecological District is in the Bay of Plenty Region.

The original vegetation that once covered Waihī Ecological District has been extensively modified. Pohutukawa forest and coastal forest comprising pohutukawa, tawa, puriri, kohekohe, rewarewa, porokaiwhiri (*Hedycarya arborea*), mangeao (*Litsea calicaris*) and karaka would have dominated the coastal hillslopes, but most of these forests have been cleared. Orokawa and Homunga Bay Scenic Reserves include the largest remaining remnants (Regnier 1987; Humphreys and Tyler 1995), and Orokawa Scenic Reserve is in the Bay of Plenty Region.

Pimelea tomentosa (Threatened-Nationally Vulnerable) occurs in the Orokawa site.

Table 5: Threatened and notable species in the coastal bioclimatic zone of Waihī Ecological District (Bay of Plenty Region).

Scientific Name	Common name	Threat Classification/ Significance[1]
BIRDS		
At Risk		
Eudyptula minor iredalei	northern little blue penguin	Declining
VASCULAR PLANTS		
Threatened		
Picris burbidgeae		Nationally Endangered
Pimelea tomentosa		Nationally Vulnerable
Hebe pubescens subsp. *pubescens*[2]	Coromandel koromiko	Regionally Uncommon[2]

Notes

[1] Threat classifications and regionally significance evaluations follow de Lange *et al.* 2009, Miskelly *et al.* 2008, and Beadel 2009.

[2] Reaches its southern limit of distribution at Orokawa; endemic to the Coromandel Ecological Region.

OROKAWA (PART)[1]

Site Number[2]	008
Grid Reference (NZMG)	E2770004 N6419777
Local Authority	Western Bay of Plenty District Council
Ecological District	Waihī (and part Tauranga)
Protection Status	Protected (Department of Conservation, Orokawa Scenic Reserve) and unprotected parts
Site Area	273.3 ha
Altitudinal Range	0-204 m asl
Geology-Landform Type	Volcanic hard coast, Sand

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa forest.	Volcanic hard coast
Terrestrial	Pohutukawa-tawa-rewarewa-puriri-porokaiwhiri-mangeao-karaka-kohekohe forest.	Volcanic hard coast
Terrestrial	Whauwhaupaku (*Pseudopanax arboreus*)-rangiora (*Brachyglottis repanda*)-karamu (*Coprosma robusta*)/manuka-kanuka scrub.	Volcanic hard coast
Terrestrial	Pohutukawa treeland.	Volcanic hard coast
Terrestrial	Pohutukawa-karo (*Pittosporum crassifolium*)-	Volcanic hard coast
Terrestrial	houpara (*Pseudopanax lessonii*) treeland. *Helichrysum lanceolatum*-karo-kohuhu (*Pittosporum tenuifolium* subsp. *tenuifolium*)-taupata (*Coprosma repens*) shrubland.	Volcanic hard coast
Terrestrial	Manuka shrubland.	Volcanic hard coast
Terrestrial	Wilding pines/indigenous secondary forest.	Volcanic hard coast
Terrestrial	Rewarewa/(pohutukawa)/whauwhaupaku forest.	Hillslope
Terrestrial/marine	Sandfield. (Wildland Consultants 2006g; Beadel 1994a; Beadel and MacKinnon 1996)	Beach sands

Vegetation and Indigenous Flora

Picris burbidgeae (Threatened-Nationally Endangered) is present (Paul Cashmore, Department of Conservation, pers. comm. 2012). *Hebe pubescens* subsp. *pubescens* (a species endemic to the Coromandel Ecological Region) was present in the Scenic Reserve in 1985 and *Pimelea tomentosa* (Threatened-Nationally Vulnerable) was present in 1996 (Beadel & McKinnon 1996). *Hebe pubescens* subsp. *pubescens* reaches its southernmost limit of distribution at Orokawa.

Indigenous Fauna

Forest geckos have been recorded in Orokawa and the surrounding forested areas. Northern little blue penguins (At Risk-Declining) nest here (J. Heaphy, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Stands of wilding pines (radiata pine - *Pinus radiata* and maritime pine - *Pinus pinaster*) are conspicuous and have the potential to further invade areas of secondary shrublands within the site (including the habitat of *Pimelea tomentosa*). Possums have had a major impact in the past, but the Department of Conservation now carries out pest animal control in this area (N. Willems, Bay of Plenty Regional Council, pers. comm. 2006).

[1] Part of Orokawa Scenic Reserve occurs outside the 'coastal environment' study area (i.e. further than 1 km inland of MHWS).

[2] Identifed as SVHZ-1 in Wildland Consultants 2006g.

Key Site Features

The large size and relatively good condition of this area of coastal forest contribute strongly to its national significance ranking. Orokawa Scenic Reserve is considered to be a representative, good quality example of the coastal vegetation of the Waihī Ecological District. In particular the areas of coastal forest (together with Homunga Scenic Reserve) are considered to be the best remaining examples in Waihī Ecological District where much of the coastal zone has been cleared and converted to pasture (Humphreys and Tyler 1995; Beadel 1994a, Environment Bay of Plenty 2006).

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	H
	3.6	H
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	L
	3.10	M
Viability and Sustainability	3.11	H
	3.12	M
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** *Picris burbidgeae* (Threatened-Nationally Endangered) *Pimelea tomentosa* (Threatened-Nationally Vulnerable) (1996). **Avifauna:** Northern little blue penguin (At Risk-Declining).
ii		
iii	✓	Coastal forest, including pohutukawa forest.
iv	✓	Southern limit of *Hebe pubescens* subsp. *pubescens* (1985).
v	✓	Nationally Significant.
vi	✓	Most of the site is within Orokawa Scenic Reserve (Department of Conservation).
Policy Met:		11(a)
Justification:		Orokawa (Part) includes a relatively large area of coastal pohutukawa forest, a vegetation type that has been greatly reduced in extent. It is also a nesting site for northern little blue penguin (At Risk-Declining). One plant species reaches its southerm limit of distribution in the reserve and two Threatened plant species have been recorded. Orokawa is nationally significant and most

Policy	Criteria Met	Explanation
		of the site is legally protected as a Scenic Reserve. For these reasons, the values of Orokawa are consistent with Policy 11(a).

Notes In 1994 this site was ranked as nationally significant for its vegetation (Beadel 1994a).

References Miller 1984; Beadel 1994a; Humphreys and Tyler 1995; Beadel and MacKinnon 1996; Wildland Consultants 2006g; Environment Bay of Plenty 2006.

6.3 Mayor Island Ecological District

Mayor Island Ecological District includes one land mass: Tūhua (Mayor Island). Tūhua is the emergent summit of an isolated rhyolite volcano lying near the edge of the continental shelf *c.*26 km offshore of the Western Bay of Plenty. The island is roughly circular, with a diameter of about 4 km, and is surmounted by a large caldera *c.*3 km in diameter that includes two crater lakes. Tūhua was connected to the mainland during the last glacial period.

The entire island is within the coastal bioclimatic zone. The vegetation was extensively modified by Polynesian occupation during pre-European times, and this continued following the arrival of Europeans. Much of the vegetation on Tūhua has developed following burning and no original forest remains. The present day vegetation, except where interrupted by cliffs and crater lakes, is generally forest composed primarily of three species; pohutukawa, rewarewa and kanuka and is less than 180 years old. Kamahi (*Weinmannia racemosa*) is locally common. Covering the talus heaps on the inside of the caldera rim is a tall forest of enormous pohutukawa, puriri, kohekohe and local mangeao. Manuka is locally dominant on the crater floor. Grasses, New Zealand iceplant (*Disphyma australe*), whaririki, and pohutukawa are common on sea cliffs. Common wetland species associated with the crater lakes include *Machaerina articulata*, *M. juncea,* raupo, giant spike sedge (*Eleocharis sphacelata*), *Carex secta, C. virgata*, manuka, sphagnum moss (*Sphagnum cristatum*), harakeke, *Machaerina rubiginosa*, *M. arthrophylla* and *M. tenax*, and swamp kiokio (*Blechnum minus*). Grey willow (*Salix cinerea*) is locally common (Atkinson and Percy 1956, Bayley *et al.* 1956, Edmonds and Briggs (undated); Shaw and Hunt 1996, Hunt and Williams 2000).

Tūhua's flora and fauna benefited from the removal, in 2000, of the island's suite of introduced pest mammals - Norway rats, kiore, feral cats and feral pigs (Towns and Broome 2003).

Twenty-one Threatened and At Risk plant taxa have been recorded on Tūhua including New Zealand shore spurge (*Euphorbia glauca*), mawhai (native cumuber; *Sicyos* aff. *australis*), and king fern (para; *Ptisana salicina*) (refer to Table 6).

Tūhua is home to a range of common and Threatened indigenous wildlife, and is one of the few offshore New Zealand islands where Australasian bittern are found. It supports a particularly large population of bellbirds and its resident North Island kākā frequently visit mainland sites in the Coromandel and Kaimai Ranges. Grey-faced petrels represent a depauperate seabird fauna which would have suffered heavily from the impacts of introduced mammals. Reintroductions of North Island robin (Heaphy 2003a), brown teal (Heaphy 2006), and North Island kiwi (D. Wills, Department of Conservation, pers. comm. 2012) have been successfully undertaken since introduced pests were eradicated.

Some indigenous herpetofauna remain, including moko skink (At Risk-Relict), copper skink and an unidentified species of gecko (*Hoplodactylus* spp.) which could be threatened (Hunt and Williams 2000).

Table 6: Threatened and notable species in the coastal bioclimatic zone of Mayor Island Ecological District.

Scientific Name	Common Name	Threat Classification/ Significance[1]
BIRDS		
Threatened		
Anas superciliosa superciliosa	grey duck	Nationally Critical
Botaurus poiciloptilus	Australasian bittern	Nationally Endangered
Larus bulleri	black-billed gull	Nationally Endangered
Larus novaehollandiae scopulinus	red-billed gull	Nationally Vulnerable
Nestor meridionalis septentrionalis	North Island kākā	Nationally Vulnerable
Phalacrocorax varius varius	pied shag	Nationally Vulnerable
At Risk		
Eudyptula minor iredalei	northern little blue penguin	Declining
Eudynamys taitensis	long-tailed cuckoo	Naturally Uncommon
Phalacrocorax melanoleucos brevirostris	little shag	Naturally Uncommon
Anas chlorotis "North Island"	brown teal	Recovering
Translocated Species		
Apteryx mantelli	North Island brown kiwi	Nationally Critical
Cyanoramphus malherbi	orange-fronted parakeet	Nationally Critical
VASCULAR PLANTS		
Threatened		
Hibiscus richardsonii	native hibiscus	Nationally Critical
Linguella puberula	dwarf greenhood	Nationally Critical
Senecio scaberulus		Nationally Critical
Lepidium oleraceum	nau, Cook's scurvy grass	Nationally Vulnerable
Pimelea tomentosa		Nationally Vulnerable
Rorippa divaricata		Nationally Vulnerable
At Risk		
Cyclosorus interruptus		Declining
Euphorbia glauca	New Zealand shore spurge	Declining
Paspalum orbiculare	taranui	Declining
Ptisana salicina	para, king fern	Declining
Solanum aviculare var. *aviculare*	poroporo	Declining
Ficinia spiralis	pingao	Relict
Pisonia brunoniana	parapara	Relict[3]
Blechnum norfolkianum		Naturally Uncommon[2]
Hypolepis dicksonioides		Naturally Uncommon
Korthalsella salicornioides	dwarf mistletoe	Naturally Uncommon
Pomaderris rugosa		Naturally Uncommon
Schizaea dichotoma		Naturally Uncommon
Sicyos mawhai[4]	mawhai, native cucumber	Naturally Uncommon
Tetragonia tetragonioides	New Zealand spinach, kokihi	Naturally Uncommon
Species of Note		
Ranunculus macropus	swamp buttercup	Data Deficient
Reptiles		
At Risk		
Oligosoma infrapunctatum	speckled skink	Declining
Oligosoma moco	moko skink	Relict

Notes

[1] Threat classifications and regionally significant evaluations follow Lange *et al.* 2009 and Miskelly *et al.* 2008.

[2] Endemic to New Zealand and Norfolk Island and reaches its southernmost limit on Tūhua (Hunt and Williams 2000).

[3] Last recorded in 1981 (Hunt & Williams 2000).
Last recorded prior to 1924 (Sladden 1924).

References

Beadel 1994a; NZPCN 2010; OSNZ 2006

TŪHUA (MAYOR ISLAND)

Site Number[1]	105
Grid Reference (NZMG)	E2798898 N6429852
Local Authority	
Ecological District	Mayor Island
Protection Status	Protected (Department of Conservation, Tūhua (Mayor Island) Marine Reserve, Nga Whenua Rāhui Kawenata, and Wildlife Refuge) and unprotected parts
Site Area	1,302.9 ha
Altitudinal Range	0-83 m asl
Geology-Landform Type	Volcanic hard coast

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa forest.	Volcanic hard coast
Terrestrial	Steepland pohutukawa forest.	Volcanic hard coast
Terrestrial	Puriri-mahoe (*Melicytus ramiflorus* subsp. *ramiflorus*)-pohutukawa forest.	Volcanic hard coast
Terrestrial	(Rewarewa)/pohutukawa-kohekohe-puriri forest.	Volcanic hard coast
Terrestrial	(Rewarewa)/pohutukawa-kanuka-kamahi forest.	Volcanic hard coast
Terrestrial	Rewarewa/kamahi-pohutukawa forest.	Volcanic hard coast
Terrestrial	Kanuka shrubland.	Volcanic hard coast
Terrestrial	Rewarewa-kanuka forest.	Volcanic hard coast
Terrestrial	(Rewarewa)/kanuka scrub.	Volcanic hard coast
Terrestrial	Manuka-karamu-prickly mingimingi (*Leptecophylla juniperina* var. *juniperina*)-mapou (*Myrsine australis*) scrub⇔pohutukawa/manuka-karamu-prickly mingimingi-mapou scrub.	Volcanic hard coast
Terrestrial	Kanuka-mingimingi-mapou-karamu-koromiko (*Hebe stricta* var. *stricta*) shrubland.	Volcanic hard coast
Terrestrial	Rewarewa/pohutukawa-kanuka forest⇔kanuka-whauwhaupaku-mapou-shining karamu shrubland.	Volcanic hard coast
Terrestrial	Mapou-kanuka-karo forest.	Volcanic hard coast
Terrestrial	Mapou-pohutukawa treeland.	Volcanic hard coast
Terrestrial	*Spinifex*-sea rocket-*Carex pumila* grassland.	Beach sand
Terrestrial	(Rewarewa)/pohutukawa-kohekohe-puriri-mangeao forest.	Volcanic hard coast
Terrestrial	Coastal cliff communities. (Shaw and Hunt 1996)	Volcanic hard coast
Palustrine	*Machaerina* sedgeland.	Wetland
Palustrine	*Carex secta* sedgeland.	Wetland
Palustrine	Raupo reedland.	Wetland
Palustrine	*Eleocharis sphacelata* reedland. (Beadel 1994a)	Wetland

Vegetation and Indigenous Flora

Tūhua is a nationally significant site for pohutukawa forest free from the effects of possums. The island has the largest flora of any of the Bay of Plenty islands (Clarkson and Spring-Rice 1992), which reflects its relatively large size and diversity of habitats. Since 1926 various plant species lists for the island have been compiled by different botanists (see Shaw and Hunt 1996 for a list of references).

Threatened plants recorded on the island include: Dwarf greenhood

[1] Identified as SVHZ-205 in Wildland Consultants 2006g.

(*Linguella puberula*), native hibiscus (*Hibiscus richardsonii*) (both Threatened-Nationally Critical), *Rorippa divaricata*, *Pimelea tomentosa* (both Threatened-Nationally Vulnerable), New Zealand shore spurge, king fern (both At Risk-Declining), *Ranunculus macropus* (Data Deficient), parapara (*Pisonia brunoniana* - At Risk-Relict) and mawhai[1] (At Risk-Naturally Uncommon) (Beadel 1994a), *Senecio scaberulus* (Threatened-Nationally Critical), New Zealand spinach (At Risk-Naturally Uncommon) and *Cyclosorus interruptus* (At Risk-Declining) (Hunt and Williams 2000). *Blechnum norfolkianum* (At Risk-Naturally Uncommon) occurs only in New Zealand and on Norfolk Island, and also reaches its southernmost limit on Tūhua (Hunt and Williams 2000). Parapara was last recorded in 1981 (Hunt and Williams 2000). Dwarf mistletoe (*Korthalsella salicornioides*) (At Risk-Naturally Uncommon) is present (Paul Cashmore, Department of Conservation, pers. comm. 2012).

There is a historic record of *Asplenium haurakiense* (NZFRI 20582; collected by Mike Wilcox in 1967).

Indigenous Fauna

The following indigenous species of bird have been recorded: Australasian bittern (Threatened-Nationally Endangered), grey duck (Threatened-Nationally Critical), North Island kākā (Threatened-Nationally Vulnerable), black-billed gull (Threatened-Nationally Endangered), northern little blue penguin (At Risk-Declining), long-tailed cuckoo (At Risk-Naturally Uncommon), red-billed gull, pied shag (both Threatened-Nationally Vulnerable), kingfisher, kereru, little shag (At Risk-Naturally Uncommon), welcome swallow, tui, bellbird, Australasian harrier, grey warbler, North Island fantail, morepork, silvereye, papango, grey-faced petrel and North Island robin. Tūhua is one of the few offshore islands around New Zealand where Australasian bittern are found. A distinctive feature of Tūhua is that it has large, co-existing populations of bellbirds and tui. It has one of the few remaining populations of North Island kākā in the western Bay of Plenty (Hunt and Williams 2000), and the population is increasing. North Island kākā frequently visit mainland sites in the Coromandel and Kaimai Ranges.

Following mammalian eradications, North Island robin were reintroduced in May 2003 (Heaphy 2003a), brown teal (At Risk-Recovering) were reintroduced in 2006 and 2008 (Heaphy 2006), North Island brown kiwi (Threatened-Nationally Vulnerable) have been translocated from the eastern Bay of Plenty since 2008, and tuatara were translocated in 2008. Orange-fronted parakeet (Threatened-Nationally Critical) have also been translocated (P. Cashmore, Department of Conservation, pers. comm. 2012).

Some of the indigenous herpetofauna remain, including moko skink (At Risk-Relict), copper skink, common gecko, Pacific gecko, and an unidentified gecko species (*Hoplodactylus* spp. - could be Threatened) (Hunt and Williams 2000, J. Heaphy, Department of Conservation, pers. comm. 2012).

A total of 62 species of spider were recorded on Tūhua in 2003. Many of these species are widely distributed throughout New Zealand, and no Tūhua endemic species were found. Six introduced species were found. Based on this study, it was estimated that it is likely that more than 100 species of spider are present on the island (Fitzgerald 2003).

Condition/Pressures

All introduced mammals which had been present (pigs, cats, Norway rats and

[1] Last recorded prior to 1924 (Sladden 1924).

kiore) were eradicated in 2000 (Heaphy 2003a).

There is a serious threat from introduced wasps on the island, although there has been a campaign by Department of Conservation to poison nests and there is currently a trial underway to assess the feasibility of total eradication (J. Heaphy, Department of Conservation, pers. comm. 2012).

Several invasive weeds are present, including maritime pine, radiata pine, pampas (*Cortaderia selloana*), Mexican devil, grey willow, fig, periwinkle (*Vinca major*), ragwort (*Jacobaea vulgaris*), inkweed (*Phytolacca octandra*), and royal fern (*Osmunda regalis*). There is an ongoing systematic weed management programme and pines are now almost eradicated (see also Hunt and Williams 2000; Heaphy 2006).

Key Site Features

Tūhua is the largest offshore island in the Bay of Plenty (and the largest terrestrial natural area within the Bay of Plenty coastal bioclimatic zone). It is geologically and ecologically distinctive, and has previously been ranked as both nationally significant (Beadel 1994a) and internationally significant (Kenny and Hayward 1996). It supports populations of eight Threatened and five At Risk bird species, and five Threatened and eight At Risk plant species, some of which have been reintroduced. Two plant species reach national distribution limits on the island. The ecological condition of the island has improved dramatically since the eradication of all mammalian pests in 2000. This is one of the most important offshore island restoration projects nationally.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	H
	3.5	H
	3.6	L
Diversity and Pattern	3.7	H
Naturalness	3.8	H
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	H
	3.12	H
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** Dwarf greenhood (Threatened-Nationally Critical) Native hibiscus (Threatened-Nationally Critical) *Senecio scaberulus* (Threatened-Nationally Critical) *Rorippa divaricata* (Threatened-Nationally Critical) *Pimelea tomentosa* (Threatened-Nationally Critical) *Cyclosorus interruptus* (At Risk-Declining) New Zealand shore spurge (At Risk-Declining) King fern (At Risk-Declining) Parapara (At Risk-Relict) (1981 record) Mawhai (At Risk-Naturally Uncommon) *Blechnum norfolkianum* (At Risk-Naturally Uncommon) Dwarf mistletoe (At Risk-Naturally Uncommon) New Zealand spinach (At Risk-Naturally Uncommon) **Avifauna:** Grey duck (Threatened-Nationally Critical) Australasian bittern (Threatened-Nationally Endangered) Black-billed gull (Threatened-Nationally Endangered) North Island kākā (Threatened-Nationally Vulnerable) Red-billed gull (Threatened-Nationally Vulnerable) Pied shag (Threatened-Nationally Vulnerable) Northern little blue penguin (At Risk-Declining) Long-tail cuckoo (At Risk-Naturally Uncommon) Little shag (At Risk-Naturally Uncommon) **Translocated Species:** Orange-fronted parakeet (Threatened-Nationally Critical) North Island brown kiwi (Threatened-Nationally Vulnerable) Brown teal (At Risk-Recovering) **Herpetofauna:** Moko skink (At Risk-Relict)
ii	✓	Australasian bittern (Endangered) Black-billed gull (Endangered) Kākā (Endangered) **Translocation Species:** Brown teal (Endangered) Northern brown kiwi (Endangered)
iii	✓	Pohutukawa forest
iv	✓	*Blechnum norfolkianum* is at its southern distributional limit.
v	✓	Nationally Significant
vi	✓	Mayor Island Wildlife Sanctuary
Policy Met:		11(a)
Justification:		The vegetation of Tūhua is dominated by pohutukawa forest and other coastal forest types which have been greatly reduced in extent both regionally and nationally. Two small lakes with associated wetlands are also present. It provides habitat for a suite of Threatened and At Risk plant and fauna species, including five bird species on the IUCN 'red list'. The site is nationally

Policy	Criteria Met	Explanation
		significant and is protected as a wildlife sanctuary. For these reasons, Tūhua is consistent with Policy 11(a).

Notes

Obsidian or 'tuhua' is abundant on the island and was a valuable commodity in the pre-European Māori economy (Hunt and Williams 2000).

Tūhua is mostly Māori-owned (16/195 shares in the land are Crown-owned) and is administered by the Tūhua Trust Board operating under a 1993 trust deed which has as one of its objectives 'to protect and conserve wahi tapu, native plants and animals and any other areas of the land which many be regarded by the owners as having special or historical importance' (Hunt and Williams 2000).

Tūhua comprises twenty-one separate geological features of regional to international importance, all volcanic or geothermal in origin (Kenny and Hayward 1996).

References

Atkinson and Percy 1956; Bayley *et al.* 1956; Beadel 1994a; Kenny and Hayward 1996; Shaw and Hunt 1996; Fitzgerald 2003; Hunt and Williams 2000; Heaphy 2003a; Heaphy 2006; Wildland Consultants 2006g.

NORTHERN VOLCANIC PLATEAU
ECOLOGICAL REGION

7. NORTHERN VOLCANIC PLATEAU ECOLOGICAL REGION

7.1 Overview

The Northern Volcanic Plateau Ecological Region comprises five Ecological Districts: Mōtītī, Tauranga, Ōtānewainuku, Rotorua Lakes and White Island. The region is characterised by its volcanic substrates and landforms. Each Ecological District has a different volcanic history and landform. For example, Ōtānewainuku is a dissected ignimbrite plateau whilst White Island Ecological District comprises two volcanic islands and several rock stacks, one of which (Whakaari or White Island) is an active volcano. Mōtītī Ecological District also comprises several islands and rock stacks. All of the Ecological Districts have coastal margins except the Rotorua Lakes Ecological District.

7.2 Tauranga Ecological District

Tauranga Harbour is the dominant feature of the coastal bioclimatic zone in this ecological district, and is one of the largest harbours in New Zealand, covering a total area of 218 square kilometres. It is a tidal estuarine lagoon impounded by a barrier island (Matakana Island) and two barrier tombolos, Mauao (Mount Maunganui) at the southern entrance and Bowentown Heads to the north. Low coastal hills occur around the inland margin of the harbour. Maketū Estuary and Waihī Estuary are separated by Ōkurei Point (also known as 'Town Point').

The open coast comprises an extensive sand dune system, some of which has been developed for housing, pastoral farming and (on Matakana Island) forestry plantations. Extensive freshwater wetlands originally occurred behind the sand dunes, but most have been drained and there are generally only small remnant wetlands, except on Matakana Island where some extensive wetlands remain at the northern end.

The vegetation of Tauranga Ecological District has been substantially modified by humans since the fourteenth century (Stokes 1980). Around Tauranga Harbour there were extensive freshwater and estuarine wetlands, whilst in the eastern part of the district there were extensive swamps known as Kawa and Waihī. The Kawa and Waihī swamps have largely been drained and developed for farming and only small remnants of the original vegetation remain.

The original wetlands in Tauranga Harbour would have included mangrove scrub and shrublands in the harbour and extending up stream channels, with local *Schoenoplectus pungens*. Behind the mangroves there would have been mosaics of oioi, sea rush and local *Machaerina juncea*, grading into saltmarsh ribbonwood sedgelands and shrublands, and manuka scrub and shrublands with local *Coprosma propinqua* subsp. *propinqua.*

The major difference between the present day vegetation and the original cover is the vegetation that occurs inland from the band of manuka scrub. Originally, at many sites, there were would have been freshwater wetlands dominated by raupo, sedges (including *Carex* spp., *Gahnia xanthocarpa, Machaerina* spp.), harakeke, swamp millet (*Isachne globosa*) and ti kouka. Undoubtedly, in places, there would have been swamp forest dominated by kahikatea (*Dacrycarpus dacrydioides*), and pukatea (*Laurelia novae-*

zelandiae) with local maire tawake (swamp maire; *Syzygium maire*). Kahikatea stumps have been found in the swamps at Maketū (Stokes 1980). Only a very small proportion of the freshwater wetlands remain today and there is little swamp forest. Many of the remaining freshwater wetlands have been invaded by grey willow as a consequence of altered hydrological regimes, and modification of the original vegetation cover by clearance, grazing and burning has encouraged this invasion (Beadel 1992a).

Two At Risk ferns, *Cyclosorus interruptus* and *Thelypteris confluens* (both At Risk-Declining), have nationally significant populations on Matakana Island (Beadel 1992b), and also occur in a small remnant of the Kawa swamp near Maketū. A native buttercup, *Ranunculus macropus* (Data Deficient), is found in the wetlands on Matakana Island.

Sand dune vegetation would have been dominated by spinifex and pingao (At Risk-Relict), and these are still common in many places on the dune system. Two Threatened and one At Risk sand dune plants which still occur in the district but would probably have been more common are sand tussock and sand pimelea (*Pimelea villosa*) (both At Risk-Declining) and *Coprosma acerosa* (At Risk-Naturally Uncommon). New Zealand shore spurge (At Risk-Declining) would also have been present on the dunes.

On Mauao, Bowentown Heads, Ōkurei Point, Moturiki Island, Motuotau Island and the hillslopes and headlands bordering Tauranga Harbour there would have been pohutukawa forest and tall coastal forest with canopy dominants including pohutukawa, puriri, karaka, rewarewa and kohekohe. However, only small areas of pohutukawa forest and treeland now remain. Minor areas of coastal shrubland dominated by taupata and coastal mahoe occur on Motuotau Island. Coastal mahoe also occurs on Matakana Island.

Tauranga Harbour is one of the 'top ten' wintering sites for black stilt (Threatened-Nationally Critical), northern New Zealand dotterel, wrybill, banded dotterel (all Threatened-Nationally Vulnerable), and pied stilt (At Risk-Declining) (Dowding and Moore 2006). It is a significant winter roost site for New Zealand pied oystercatcher (At Risk-Declining), many of which (generally sub-adult birds) remain at Tauranga over spring/summer, when adults return to their inland South Island breeding grounds. Reef heron (Threatened-Nationally Vulnerable) feed in the waters around Sulphur Point and Mauao and in adjacent channels (J. Heaphy, Department of Conservation, pers. comm. 2012). Flocks of Caspian tern (Threatened-Nationally Vulnerable) have been recorded since 2003 (OSNZ 2006). Owen *et al.* (2006) recommended Tauranga Harbour be considered for RAMSAR status.

The following information was provided by B. Chudleigh (OSNZ) in 2006:

Large numbers of arctic migratory bird species roost in Tauranga Harbour outside their breeding seasons, from September to March. The most numerous species are turnstone, godwit, and lesser knot. In addition, many juveniles of these species overwinter at Tauranga Harbour.

Wader species collectively utilise several known roosting sites around Tauranga Harbour. Some sites are entirely above mean high water springs and therefore are continuously available, while other sites are available only for a certain number of days per month. Other sites identified, such as the Ōmokoroa golf course, are used only at spring high tides or during bad weather and/or storm surges. The largest and

most important roosts have been identified as separate sites within this report, i.e. Bowentown Shellbanks, Matahui Point Intertidal Flats, Mangawhai Bay Intertidal Flats, Tuapiro Estuary Sandspit, and Egg Island Sandbank.

The extensive intertidal flats in Tauranga Harbour are feeding areas for wading bird populations. Waders disperse throughout the harbour to feed, although flats adjacent to important roost sites would be particularly well used. It is likely that many regular feeding areas have not been identified because of the extensive size, convoluted shoreline, and difficulties of access to large areas within the harbour.

Lowland, near-coastal freshwater habitats around Tauranga Ecological District are habitat for At Risk fish species such as longfin eel and giant kōkopu.

Table 7: Threatened and notable species in coastal bioclimatic zone of Tauranga Ecological District.

Scientific Name	Common Name	Threat Classification/ Significance[1]
BIRDS		
Threatened		
Anas superciliosa superciliosa	grey duck	Nationally Critical
Ardea modesta	White heron	NationallyCritical
Himantopus novaezelandiae[2]	black stilt	NationallyCritical
Sterna nereis davisae[2]	New Zealand fairy tern	Nationally Critical
Botaurus poiciloptilus	Australasian bittern	Nationally Endangered
Anarhynchus frontalis	wrybill	Nationally Vulnerable
Charadrius bicinctus bicinctus	banded dotterel	Nationally Vulnerable
Charadrius obscurus aquilonius	northern New Zealand dotterel	Nationally Vulnerable
Egretta sacra sacra	reef heron	Nationally Vulnerable
Larus novaehollandiae scopulinus	red-billed gull	Nationally Vulnerable
Phalacrocorax varius varius	pied shag	Nationally Vulnerable
Sterna caspia	Caspian tern	Nationally Vulnerable
At Risk		
Anthus novaeseelandiae novaeseelandiae	New Zealand pipit	Declining
Bowdleria punctata vealeae	North Island fernbird	Declining
Eudyptula minor iredalei	northern little blue penguin	Declining
Haematopus finschi	New Zealand pied oystercatcher	Declining
Himantopus himantopus leucocephalus	pied stilt	Declining
Sterna striata striata	white-fronted tern	Declining
Gallirallus philippensis assimilis	banded rail	Naturally Uncommon
Phalacrocorax carbo novaehollandiae	black shag	Naturally Uncommon
Phalacrocorax melanoleucos brevirostris	little shag	Naturally Uncommon
Phalacrocorax sulcirostris	little black shag	Naturally Uncommon
Platalea regia	Royal spoonbill	Naturally Uncommon
Pelagodroma marina maoriana	New Zealand white-faced storm petrel	Relict
Pelecanoides urinatrix urinatrix	northern diving petrel	Relict
Porzana pusilla affinis	marsh crake	Relict
Porzana tabuensis plumbea	spotless crake	Relict
Anas chlorotis "North Island"	brown teal	Recovering
Haematopus unicolor	variable oystercatcher	Recovering
Other Notable Species		
Arenaria interpres	turnstone	Migrant
Calidris canutus	lesser knot	Migrant
Limosa lapponica	bar-tailed godwit	Migrant
Numenius madagascariensis	eastern curlew	Migrant
Numenius phaeopus	whimbrel	Migrant

Scientific Name	Common Name	Threat Classification/ Significance[1]
OTHER FAUNA		
Threatened		
Latrodectus katipo	Katipo spider	Chronically Threatend
VASCULAR PLANTS		
Threatened		
Pterostylis micromega		Nationally Critical
Lepidium oleraceum		Nationally Vulnerable
Pimelea tomentosa		Nationally Vulnerable
At Risk		
Coprosma acerosa	sand coprosma	Declining
Cyclosorus interruptus		Declining
Dianella haematica		Declining
Myriophyllum robustum		Declining
Pimelea villosa	sand pimelea	Declining
Poa billardierei	hinarepe, sand tussock	Declining
Pterostylis paludosa		Declining
Thelypteris confluens	marsh fern	Declining
Carex textacea		Relict
Ficinia spiralis	pingao	Relict
Strebus banksii		Relict
Mimulus repens	native musk	Naturally Uncommon
Pterostylis aff. graminea		Naturally Uncommon
Pterostylis aff. graminea "Sphagnum"		Naturally Uncommon
Tetragonia tetragonioides	New Zealand spinach, kokihi	Naturally Uncommon
Data Deficient		
Ranunculus macropus	swamp buttercup	Data Deficient
Regionally Uncommon		
Asplenium appendiculatum subsp. *maritimum*		Regionally Uncommon
Asplenium haurakiense		Regionally Uncommon
Astelia banksii	kakaha	Regionally Uncommon
Austrostipa stipoides		Regionally Uncommon
Chionochloa flavicans		Regionally Uncommon
Einadia trigonos subsp. *trigonos*		Regionally Uncommon
Gahnia lacera	tarangarara	Regionally Uncommon
Gahnia xanthocarpa	tupari-maunga	Regionally Uncommon
Hypolepis distans		Regionally Uncommon
Juncus caespiticius		Regionally Uncommon
Lepidosperma laterale		Regionally Uncommon
Melicytus novae-zelandiae	coastal mahoe	Regionally Uncommon
Olearia solandri		Regionally Uncommon
Oxalis rubens	sand oxalis	Regionally Uncommon
Poa pusilla		Regionally Uncommon
Psilotum nudum		Regionally Uncommon
Pteris comans		Regionally Uncommon
Ranunculus acaulis		Regionally Uncommon
Rorippa palustris	hanea	Regionally Uncommon
Schoenus apogon		Regionally Uncommon
Schoenus nitens		Regionally Uncommon
Senecio biserratus		Regionally Uncommon
Senecio glomeratus		Regionally Uncommon
Sparganium subglobosum	maru, burr reed	Regionally Uncommon
Tetraria capillaris		Regionally Uncommon
Trisetum arduanum		Regionally Uncommon
Zoysia pauciflora		Regionally Uncommon
Translocated Species		
Euphorbia glauca	New Zealand shore spurge	Declining
REPTILES		
At Risk		
Oligosoma infrapunctatum	speckled skink	Declining
Oligosoma moco	moko skink	Relict

Scientific Name	Common Name	Threat Classification/ Significance[1]
FRESHWATER FISH		
At Risk		
Anguilla dieffenbachii	longfin eel	Declining
Cheimarrichthys fosteri	torrentfish	Declining
Galaxias argenteus	giant kōkopu	Declining
Galaxias brevipinnis	kōaro	Declining
Galaxias maculatus[3]	inanga	Declining
Galaxias postvectis	shortjaw kōkopu	Declining
Geotria australis	lamprey	Declining
Gobiomorphus huttoni	redfin bully	Declining
MAMMALS		
Threatened		
Orcinus orca	orca	Nationally Critical
FRESHWATER INVERTEBRATE		
Chronically Threatened		
Parenephrops planifrons	northern koura	Gradual Decline

Notes

[1] Threat classifications and regionally significant evaluations follow de Lange *et al.* 2009, Miskelly *et al.* 2008; Allibone *et al.* 2010; and Beadel 2009.

[2] Roosts but does not breed in Tauranga Ecological District.

[3] Spawning sites on major rivers and estuaries.

CENTRAL WAIHĪ BEACH

Site Number[1]	022
Grid Reference (NZMG)	E2771887 N6415473
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (Department of Conservation, Orokawa Scenic Reserve and WBOPDC reserve) and unprotected parts
Site Area	21.4 ha
Altitudinal Range	0-4 m asl
Geology-Landform Type	Sand

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Spinifex-pingao/shore bindweed (*Calystegia soldanella*)-harestail (*Lagurus ovatus*) grassland.	Incipient foredune
Terrestrial	Spinifex-pingao-buffalo grass-(sand tussock)[2] grass grassland.	Incipient foredune
Terrestrial	Spinifex-pingao-buffalo grass grassland.	Incipient foredune
Terrestrial	Lupin (*Lupinus arboreus*)/spinifex-dimorphotheca (*Osteospermum fruticosum*)/shore bindweed grassland.	Incipient foredune
Terrestrial	Lupin/arctotis (*Arctotis stoechadifolia*)-iceplant-pohuehue (*Muehlenbeckia complexa*)-*Gazania linearis*-buffalo grass herbfield.	Established foredune
Terrestrial	Agapanthus (*Agapanthus praecox*)-succulents-pohuehue herbfield.	Established foredune
Terrestrial	Lupin/*Carex testacea*-*Gazania linearis*-cocksfoot (*Dactylis glomerata*)-harestail sedgeland.	Established foredune and transgressive dunefield
Terrestrial	(Lupin)/*Ficinia nodosa*-marram (*Ammophila arenaria*)/pohuehue-*Carex testacea* vineland.	Transgressive dunefield
Terrestrial	Houpara-(taupata-ti kouka)/*Ficinia nodosa*/ pohuehue-*Carex testacea* vineland.	Transgressive dunefield
Terrestrial	*Ficinia nodosa*/pohuehue-dimorphotheca-kikuyu grass (*Pennisetum clandestinum*)-agapanthus vineland.	
Terrestrial	Cape ivy-arctotis-*Ficinia nodosa*-succulents-*Ipomea indica*-buffalo grass vineland.	Transgressive dunefield
Terrestrial	*Ficinia nodosa*/*Asparagus densiflorus*-*Gazania linearis*-pohuehue herbfield.	Transgressive dunefield
Terrestrial	Buffalo grass-pohuehue grassland.	Transgressive dunefield
Terrestrial	*Asparagus densiflorus*-buffalo grass herbfield.	Transgressive dunefield
Terrestrial	Succulents-*Agave americana*-agapanthus/pohuehue vineland.	Transgressive dunefield
Terrestrial	Cape ivy-pohuehue-buffalo grass vineland.	Transgressive dunefield.
Terrestrial	Gorse (*Ulex europaeus*)-oioi-(kikuyu grass) shrubland.	Transgressive dunefield.
Terrestrial	Gorse-wild broom (*Cytisus scoparius*)/pohuehue scrub.	Transgressive dunefield.

[1] Identifed as SVHZ-2 in Wildland Consultants 2006g. Transgressive dunefield.
[2] Planted.

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Gorse-agapanthus-pohuehue ⇔ marram-pohuehue vineland.	Transgressive dunefield.
Terrestrial	(*Banksia integrifolia*)/agapanthus-*Gazania linearis*-arctotis-cape ivy-iceplant-shore bindweed herbfield.	Transgressive dunefield.
Terrestrial	Pohutukawa-karo/bracken (*Pteridium esculentum*)-*Ficinia nodosa*-buffalo grass-agapanthus fernland.	Transgressive dunefield.
Terrestrial	Cape ivy-kikuyu grass/succulents herbfield.	Transgressive dunefield
Terrestrial	Kikuyu grass-pohuehue grassland.	Transgressive dunefield
Terrestrial	(Pig's ear)/buffalo grass-pohuehue with succulents grassland.	Transgressive dunefield
Terrestrial	Sandfield. (Wildland Consultants 2008a)	Beach sand

Vegetation and Indigenous Flora

This site comprises several narrow strips of spinifex and pingao (At Risk-Relict) dominated incipient and established foredunes backed by residential development and two wider areas that include heavily vegetated stabilised transgressive dunefields in addition to the incipient and established dune complex. Pingao (At Risk-Relict) and *Oxalis rubens* (a regionally uncommon plant species) are present. In narrow areas weed invasion from adjacent lawns and gardens can be severe, and the vegetation highly modified. Some areas within narrow dune strips are subject to active restoration work motivated by severe erosion, which includes plantings of sand tussock and sand pimelea (both At Risk-Declining) and pingao (At Risk-Relict).

Indigenous Fauna

Variable oystercatcher (At Risk-Recovering), reef heron and Caspian tern (both Threatened-Nationally Vulnerable) were recorded (Wildland Consultants 2008a).

The fauna described for this site does not constitute an exhaustive account. A wide variety of indigenous invertebrates will be present in microsites with indigenous habitats, including, but not limited to, Crustaceans, Myriopods, Arachnids, and Hexapods including Diplurans, Proturans, Collembolids, and Insecta. Of indigenous vertebrates, only shore skink is likely to occur.

Okawe Stream mouth may be a migratory path for indigenous freshwater fish species (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Several invasive species, including kikuyu grass, marram, and pampas, are present at this site. The dunes around the mouth of Three Mile Creek are dominated by gorse, lupin, and pampas. The dunes north of Three Mile Creek also include a high component of exotic species, including garden escapes. Other invasive weeds in this site include *Asparagus densiflorus*, agapanthus, *Banksia integrifolia*, buffalo grass, cape ivy, dimorphotheca, Japanese honeysuckle (*Lonicera japonica*), kikuyu grass, morning glory, Italian buckthorn, iceplant, a range of succulents, tradescantia (*Tradescantia fluminensis*), and ladder fern. Many of these weeds are have spread from adjacent private land, or are associated with areas in which dumping of organic waste occurs. Kikuyu grass and couch are spreading into dune vegetation from mown lawns adjacent to the dunes.

Shipping containers and other debris washed up on Waihī Beach in early 2012, following the grounding of the Rena in October 2011.

Key Site Features

This site includes populations of three At Risk plant species (pingao, sand tussock, and sand pimelea) two of which have been planted at the site, and one regionally uncommon plant species. This site occurs on a tombolo, a regionally significant geological feature (Kenny and Hayward 1996). The site is impacted locally by weed infestations and has been reduced in size by development for residential housing. Two Threatened and one At Risk bird species have been recorded at this site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	H
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	L
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** Pingao (At Risk-Relict) Sand pimelea (At Risk-Declining) (planted) Sand tussock (At Risk-Declining) (planted) **Avifauna:** Caspian tern (Threatened-Nationally Vulnerable) Reef heron (Threatened-Nationally Vulnerable) Variable oystercatcher (At Risk-Recovering)
ii		
iii		Sand dunes are an "originally rare" ecosystem type, but those at Central Waihī Beach have been highly modified.
iv		
v		Regionally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a WBOPDC reserve.

Policy	Criteria Met	Explanation
11(b)		
i	✓	Indigenous dune vegetation with areas of exotic vegetation.
ii		
iii	✓	Modified coastal dunes.
iv	N/A	
v	✓	Provides a link between Orokawa (Part), in the north, and Bowentown Sand Dunes and Beach (to the south).
Policy Met:		11(b)
Justification:		Central Waihī Beach comprises coastal dunes, and two Threatened species and two At Risk species have been recorded at the site. However, it does not meet the criteria in Policy 11(a) because the site is only a narrow strip of foredunes which are not of high quality due to the presence of exotic plant species and modifications associated with residential development and construction of a sea wall. However, the site is of ecological value because it includes areas of indigenous dune vegetation and provides a link between two natural areas of high value (Orokawa (Part) and Bowentown Sand Dunes and Beach). Therefore, it is consistent with Policy 11(b).

Notes The site is a regionally significant example of a beach form shaped by long-term erosional processes (Kenny and Hayward 1996).

References Kenny and Hayward 1996; Wildland Consultants 2006g; Wildland Consultants 2008a.

WAIHĪ BEACH GREY WILLOW FOREST

Site Number[1] 011
Grid Reference (NZMG) E2770423 N6417325
Local Authority Western Bay of Plenty District Council
Ecological District Tauranga
Protection Status Protected (WBOPDC local purpose reserve)
Site Area 2.4 ha
Altitudinal Range 0 m asl
Geology-Landform Type Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Grey willow forest.	Alluvial flat
Palustrine	Grey willow-manuka shrubland.	Alluvial flat
Palustrine	*Machaerina articulata* reedland. (Current study)	Alluvial flat

Vegetation and Indigenous Flora

The forest canopy at this site is dominated by grey willow but the understorey includes indigenous species such as mahoe, harakeke, manuka, hukihuki, *Eleocharis acuta*, *E. gracilis*, and *Carex virgata*. There is also an area of grey willow-manuka shrubland. *Machaerina articulata* is present beneath the grey willow and, in places, occurs as swards on the edge of the grey willow forest.

Fauna

Habitat for common forest birds.

Condition/Pressures

Weeds present at this site include tradescantia, selaginella (*Selaginella kraussiana*) (Cashmore 2009) Japanese honeysuckle, moth plant (*Araujia sericifera*), Chinese privet (*Ligustrum sinense*), arum lily (*Zantedeschia aethiopica*) (including the Green Goddess cultivar), and occasional pampas. Dumping of garden refuse containing pest plants, drainage and vegetation clearance are potential threats. A walkway has been constructed close to parts of the site.

Key Site Features

Waihī Beach grey willow forest comprises two relatively small and degraded areas, but they are locally significant because freshwater wetlands have been greatly reduced in extent in the Tauranga Ecological District.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	L
Rarity or Distinctive Features	3.2	L
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	L
Ecological Context	3.9	L
	3.10	L

[1] Identified as Site Number 162 in Wildland Consultants 2008a.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	L
	3.12	L
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Locally Significant
vi		Biodiversity values at the site are not formally protected, but the site is a WBOPDC local purpose reserve.
11(b)		
i	✓	Most of the canopy is dominated by grey willow but the understorey is indigenous.
ii		
iii		
iv		
v		
Policy Met:		11 (b)
Justification:		Waihī Beach Grey Willow Forest is consistent with Policy 11(b) because it is a wetland with a subcanopy that is predominantly indigenous. It is a reserve, but the reserve status is not for the purpose of protection of biodiversity values.

Notes A concept plan has been adopted by the WBOPDC (Western Bay of Plenty District Council (2009) that proposes restoration of this area. This would be an excellent initiative.

References Cashmore 2009; Wildland Consultants 2008a.

BOWENTOWN SAND DUNES AND BEACH

Site Number[1]	028
Grid Reference (NZMG)	E2773521 N6412603
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (WBOPDC reserve) and unprotected parts
Site Area	73.4 ha
Altitudinal Range	0-15 m asl
Geology-Landform Type	Sand

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	(Lupin)/spinifex/shore bindweed grassland.	Incipient and established foredune
Terrestrial	(*Ficinia nodosa*)/spinifex/shore bindweed grassland.	Incipient and established foredune
Terrestrial	*Ficinia nodosa*-lupin-spinifex/shore bindweed grassland.	Established foredune
Terrestrial	*Ficinia nodosa*/*Carex testacea*-pohuehue-shore bindweed sedgeland.	Transgressive dunefield
Terrestrial	Maritime pine-houpara-gorse/*Ficinia nodosa*/pohuehue sedgeland.	Transgressive dunefield
Terrestrial	Gorse/*Ficinia nodosa*/pohuehue sedgeland.	Transgressive dunefield
Terrestrial	Gorse⇔exotic grasses shrubland.	Transgressive dunefield
Terrestrial	Grey willow/pampas scrub.	Transgressive dunefield
Terrestrial	*Banksia integrifolia*/*Ficinia nodosa*-pohuehue treeland.	Transgressive dunefield
Terrestrial	*Banksia integrifolia*/pohuehue-*Tetragonia* forest.	Transgressive dunefield
Terrestrial	Pohutukawa/oioi-harakeke rushland.	Transgressive dunefield
Terrestrial	Gorse-pohuehue scrub.	Transgressive dunefield
Terrestrial	(Grey willow)-ti kouka/pampas/manuka-harakeke-taupata-karo-exotic grasses shrubland.	Transgressive dunefield
Terrestrial	Cape ivy vineland.	Transgressive dunefield
Terrestrial	*Ficinia nodosa*/*Gazania linearis*-pohuehue-*Asparagus densiflorus* herbfield.	Transgressive dunefield
Terrestrial	Saltmarsh ribbonwood/*Ficinia nodosa* sedgeland.	Transgressive dunefield
Terrestrial	Sandfield. (Wildland Consultants 2008a)	Beach sand

Vegetation and Indigenous Flora

This site comprises a series of dunes, continuous across a tombolo, from an exposed oceanic coast on one side to a sheltered estuarine margin on the other. Dune landform and vegetative cover change dramatically across the tombolo in response to varying degrees of exposure. Spinifex and pingao (At Risk-Relict) occur on incipient dunes and the stoss face of established dunes. *Ficinia nodosa* and pohuehue dominated vegetation occur on densely

[1] Identified as SVHZ-3 in Wildland Consultants 2006g.

vegetated transgressive dunefield, and pohutukawa, harakeke, oioi, and saltmarsh ribbonwood occur on the estuarine margin. Some areas of the transgressive dunefield are covered by gorse. In 1983, one plant of sand pimelea (At Risk-Declining) was recorded at this site (P.J. de Lange pers. comm. in Beadel 1994a). *Juncus pallidus* occurs locally in dune hollows and ephemeral wetlands, along with saltmarsh ribbonwood, *Ficinia nodosa*, *Machaerina juncea*, and oioi. There is also a small population of *Coprosma acerosa* (At Risk-Declining) (G. Jenks pers. comm. 2006). *Oxalis rubens* and *Zoysia pauciflora* (both regionally uncommon plant species) are present on the dunes.

Indigenous Fauna

This beach is a nesting area for northern New Zealand dotterel (Threatened-Nationally Vulnerable) and variable oystercatcher (At Risk-Recovering). Shore skinks are present (J. Heaphy, Department of Conservation, pers. comm. 2006).

The fauna described for this site does not constitute an exhaustive account. A wide variety of indigenous invertebrates will be present in microsites with indigenous habitats, including, but not limited to, Crustaceans, Myriopods, Arachnids, and Hexapods including Diplurans, Proturans, Collembolids, and Insecta.

Condition/Pressures

There is an ever-increasing *Banksia integrifolia* infestation at this site, mainly concentrated at the northern end. Other invasive weeds include gorse, lupin, and pampas. Rabbits threaten the remaining *Coprosma acerosa* population (G. Jenks pers. comm. 2006). Vehicle parking areas and informal walking tracks have resulted in localised areas of vegetation disturbance or removal.

Key Site Features

This regionally significant site has high botanical values with a mosaic of sand dune vegetation types present. However, it is degraded by invasive weeds which will continue to spread through the site unless eradicated or controlled. It is a regionally important breeding area for the Threatened northern New Zealand dotterel and At Risk variable oystercatcher, and contains three At Risk and two regionally uncommon plant species. This site has been identified as part of a regionally significant geological feature (Kenny and Hayward 1996). It adjoins Bowentown Heads and, through central Waihī Beach, is contiguous with Orokawa. This site is a large example of natural vegetation on a regionally significant barrier tombolo (Kenny and Hayward 1996) with indigenous vegetation encompassing the entire range of variation found on mobile dunes within the Bay of Plenty. One of the few examples of an intact dune system extending between a harbour and the ocean within Tauranga Ecological District. Extensive areas of gorse invasion require active intervention and ongoing management. Housing is restricted to either end of tombolo. This site has high potential for restoration.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	H
	3.5	M
	3.6	H
Diversity and Pattern	3.7	H

Criterion*	RPS Number*	Ranking**
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	M
Viability and Sustainability	3.11	H
	3.12	M
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** *Coprosma acerosa* (At Risk-Declining) Sand pimelea (At Risk-Declining) (1983) Pingao (At Risk-Relict) **Avifauna:** Northern New Zealand dotterel (Threatened-Nationally Vulnerable) Variable oystercatcher (At Risk-Recovering)
ii	✓	New Zealand dotterel (Endangered)
iii	✓	Sand dunes are an "originally rare" ecosystem type and this site is a relatively large, high quality example of this ecosystem type.
iv		
v		Regionally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a WBOPDC reserve.
Policy Met:		11(a)
Justification:		Bowentown Sand Dunes and Beach is consistent with Policy 11(a) because it provides habitat for Threatened and At Risk plant and fauna species and is a relatively large, high quality example of an ecosystem, and vegetation types which are threatened and "originally rare". In addition, it is one of only a few examples in the Bay of Plenty of a dune system that extends between an estuary and the open coast.

Notes Regionally significant example of a beach form shaped by long-term erosional processes (Kenny and Hayward 1996). This site was identified as a Category 1 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References Beadel 1994a; Kenny and Hayward 1996; Wildland Consultants 2006g; Wildland Consultants 2008a.

BOWENTOWN HEADS

Site Number[1]	029
Grid Reference (NZMG)	E2774011 N6410780
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (WBOPDC reserve) and unprotected parts
Site Area	29.9 ha
Altitudinal Range	0-80 m asl
Geology-Landform Type	Volcanic hard coast

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa forest.	Volcanic hard coast
Terrestrial	Whauwhaupaku-houpara-mapou-brush wattle (*Paraserianthes lophantha*) forest. (Beadel 1994a, Wildland Consultants 2008a)	Volcanic hard coast

Vegetation and Indigenous Flora

Mature coastal pohutukawa forest occurs on steep sites around the perimeter of this volcanic headland. Regenerating forest occurs on gently sloping sites on the top and upper sides of the headland. New Zealand spinach (*Tetragonia tetragonioides*) (At Risk-Naturally Uncommon) is present under pohutukawa around the carpark. It had also been recorded in previous surveys (Beadel 1994a). *Pteris comans, Astelia banksii, Lepidosperma laterale,* and *Chionochloa flavicans*, all of which are regionally uncommon, are also present (Wildland Consultants 2008a; Beadel 2010).

Indigenous Fauna

This is a nesting site for northern little blue penguin (At Risk-Declining) (J. Heaphy, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Secondary vegetation within the site and adjacent to it includes invasive species such as pampas and brush wattle. These areas may need to be managed to allow indigenous species to regenerate. Potential impacts associated with recreational use of the site include litter and trampling of vegetation.

Key Site Features

This site includes good quality examples of remnant pohutukawa forest and secondary mixed forest on hard rocky headland. Pohutukawa forest was once common in Tauranga Ecological District, but has now been greatly reduced in extent and only small areas remain (for example Mauao, Kauri Point, Ngakautuakina Point, Matakana Point, Tanners Point, Motuhoa Island). This site is also ecologically significant as a nesting area for the At Risk northern little blue penguin, and one At Risk and four regionally uncommon plant species. There is strong regeneration, but the site is impacted by possums in places, and weeds such as brush wattle are present. This site requires a moderate level of active management to ensure healthy ongoing ecosystem functioning. It adjoins Bowentown Sand Dunes and Beach, and across the Katikati Harbour Entrance is Matakana Island. Forest at the site is divided into two discrete patches on headlands in conjunction with secondary scrub, but is separated by grassed areas and exotic-dominant shrublands. There is the potential to increase physical linkages between these two headlands through restoration.

[1] Identified as SVHZ-4 in Wildland Consultants 2006g.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	M
	3.5	M
	3.6	H
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** New Zealand spinach (At Risk-Naturally Uncommon) **Avifauna:** Northern little blue penguin (At Risk-Declining)
ii		
iii	✓	Pohutukawa forest
iv	✓	Southern limit of *Pteris comans*.
v		Regionally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a WBOPDC reserve.
Policy Met:		11(a)
Justification:		Bowentown Heads is consistent with Policy 11(a) because it contains a relatively high quality example of pohutukawa forest, and pohutukawa forest has been greatly reduced in extent in Tauranga Ecological District. It is also a nesting site of northern little blue penguin (At Risk-Declining).

Notes

Adjacent areas of gorse scrub contain scattered indigenous species (for example pohutukawa, manuka, ti kouka). If these areas are allowed to regenerate and degrading influences (invasive weeds and pest animals) are managed, gorse will be superseded by secondary successional forest dominated by indigenous species natural succession processes. This has the potential to increase the indigenous biodiversity of the site and buffer the existing pohutukawa and secondary indigenous forest. Control of invasive species will be required (e.g. pampas, brush wattle, moth plant, and Taiwan cherry (*Prunus campanulata*)).

Bowetown Heads has been identified as a Category 1 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

References Beadel 1994a; Wildland Consultants 2006g; Wildland Consultants 2008a.

TAURANGA HARBOUR - UNVEGETATED AND SPARSELY VEGETATED INTERTIDAL AND SUBTIDAL AREAS

Site Number 055
Grid Reference (NZMG) E2779711 N6388935
Local Authority Western Bay of Plenty District Council and Tauranga City Council
Ecological District Tauranga
Protection Status Unprotected
Site Area 18,435.4 ha
Altitudinal Range 0 m
Geology-Landform Type Estuarine

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Mangrove scrub.	Intertidal flat
Estuarine	Mangrove shrubland.	Intertidal flat
Estuarine	Oioi rushland.	Intertidal flat
Estuarine	*Schoenoplectus pungens* sedgeland.	Intertidal flat
Estuarine	Sea rush tussockland.	Intertidal flat
Estuarine	*Machaerina juncea*-searush-oioi sedgeland.	Intertidal flat
Estuarine	Oioi-saltmarsh ribbonwood shrub-sedgeland.	Intertidal flat
Estuarine	Raupo reedland.	Intertidal flat
Estuarine	Glasswort (*Sarcocornia quinqueflora*) herbfield.	Intertidal flat
Estuarine	Seagrass (*Zostera* spp.) grassland.	Intertidal and sub-tidal
Estuarine	Sandfield.	Intertidal flat
Estuarine	Sandspit.	Intertidal flat
Marine	Worm field.	Intertidal flat
Marine	Worm field.	Subtidal channel
Marine	Cockle bed.	Intertidal flat
Marine	Pipi bed.	Intertidal flat
Marine	Horse mussel field.	Subtidal channel
Marine	Scallop bed.	Subtidal channel
	(Beadel 1992a; Stephen Park, Environment BOP, pers. comm. 2006; current study)	

Indigenous Flora

There are extensive areas of high-density seagrass (*Zostera* spp.) beds on intertidal and subtidal flats (Park 1999). This site also includes examples of estuarine vegetation (e.g. oioi, searush, mangroves), but most vegetated areas are mapped as separate sites.

Indigenous Fauna

Tauranga Harbour provides feeding, roosting, and breeding sites for a range of shorebirds including Threatened and At Risk species, such as black stilt (Threatened-Nationally Critical), reef heron (Threatened-Nationally Vulnerable), Caspian tern (Threatened-Nationally Vulnerable), red-billed gull (Threatened-Nationally Vulnerable), wrybill (Threatened-Nationally Vulnerable), banded dotterel (Threatened-Nationally Vulnerable), variable oystercatcher (At Risk-Recovering), northern New Zealand dotterel (Threatened-Nationally Vulnerable), northern little blue penguin (At Risk-Declining), New Zealand pied oystercatcher (At Risk-Declining), pied stilt (At Risk-Declining), little shag (At Risk-Naturally Uncommon), black shag (At Risk-Naturally Uncommon), eastern curlew (migrant), and white-fronted tern (At Risk-Naturally Uncommon). The most important roosting and breeding sites are mapped as separate sites. The extensive intertidal flats within this site are feeding grounds for wading species.

Marine mammals that frequent the harbour include Orca (Threatened-Nationally Critical), New Zealand fur seal, and common dolphin.

In addition to marine and estuarine fish species, the harbour also provides habitat for a suite of migratory species of freshwater fish, including Threatened and At Risk species. For these species, Tauranga Harbour is used as a migratory route and/or for parts of their life cycle.

Condition/Pressures

The catchment and margins of Tauranga Harbour include intensively managed agricultural and horticultural land and urban areas. Nutrient inputs associated with these landuses include fertiliser funoff, runoff from stock effluent, stormwater runoff from roads and urban areas, and treated human sewage. There may be impacts from the intensive recreational use of the harbour for activities such as boating and fishning. Channels are regularly dredged in association with the operation of the Port of Tauranga.

Gross changes have been measured in the changes to the extent of intertidal mangrove and intertidal/subtidal seagrass communities around Tauranga Harbour. Increased sedimentation caused by clearance of indigenous vegetation and intensification of land-use has raised the intertidal seabed and increased nutrient inputs. This is a possible explanation for the large observed increase in mangrove extent between 1943 and 2001 (Park 2004). Sediment and nutrient runoff that decreases levels of light reaching seabed may have contributed significantly to a 34% reduction in the extent of seagrass beds in Tauranga Harbour between 1959 and 1996 (Park 1999).

Control and eradication efforts in recent years mean that *Spartina*, previously a significant weed threat to intertidal flats in Tauranga Harbour, now poses a potential rather than actual threat.

Key Site Features

Tauranga Harbour is habitat for a suite of Threatened and At Risk species of avifauna, in addition to marine fish, migratory freshwater fish, marine mammals, and invertebrates that live in the sediment and the water column. Its margins include estuarine wetlands of national, regional and local significance that are habitat for species that are characteristic of the coastal environment. Many of these wetlands are habitat for Threatened or At Risk species. Tauranga Harbour as a whole is regarded as meeting the criteria to be considered a Ramsar Wetland of International Importance.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	M
	3.5	H
	3.6	N/A
Diversity and Pattern	3.7	M
Naturalness	3.8	H
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	H
	3.12	H
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Black stilt (Threatened-Nationally Critical) Banded dotterel (Threatened-Nationally Vulnerable) Caspian tern (Threatened-Nationally Vulnerable) Northern New Zealand dotterel (Threatened-Nationally Vulnerable) Red-billed gull (Threatened-Nationally Vulnerable) Reef heron (Threatened-Nationally Vulnerable) Wrybill (Threatened-Nationally Vulnerable) New Zealand pied oystercatcher (At Risk-Declining) Northern little blue penguin (At Risk-Declining) Pied stilt (At Risk-Declining) Black shag (At Risk-Naturally Uncommon) Little shag (At Risk-Naturally Uncommon) White-fronted tern (At Risk-Naturally Uncommon) Variable oystercatcher (At Risk-Recovering) **Mammals** Orca (Threatened-Nationally Critical) **Fish** A suite of freshwater fish, including Threatened and At Risk species use Tauranga Harbour as a migratory route and/or for parts of their life cycle.
ii	✓	Black stilt (Critically Endangered) New Zealand dotterel (Endangered) Wrybill (Vulnerable)
iii	✓	Tauranga Harbour has very high ecological values and is the largest harbour in the Region and includes the highest quality estuarine ecosystems.
iv		
v	✓	Nationally Significant
vi		
Policy Met:		11(a)
Justification:		Tauranga Harbour is consistent with Policy 11(a) because it is a nationally significant site that is a habitat for a suite of Threatened and At Risk species of avifauna, marine mammals, and freshwater fish. The margins of the harbour include locally, regionally, and nationally significant examples of estuarine wetlands that are habitat for indigenous flora and fauna, including Threatened and At Risk species such as Australasian bittern, North Island fernbird, banded rail, and spotless crake. In addition, the harbour is a habitat for marine fish, crustacea, molluscs, and other organisms that dwell in sediment or in the water column.

References Beadel 1992a; Park 1999; Park 2004; Owen et al 2006; Park 2004.

ATHENREE

Site Number [1]	021
Grid Reference (NZMG)	E2771864 N6414111
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (Department of Conservation, Athenree Wildlife Refuge)
Site Area	54.1 ha
Altitudinal Range	0-20 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium
HVES Number	39

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Mangrove scrub and shrubland.	Intertidal flat
Estuarine	(Saltmarsh ribbonwood)/oioi-sea rush tussockland and *Bolboschoenus fluviatilis* sedgeland.	Intertidal flat
Palustrine	Harakeke flaxland.	Intertidal flat
Palustrine	Manuka scrub.	Wetland
	(Beadel 1992a, Wildland Consultants 2006g)	

Vegetation and Indigenous Flora

Mangrove scrub and shrublands are extensive towards the downstream end of the site and are scattered along the edge of the river channel. The site comprises extensive areas of oioi rushland and sea rush tussockland with scattered saltmarsh ribbonwood and stands of *Bolboschoenus fluviatilis*. There are also smaller areas of freshwater wetlands on the margins, particularly towards the southern (upstream) end of the site, which include harakeke, raupo, and manuka.

Indigenous Fauna

Athenree is regarded by Department of Conservation as one of the most important saltmarsh areas in Tauranga Harbour (J. Heaphy pers. comm. 2012). There are recent records for a range of Threatened saltmarsh birds, e.g. Australasian bittern (Threatened-Nationally Endangered), spotless crake, marsh crake (both At Risk-Relict), banded rail (At Risk-Naturally Uncommon) and North Island Fernbird (At Risk-Declining) (J. Heaphy, Department of Conservation, pers. comm. 2012).

The site includes the mouth of the Waiau River, which is a habitat and a migratory pathway for indigenous species of freshwater fish, including longfin eel (At Risk-Declining), redfin bully (At Risk-Declining), giant bully, common bully, common smelt, inanga, shortfin eel, and banded kōkopu (Environment Bay of Plenty 2008), and torrentfish (At Risk-Declining) (K. Owen, Department of Conservation, pers. comm. 2012). The site also includes a whitebait spawning area (Bay of Plenty Regional Council 2012).

Condition/Pressures

Residential developments close to the margins of the site at Athenree and Island View may have adverse impacts on vegetation and fauna. Pampas is present both within and on the margins of the site, particularly along drain margins. Owen (1993) noted the presence of weeds and dumping of road spoil. The Department of Conservation has acquired the area of poorly drained pasture between the southern end of the Athenree Wildlife Refuge and Steele Road. This area is being restored back to saltmarsh and freshwater wetland to expand the current habitats (K. Owen, Department of Conservation, pers. comm. 2006.).

[1] Identified as SVHZ-5 in Wildland Consultants 2006g.

Key Site Features Athenree is a nationally significant saltmarsh and freshwater wetland complex at the mouth of the Waiau River. It comprises high quality representative examples of vegetation characteristic of the Tauranga Ecological District. One Threatened bird species and four At Risk marshbird species are present. The river is a habitat and migratory pathway for freshwater fish, including At Risk species.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	M
	3.5	H
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	H
Ecological Context	3.9	M
	3.10	H
Viability and Sustainability	3.11	H
	3.12	H
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Australasian bittern (Threatened-Nationally Endangered) Spotless crake (At Risk-Relict) Marsh crake (At Risk-Relict) Banded rail (At Risk-Naturally Uncommon) North Island fernbird (At Risk-Declining) **Fish:** Longfin eel (At Risk-Declining) Redfin bully (At Risk-Declining) Torrentfish (At Risk-Declining)
ii	✓	Australasian bittern (Endangered)
iii	✓	High quality estuarine wetland with smaller examples of palustrine wetland.
iv		
v	✓	Nationally Significant
vi	✓	Athenree Wildlife Refuge (Department of Conservation)
Policy Met:		11(a)
Justification:		Athenree comprises a high quality estuarine wetland that provides habitat for a suite of Threatened species, including one species that is included in the IUCN red list. It is a nationally significant site and is protected as a wildlife refuge. Therefore, it is consistent with Policy 11(a).

Notes	Identified as a Category 1 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).
References	Beadel 1992a; Owen 1993; Beadel 1994a; Beadel and Shaw 2000b; BOPRC 2012; Environment Bay of Plenty 2008; Wildland Consultants 2006g, Wildland Consultants 2008a.

STEELE ROAD WETLANDS A

Site Number [1]	018
Grid Reference (NZMG)	E2771312 N6413321
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	8.5 ha
Altitudinal Range	20 m asl
Geology-Landform Type	Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Grey willow forest.	Wetland
Palustrine	Manuka/harakeke-pampas shrubland. (Wildland Consultants 2008a)	Wetland

Vegetation and Indigenous Flora

A large proportion of this site is grey willow forest, with the remainder comprising manuka shrubland containing frequent harakeke and pampas, and occasional ti kouka. The understorey varies according to water levels. Drier sites include dense hangehange (*Geniostoma ligustrifolium*) with karamu, mamaku (*Cyathea medullaris*), ponga (*Cyathea dealbata*), swamp kiokio, and bush rice grass (*Microlaena avenacea*). At wetter sites swamp coprosma (*Coprosma tenuicaulis*), and *Machaerina* species (e.g. *M. juncea* and *M. teretifolia*) are prominent. *Machaerina articulata* and *Bolboschoenus fluviatilis* are also present in localised patches.

Indigenous Fauna

The stream is habitat for inanga (At Risk-Declining), shortfin eel, and giant kōkopu (At Risk-Declining) (Grove *et al.* 1999). A single North Island fernbird (At Risk-Declining) was heard within the site in 2006 (Wildland Consultants 2006g).

Condition/Pressures

Invasive weeds include grey willow, pampas, brush wattle and Japanese honeysuckle. Hawthorn is present at the southern end of the site. A very narrow strip along the eastern boundary of the site has been cleared of tall vegetation, probably in association with conversion of the adjacent land from pasture to horticulture.

Key Site Features

This site is degraded and the canopy is dominated by exotic species in places. However, it is locally significant because freshwater wetlands have been greatly reduced in extent in the Tauranga Ecological District. There is a recent record of one At Risk bird species, and two At Risk fish species have been recorded in the catchment of the stream which flows along the edge of the site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	H
Diversity and Pattern	3.7	L

[1] Identified as SVHZ-6 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	L
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** North Island fernbird (At Risk-Declining) **Fish:** Giant kōkopu (At Risk-Declining) Inanga (At Risk-Declining)
ii	✓	Giant kōkopu (Vulnerable)
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	A large proportion of the site is grey willow forest but it has an indigenous understorey. The remainder of the site is indigenous vegetation.
ii		
iii		
iv	✓	The stream is a migratory pathway for indigenous fish such as giant kōkopu (At Risk-Declining).
v		
Policy Met:		11(b)
Justification:		Steele Road Wetlands A is consistent with Policy 11(b) because it comprises predominantly indigenous vegetation and habitats. The stream that flows through the site provides habitat for At Risk fish species, and one fernbird has been recorded in the site.

Notes

Steele Road Wetlands A is a Category 3 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

The area adjoins damp pasture (*c.*20 ha) to the north which has been acquired by Department of Conservation and is being reflooded to recreate a saltmarsh/freshwater wetland.

References

Beadel 1992a; Grove *et al.* 1999; Wildland Consultants 2006g, Wildland Consultants 2008a.

STEELE ROAD WETLANDS B (PART)[1]

Site Number [2]	015
Grid Reference (NZMG)	E2770863 N6413541
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	5.5 ha
Altitudinal Range	20 m asl
Geology-Landform Type	Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Grey willow-manuka-(mamaku)-(ti kouka)-(kanuka)/raupo-(harakeke) shrubland.	Wetland
Palustrine	Grey willow-kanuka-manuka-mamaku shrubland. (Wildland Consultants 2008a)	Wetland

Vegetation and Indigenous Flora

Steele Road Wetlands B comprises a large wetland beside the Waiau River. Other species which are present include raupo, *Coprosma propinqua* subsp. *propinqua,* karamu, toetoe (*Austroderia fulvida*), harakeke, kawakawa (*Macropiper excelsum* var. *excelsum*), mahoe, hangehange, whauwhaupaku, and swamp coprosma. Other species present are wheki, gorse, mahoe, whauwhaupaku and exotic grasses and herbs. No rare or uncommon plant species have been recorded at this site.

Indigenous Fauna

This site is adjacent to the Waiau River. The river is habitat for a suite of indigenous freshwater species, including longfin eel and giant kōkopu (both At Risk-Declining) (Wildland Consultants 2006b). This site is likely to have a role in maintaining instream habitat values. North Island fernbird (At Risk-Declining) have been heard in the nearby Steele Road Wetlands A (Wildland Consultants 2006g), and this species may also be present in Steele Road Wetlands B. Other species which have been recorded in the nearby wetlands along the Waiau River (see 'Athenree') and which may be present in this site include Australasian bittern (Threatened-Nationally Endangered), marsh crake, spotless crake (both At Risk-Relict), and banded rail (At Risk-Naturally Uncommon) (J. Heaphy, Department of Conservation, pers. comm. 2006).

Pukeko, silvereye, North Island fantail, magpie, and house sparrow were observed at this site (Wildland Consultants 2008a).

Condition/Pressures

The site is dominated by grey willow, which is an invasive species. Where the site bounds Steele Road many other pest plant infestations occur, including gorse, tradescantia, hawthorn, wild cherry, Chinese privet, cotoneaster (*Cotoneaster glaucophyllus*), canna lily, elephants ear, and brush wattle. Climbing asparagus (*Asparagus scandens*) is present on the opposite side of the road and may also be present at the site.

Key Site Features

Whilst this site is degraded, it is significant because freshwater wetlands have been greatly reduced in extent in the Tauranga Ecological District. There is a recent record of two At Risk fish species in the catchment of the stream which flows along the edge of the site. This site provides potential habitat for Threatened and At Risk bird species.

[1] Part of Steele Road Wetlands B occurs outside the 'coastal environment' study area (i.e. further than 1 km inland of MHWS).

[2] Identified as SVHZ-7 in Wildland Consultants 2006g.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	M
	3.3	H
	3.4	L
	3.5	M
	3.6	H
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Fish recorded in Waiau River:** Giant kōkopu (At Risk-Declining) Longfin eel (At Risk-Declining) **Avifauna:** None recorded, but the site may be suitable habitat for any of the suite of Threatened and At Risk species which have been recorded from elsewhere along the Waiau River.
ii	✓	Giant kōkopu (Vulnerable)
iii		
iv		
v		Regionally Significant
vi		Unprotected
11(b)		
i	✓	Grey willow dominates the canopy but the understorey is indigenous.
ii		
iii		Palustrine wetlands with a grey willow canopy are not confined to the coastal environment.
iv		
v	✓	Part of a corridor along the Waiau River.
Policy Met:		11(b)
Justification:		Steele Road Wetlands B (Part) is adjacent to the Waiau River. The site is consistent with Policy 11(b) because the understorey is indigenous, the site is part of an ecological corridor associated with the Waiau River, and it may provide habitat for Threatened or At Risk species of fauna. In addition, palustrine wetlands have been greatly reduced in both extent and quality in the Bay of Plenty.

Notes	Steele Road Wetlands B is a Category 2 natural area in Tauranga Ecological District (Wildland Consultants 2008a).
References	Beadel 1992a; Beadel 1994a; Wildland Consultants 2006b; Wildland Consultants 2006g, Wildland Consultants 2008a.

HIKURANGI

Site Number [1]	009
Grid Reference (NZMG)	E2770541 N6410732
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (WBOPDC reserve) and unprotected parts
Site Area	54.2 ha
Altitudinal Range	0-16 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Mangrove scrub and shrubland.	Intertidal flat
Estuarine	Sea rush tussockland, oioi rushland, *Machaerina juncea* sedgeland.	Intertidal flat
Estuarine	(Mangrove)-(sea rush) shrubland.	Intertidal flat
Estuarine	Sea rush/pasture rushland.	Intertidal flat
Palustrine	Constructed ponds.	Wetland
Palustrine	Manuka scrub and shrubland.	Wetland
Palustrine	Grey willow forest. (Beadel 1992a)	Wetland

Vegetation and Indigenous Flora

The site includes mangrove scrub and shrublands, and estuarine wetlands which comprise variable mixtures of sea rush, oioi, and *Machaerina juncea*. Towards the northern end of the site there are three constructed ponds, and on the landward margins of the site there are small examples of manuka scrub and willow forest. No rare or uncommon plant species have been recorded at this site.

Indigenous Fauna

Australasian bittern (Threatened-Nationally Endangered) reported by adjoining landowner; banded rail (At Risk-Naturally Uncommon), pied stilt and North Island fernbird (both At Risk-Declining) recorded in 1992 (Owen 1993).

Condition/Pressures

The site is long and narrow and is not buffered from adjacent landuses, which include agriculture, horticulture and residential developments. Owen (1993) noted weeds, organic rubbish dumping, illegal reclamation, and stock access. *Spartina* is being controlled in the southern end of this site (K. Owen, Department of Conservation, pers. comm. 2008).

Key Site Features

The relatively large size of this site is offset by its long narrow shape, lack of buffering from adjacent intensive land use, and extensive modification. One Threatened and three At Risk bird species have been recorded at this site. It is of local significance because of its large size and because it comprises large examples of estuarine vegetation that are typical of Tauranga Harbour.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L

[1] Identified as SVHZ-8 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Banded rail (At Risk-Naturally Uncommon) (1993) North Island fernbird (At Risk-Declining) (1993) Pied stilt (At Risk-Declining) (1993) **Possible Record:** Australasian bittern (Threatened-Nationally Endangered)
ii		Possible record of Australasian bittern (Endangered)
iii		
iv		
v		Locally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a WBOPDC reserve.
11(b)		
i	✓	Mangrove scrub and shrubland, sea rush rushland, and manuka scrub.
ii		
iii	✓	Mangrove scrub and shrubland.
iv	N/A	
v		
Policy Met:		11(b)
Justification:		There are historic (1993) records of At Risk bird species at Hikurangi, but the quality of the site is not high enough to make it consistent with Policy 11(a). However, the site is predominantly indigenous in character and includes indigenous habitat types that are found only in the coastal environment and are vulnerable to modification so its values are consistent with Policy 11(b).

Notes Hikurangi is a Category 3 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References Beadel 1992a; Owen 1993; Wildland Consultants 2006g; Wildland Consultants 2008a.

BOWENTOWN SHELLBANKS[1]

Site Number [2]	024
Grid Reference (NZMG)	E2772748 N6410433
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	9.8 ha
Altitudinal Range	0 m asl
Geology-Landform Type	Estuarine

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Sandfield, seagrass grassland and intertidal flats.	Sandbank, intertidal and subtidal flat

Vegetation and Indigenous Flora

This site includes small areas of seagrass but, based on observations of aerial photographs, is mainly unvegetated sand and silt.

Indigenous Fauna

Along with the north-west end of Matakana Island, Bowentown Shellbanks is one of the most important roosting sites for waders (principally godwit, New Zealand pied oystercatcher (At Risk-Declining)), and variable oystercatcher (At Risk-Recovering) in Tauranga Harbour, for example, counts of bar-tailed godwit commonly exceed 1,000 individuals, and counts of New Zealand pied oystercatcher commonly number in the hundreds. (J. Heaphy and B. Chudleigh pers. comm. 2006) (Owen *et al.* 2006). Variable oystercatcher (At Risk-Recovering) and New Zealand pied oystercatcher (At Risk-Declining) also breed at this site (K. Owen, Department of Conservation, pers. comm. 2012). Other Threatened species recorded at this site include: Caspian tern (Threatened-Nationally Vulnerable) (roosting and breeding) (K. Owen, Department of Conservation, pers. comm. 2012), and red-billed gull (Threatened-Nationally Vulnerable) (breeding and roosting) (K. Owen, Department of Conservation, pers. comm. 2012), and New Zealand dotterel (Threatened-Nationally Vulnerable) (roosting and nesting) (K. Owen, Department of Conservation, pers. comm. 2012). Shags, southern black-backed gull, turnstone, and other species roost there during high water (Owen *et al.* 2006). New Zealand dotterel are also present (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Its situation as a shellbank in mid-harbour means direct human disturbance is low. The sandbank is subject to erosion and accretion, and is flooded by spring high tides, affecting its availability as a roost (Owen *et al.* 2006). Some bird nesting (Caspian tern, red-billed gull, southern black-backed gull, and seagull) occurs.

Key Site Features

This site is significant because of the numbers and diversity of international and New Zealand migratory waders, including some Threatened, At Risk and uncommon species, that flock here. In addition, this mid-harbour shellbank is subjected to few direct human pressures.

[1] This site has previously been known as Yellow Point Sandbank (see Wildland Consultants 2006g).
[2] Identified as SVHZ-10 in Wildland Consultants 2006g.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	H
	3.6	N/A
Diversity and Pattern	3.7	L
Naturalness	3.8	H
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	H
	3.12	H
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Caspian tern (Threatened-Nationally Vulnerable) Northern New Zealand dotterel (Threatened-Nationally Vulnerable) Red-billed gull (Threatened-Nationally Vulnerable) New Zealand pied oystercatcher (At Risk-Declining) Variable oystercatcher (At Risk-Recovering)
ii	✓	New Zealand dotterel (Endangered)
iii	✓	The site is a largely unvegetated shellbank that is one of the most important roosting sites in Tauranga Harbour.
iv		
v		Regionally Significant
vi		Unprotected
Policy Met:		11(a)
Justification:		The values of this site are consistent with Policy 11(a) because it is an important roost site for wading birds, including Threatened, At Risk, and migratory species. It is regarded as a high quality site because its location in the middle of the harbour means that the impacts of predators and humans are low.

Notes This site is part of North Tauranga Harbour Key Ecological Zone (Wildland Consultants 2006g) and has been identified as a Category 1 natural area in Tauranga Ecological District (Wildland Consultants 2008a)

References Park 1999a; Park 1999b; B. Chudleigh, OSNZ, pers. comm. 2006; J.Heaphy, Department of Conservation. pers. comm. 2006; Owen *et al.* 2006; Wildland Consultants 2006g: Wildland Consultants 2008a.

TANNERS POINT

Site Number [1]	014
Grid Reference (NZMG)	E2770594 N6408615
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (Department of Conservation, Tanners Point Marginal Strip, and WBOPDC Tanners Point South Foreshore) and unprotected parts.
Site Area	7.6 ha
Altitudinal Range	0-20 m asl
Geology-Landform Type	Estuarine

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa forest. (Beadel 1992a, Wildland Consultants 2008a)	Hillslope

Vegetation and Indigenous Flora

Tanners Point comprises a strip of pohutukawa forest on the southeast side of Tanners Point. Two regionally uncommon plant species are present at this site, *Asplenium appendiculatum* subsp. *maritimum* and *Gahnia lacera* (Beadel 1992b).

Indigenous Fauna

A small colony of pied shag (Threatened-Nationally Vulnerable) breed and roost at this site (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

The site comprises a strip of pohutukawa on the harbour margin of Tanners Point. It is bounded by residential properties and smaller areas of pasture and horticulture, and is bisected by access to a boat ramp and an associated parking area. It is vulnerable to weed invasion and dumping of garden waste.

Key Site Features

Tanners Point contains a good quality example of pohutukawa forest that is representative of the ecological character of the Bay of Plenty Region. Pohutukawa forest was once common in Tauranga Ecological District, but has now been greatly reduced in extent and only small areas remain (for example at Mauao, Kauri Point, Ngakautuakina Point, Matakana Point, Bowentown Heads, and Motuhoa Island) (Beadel 1994a). It is also notable that the pohutukawa forest has a relatively intact understorey. Two regionally uncommon plant species have been recorded here.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	M
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	M

[1] Identified as part of SVHZ-11 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	Pied shag (Threatened-Nationally Vulnerable)
ii		
iii	✓	One of the higher quality examples of pohutukawa forest in Tauranga Ecological District.
iv		
v		Regionally Significant
vi		Biodiversity values at the site are not formally protected, but parts of the site are WBOPDC reserve or WBOPDC covenants.
Policy Met:		11(a)
Justification:		Tanners Point is consistent with Policy 11(a) because it comprises one of the highest quality examples of pohutukawa forest in Tauranga Ecological District. The site is notable because there is a relatively intact subcanopy. In addition, two regionally uncommon plant species are present.

Notes

Tanners Point was identified as part of a Category 1 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

This site forms part of the 'Tuapiro' corridor (Environment Bay of Plenty 2006) ranked second priority Level 2 (Wildland Consultants 2007b).

References

Beadel 1994a; Environment Bay of Plenty 2006; Wildland Consultants 2006g; Wildland Consultants 2007b; Wildland Consultants 2008a.

TUAPIRO

Site Number [1]	005
Grid Reference (NZMG)	E2769626 N6407804
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	largely unprotected, small protected areas (WBOPDC foreshore reserves)
Site Area	44.7 ha
Altitudinal Range	0 m asl
Geology-Landform Type	Estuarine

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Mangrove scrub and shrubland.	Intertidal flat
Estuarine	(Saltmarsh ribbonwood)/sea rush-oioi-*Machaerina juncea* tussockland. (Beadel 1992a, Wildland Consultants 2008a)	Intertidal flat

Vegetation and Indigenous Flora

Tuapiro comprises estuarine wetlands of mangrove scrub and shrubland, and saltmarsh comprising mixtures of sea rush, oioi, and *Machaerina juncea* with scattered saltmarsh ribbonwood (particularly towards the landward edges of the site).

Indigenous Fauna

Marsh crake (At Risk-Relict) (possibly), banded rail (At Risk-Naturally Uncommon) and North Island fernbird (At Risk-Declining) were recorded in 1991-92 (Owen 1993), and it is likely that both species are still present.

The site includes the mouth of Tuapiro Creek, which is a habitat and migratory pathway of indigenous species of freshwater fish such as longfin eel (At Risk-Declining), redfin bully (At Risk-Declining), banded kōkopu, common smelt, common bully (Environment Bay of Plenty 2008), and torrentfish (At Risk-Declining) (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Owen (1993) noted stock access and a range of weeds present in 1991-92. The northern portion of the site is buffered from adjacent, intensive landuses by a strip of mixed indigenous-exotic scrub. The southern part of the site is bounded by pasture, horticulture, and residential land.

Key Site Features

Tuapiro contains good quality examples of estuarine wetlands and saltmarsh that are representative of the ecological character of the Bay of Plenty Region. This site provides reasonably good quality habitat for three At Risk marshbird species, with high numbers of North Island fernbird recorded in 1991-92. It also includes the mouth of Tuapiro Creek, which is a habitat and migratory pathway of freshwater fish.

[1] Identified as part of SVHZ-11 in Wildland Consultants 2006g.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	M
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	M
Viability and Sustainability	3.11	M
	3.12	H
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Banded rail (At Risk-Naturally Uncommon) North Island fernbird (At Risk-Declining) **Fish:** Longfin eel (At Risk-Declining) Redfin bully (At Risk-Declining) Torrentfish (At Risk-Declining)
ii		
iii		
iv		
v		Regionally Significant
vi		Biodiversity values at the site are not formally protected, but parts of the site are WBOPDC reserve.
11(b)		
i	✓	Mangrove scrub and scrubland and other estuarine wetland types.
ii		
iii	✓	Mangrove scrub and scrubland, other estuarine wetland types.
iv	N/A	
v	✓	Tuapiro Creek is a migratory pathway for indigenous freshwater fish.
vi		
Policy Met:		11(b)
Justification:		Tuapiro is an estuarine wetland and while it is of high ecological value it is not one of the best quality examples in Tauranga Harbour. The site is consistent with Policy 11(b) because the vegetation is predominantly indigenous and is of a type that is confined to the coastal environment. In addition, two At Risk

Policy	Criteria Met	Explanation
		bird species were recorded at the site in 1992, and these are highly likely to still be present.

Notes

Tuapiro has been identified as part of a Category 1 natural heritage site in the Tauranga Ecological District (Wildland Consultants 2008a).

This site forms part of the 'Tuapiro' corridor (Environment Bay of Plenty 2006) ranked second priority Level 2 (Wildland Consultants 2007b).

References

Owen 1993; Beadel 1994a; Environment Bay of Plenty 2006; Environment Bay of Plenty 2008; Wildland Consultants 2006g; Wildland Consultants 2007b; Wildland Consultants 2008a.

TUAPIRO ESTUARY SANDSPIT

Site Number [1]	016
Grid Reference (NZMG)	E2771124 N6408513
Local Authority	Western Bay of Plenty District
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	4.6 ha
Altitudinal Range	0 m asl
Geology-Landform Type	Estuarine

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Sandfield and intertidal flats. (Wildland Consultants 2007a)	Sandspit, sandbank, intertidal flat.

Vegetation and Indigenous Flora

This site comprises largely unvegetated sandspit and intertidal flats. No rare or uncommon plant species have been recorded here.

Indigenous Fauna

This sandspit is used as a neap high tide roost by waders such as bar-tailed godwit and New Zealand pied oystercatcher (At Risk-Declining) (B. Chudleigh (OSNZ) pers. comm. 2006; Owen *et al.* 2006). White-faced herons have also been recorded and shags roost in the trees.

Condition/Pressures

Increasing public use of the adjoining recreation reserve is resulting in increased disturbance to this roost site (Owen *et al.* 2006).

Key Site Features

This site is regionally significant because of the high abundances and numbers of species of international and New Zealand migratory waders that regularly roost here on neap high tides (Owen *et al.* 2006). Surrounding sites 'Ongare' and 'Tuapiro' line the estuary, and provide buffering and a wider range of habitats.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	L
	3.3	M
	3.4	L
	3.5	M
	3.6	N/A
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	L
	3.10	H
Viability and Sustainability	**3.11**	**M**
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

[1] Identified as SVHZ-12 in Wildland Consultants 2006g.

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** New Zealand pied oystercatcher (At Risk-Declining)
ii		
iii		
iv		
v		Regionally Significant
vi		Unprotected
11(b)		
i	✓	The site is indigenous in character, comprising bare sand and intertidal flats.
ii		
iii	✓	Bare sand and intertidal flats.
iv	N/A	
v		
vi	✓	Is a buffer to the adjacent site, Ongare.
Policy Met:		11(b)
Justification:		Tuapiro Estuary Sandspit is consistent with Policy 11(b) because it is a high tide roost and comprises indigenous habitats that are confined to the coastal environment. It is not consistent with Policy 11(a) because it is not one of the best high tide roosts in Tauranga Harbour and is subjected to disturbance from humans and dogs using the adjacent recreation reserve.

Notes Increasing public use of the adjoining recreation reserve is increasing disturbance to this roost (Owen *et al.* 2006). Identified as a Category 1 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References B. Chudleigh (OSNZ) pers. comm. 2006; Owen 1993; Owen *et al.* 2006; Wildland Consultants 2006g; Wildland Consultants 2008a; BOPRC 2012.

ONGARE

Site Number [1]	017
Grid Reference (NZMG)	E2771328 N6407957
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (WBOPDC reserve) and unprotected parts
Site Area	24.9 ha
Altitudinal Range	0-11 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Radiata pine/*Machaerina juncea* forest.	Sandspit
Estuarine	Mangrove scrub and shrubland.	Intertidal flat
Estuarine	Sea rush-oioi-*Machaerina juncea* tussockland and rushland.	Intertidal flat
Estuarine/terrestrial	*Olearia* solandri/oioi rushland, manuka scrub and shrubland, and estuary margin vegetation.	Intertidal flat
Palustrine	(Ti kouka)-(grey willow)/(manuka)/*Machaerina juncea-Juncus* spp.-*Carex* spp. sedge-rushland.	Wetland
Palustrine	Raupo-manuka reedland.	Wetland
	(Wildland Consultants 2007a and Beadel 1992a)	

Vegetation and Indigenous Flora

The site is dominated by species which are typical of estuarine wetlands in Tauranga Harbour, and includes smaller examples of freshwater wetland. In 2003, the freshwater wetland east of the road was described as being dominated by grey willow with an understorey of *Machaerina juncea*, manuka, mingmingi, swamp coprosma, kiokio (*Blechnum novae-zelandiae*), and bracken (Wildland Consultants 2003i). In 2007 it appeared that grey willow and crack willow had been controlled recently. *Olearia solandri,* a regionally uncommon plant species, occurs at this site

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon) and North Island fernbird (At Risk-Declining) were recorded here in 1992 (Owen 1993). North Island fernbird was recorded again in 2003 (Wildland Consultants 2003i). In 2006, Australasian bittern (Threatened-Nationally Endangered) were observed in the wetland on the eastern side of the road. The sandy beach on the end of the point is a high tide roost for wading birds (J. Heaphy, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Wild ginger (*Hedychium gardnerianum*) is present on the spit beneath the pines but appears to be being controlled (2007). Pampas and blackberry (*Rubus* sp. (*R. fruticosus* agg.) are present on the margins of the site. Motorcyclists ride on the spit and beach. This activity has the potential to disturb wildlife and damage vegetation.

Key Site Features

This site comprises estuarine habitat typical of Tauranga Ecological District, although weeds and direct human impacts have significantly modified its condition. One Threatened, two At Risk bird species, and one regionally uncommon plant species have been recorded here.

[1] Identified as SVHZ-13 in Wildland Consultants 2006g.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Australasian bittern (Threatened-Nationally Endangered) North Island fernbird (At Risk-Declining) Banded rail (At Risk-Naturally Uncommon)
ii	✓	Australasian bittern (Endangered)
iii	✓	Includes estuarine wetland that is linked to a palustrine wetland where Australasian bittern was recorded in 2003.
iv		
v		Regionally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a WBOPDC reserve.
Policy Met:		11(a)
Justification:		Ongare is consistent with Policy 11(a) because it comprises high quality, interlinked estuarine and palustrine wetlands and it provides habitat for three avifauna species which are Threatened or At Risk.

Notes Ongare is a Category 2 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References Beadel 1992a; Owen 1993; Wildland Consultants 2003i; Wildland Consultants 2006g; Wildland Consultants 2008a.

KAURI POINT

Site Number [1]	025
Grid Reference (NZMG)	E2773219 N6405589
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (WBOPDC Historic Reserve)
Site Area	11.6 ha
Altitudinal Range	0-40 m asl
Geology-Landform Type	Sedimentary (volcanic) unconsolidated

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa forest and pohutukawa/houpara-karaka/*Astelia banksii*-kawakawa-karaka forest. (Wildland Consultants 2006g)	Moderate-steep hillslope

Vegetation and Indigenous Flora

The site comprises pohutukawa forest on moderate to steep faces adjacent to Tauranga Harbour. *Astelia banksii* (a regionally uncommon species), houpara, karaka, and kawakawa are present in the understorey.

Indigenous Fauna

Possible though unconfirmed presence of moko skink (At Risk-Relict), which inhabit some headlands in the inner Tauranga Harbour (J. Heaphy, Department of Conservation, pers. comm. 2006).

Condition/Pressures

The site is bounded by a grassed historic reserve, and there is a sealed access to a boat ramp and jetty. Dumping of garden waste occurs and there is an infestation of wild ginger near the toilet block. The site appears to be fenced and ungrazed.

Key Site Features

Kauri Point is regionally significant as it comprises a good quality, representative example of a regionally under-represented vegetation type (i.e. coastal pohutukawa forest). Pohutukawa forest was once common throughout Tauranga Ecological District, but has now been greatly reduced in extent, and only small areas remain (for example Mauao, Bowentown Heads, Ngakautuakina Point, Matakana Point, Tanners Point, Motuhoa Island). One regionally uncommon plant species is found at this site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	L
	3.3	M
	3.4	L
	3.5	M
	3.6	L
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	M

[1] Identified as SVHZ-15 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	M
	3.12	H
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		**Unconfirmed record:** Moko skink (At Risk-Relict)
ii		
iii	✓	Good quality pohutukawa forest
iv		
v		Regionally Significant
vi		Biodiversity values at the site are not formally protected, but the site is a WBOPDC Historic Reserve.
Policy Met:		11(a)
Justification:		Kauri Point comprises a small but high quality example of pohutukawa forest, a coastal vegetation type that has been greatly reduced in extent. The understorey is dominated by indigenous species, including one species that is regionally uncommon (i.e. *Astelia banksii*). In addition, there is a possible record of moko skink (At Risk-Relict) occurring at the site.

Notes Category 2 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References Beadel 1994a; Wildland Consultants 2006g; Wildland Consultants 2008a.

EGG ISLAND SANDBANK

Site Number [1]	027
Grid Reference (NZMG)	E2773196 N6402311
Local Authority	Western Bay of Plenty District
Ecological District	Tauranga
Protection Status	Protected (Department of Conservation, Egg Island Crown Land) and unprotected parts
Site Area	297.7 ha
Altitudinal Range	0 m asl
Geology-Landform Type	Estuarine

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Sandfield and seagrass grassland. (Park 1999a; Park 1999b)	Sandbank, intertidal and subtidal flat

Vegetation and Indigenous Flora Egg Island Sandbank comprises unvegetated marine sediment and seagrass beds. No rare or uncommon plant species have been recorded at this site.

Indigenous Fauna Periodically used as a roost by waders, particularly godwit and New Zealand pied oystercatcher (At Risk-Declining) (B. Chudleigh (OSNZ) pers. comm. 2006).

Condition/Pressures Its situation as a sandbank in mid-harbour means direct human disturbance of roosting birds is low. It is low-lying so is subject to erosion and accretion cuased by tides, currents, and episodic weather events.

Key Site Features Egg Island comprises extensive areas of sandbank and seagrass beds where, by virtue of being a mid-harbour sandbank, direct human pressures are very low. It is nationally significant because of the numbers and diversity of international and New Zealand migratory waders that feed here, and also roost when tidal conditions are right.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	L
	3.3	M
	3.4	L
	3.5	H
	3.6	N/A
Diversity and Pattern	3.7	L
Naturalness	3.8	H
Ecological Context	3.9	L
	3.10	M
Viability and Sustainability	3.11	M
	3.12	H
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

[1] Identified as SVHZ-16 in Wildland Consultants 2006g.

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** New Zealand pied oystercatcher (At Risk-Declining)
ii		
iii	✓	High tide roost that includes sandbanks and seagrass beds.
iv		
v	✓	Nationally Significant
vi	✓	Partially protected (Stewardship Area, Department of Conservation).
Policy Met:		11(a)
Justification:		Egg Island Sandbank is used as a roost by wading birds, including at least one At Risk species. It is a high quality example of its type because its location in Tauranga Harbour means that the impacts of introduced predators and humans are low. Its values are consistent with Policy 11(a).

Notes Category 1 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References Park 1999a; Park 1999b; B. Chudleigh (OSNZ) pers. comm. 2006; Wildland Consultants 2006g; Wildland Consultants 2008a.

STOKES ROAD COASTAL FOREST

Site Number [1]	006
Grid Reference (NZMG)	E2769620 N6403837
Local Authority	Western Bay of Plenty District
Ecological District	Tauranga
Protection Status	Protected (WBOPDC reserve) and unprotected parts
Site Area	23.8 ha
Altitudinal Range	0-60 m asl
Geology-Landform Type	Sedimentary (volcanic) unconsolidated

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	(Maritime pine)-(radiate pine)-rewarewa/mamaku-kanuka-brush wattle-mahoe forest.	Moderate hillslope
Terrestrial	Rewarewa/mapou forest and treeland.	Moderate hillslope
Terrestrial	Radiata pine/kanuka forest.	Moderate hillslope
	(Wildland Consultants 2006g; current study)	

Vegetation and Indigenous Flora

The site comprises secondary indigenous forest with a component of exotic species. Maritime pine, radiata pine and rewarewa are emergent over species such as mamaku, brush wattle, kanuka, mahoe, totara (*Podocarpus totara*), mapou, hangehange, kawakawa, and makomako. Mature kauri are also present.

Indigenous Fauna

No rare or uncommon species have been recorded. Indigenous species include tui, grey warbler, white-faced heron, kotare, and pukeko.

Condition/Pressures

Exotic plant species include maritime pine, radiate pine, brush wattle, silver wattle, Chinese privet, tree privet (*Ligustrum lucidum*), periwinkle, hawthorn, montbretia, barberry, an infestation of mignonette vine (*Andredera cordifolia*), and occasional woolly nighshade and pampas . The site is irregularly shaped, is bisected by a farm track, and is probably vulnerable to further weed invasion. The southern portion of the site is fenced to exclude domestic stock but the northern portion is grazed.

Key Site Features

This site comprises a small example of modified secondary indigenous vegetation which acts as a protective buffer to the Katikati Inlet. Adventive species are locally common.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	L
Rarity or Distinctive Features	3.2	L
	3.3	L
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	L
Ecological Context	3.9	M
	3.10	M

[1] Identified as SVHZ-17 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	M
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Locally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a WBOPDC reserve.
11(b)		
i	✓	Mixed indigenous and exotic secondary forest.
ii		
iii		Secondary forest is not confined to the coastal environment.
iv		
v		
vi		The site is not a corridor, but it is a buffer to part of Katikati Inlet.
Policy Met:		11(b)
Justification:		Stokes Road Coastal Forest is secondary forest comprised of indigenous and exotic species. There is a very little forest on the margins of the Tauranga Harbour so this site is consistent with Policy 11(b).

Notes Category 3 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References Wildland Consultants 2006g; Wildland Consultants 2008a.

KATIKATI INLET

Site Number [1]	002
Grid Reference (NZMG)	E2768387 N6403016
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (Nga Whenua Rāhui Kawenata, WBOPDC reserve) and unprotected parts
Site Area	47.2 ha
Altitudinal Range	0-15 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Mangrove scrub and shrubland.	Intertidal flat
Palustrine	Grey willow forest.	Wetland
Palustrine	Manuka shrubland.	Wetland
Palustrine	Harakeke-manuka flaxland.	Wetland
Estuarine	Sea rush-oioi-saltmarsh ribbonwood-(harakeke) rushland. (Beadel 1992a, Wildland Consultants 2008a)	Intertidal flat

Vegetation and Indigenous Flora

This site is dominated by mangrove scrub and shrubland, and estuarine wetlands which comprise sea rush, oioi, saltmarsh ribbonwood, and harakeke. There are also small areas of grey willow forest and harakeke-manuka wetland. No rare or uncommon plant species have been recorded at this site.

Indigenous Fauna

Australasian bittern (Threatened-Nationally Endangered); banded rail (At Risk-Naturally Uncommon), marsh crake (At Risk-Relict), North Island fernbird (At Risk-Declining) (Owen 1993), brown teal[2] (At Risk-Recovering) (BOPRC 2012) utilise the site. Fernbird was recorded again in 2012 (current study).

The site includes the mouths of the Tahawai Stream and the Uretara River. Uretara River is a habitat and migratory pathway of indigenous species of freshwater fish, including redfin bully (At Risk-Declining), longfin eel (At Risk-Declining), inanga (At Risk-Declining), giant kōkopu (At Risk-Declining), torrentfish (At Risk-Declining), common smelt, banded kōkopu, common bully, and shortfin eel (Environment Bay of Plenty 2008). Tahawai Stream is also important for fish passage to migratory indigenous freshwater fish species including At Risk species (K. Owen, Department of Conservation, pers. comm. 2012). There is an inanga spawning site within this site (K. Owen, Department of Conservation, pers. comm. 2012).

Notable site for wading birds and waterbirds. Black stilt (Threatened-Nationally Critical) and wrybill (Threatened-Nationally Vulnerable) have been recorded in the past (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Owen (1993) noted stock access, *Spartina*, and dumped household and garden refuse. *Spartina* may now be eradicated. Manuka in the western outlier of the site has been removed by the adjacent orchardist in the belief

[1] Identified as SVHZ-18 in Wildland Consultants 2006g.
[2] Brown teal have been reintroduced into the Bay of Plenty.

that it has adversely affected kiwifruit pollination (L. Collins, Wildland Consultants, pers. obs.). Nearby manuka on the estuary margin may also have been disturbed.

Key Site Features

This inlet is a relatively large, good quality, representative example of the wetland vegetation of the Tauranga Harbour and is considered regionally significant (see also Beadel 1994a). Pressures operating at the site are related to weeds and neighbouring land uses. One At Risk bird species has been recorded recently, and three Threatened and two At Risk bird species have been recorded here in the past. The site includes the mouths of the Tahawai Stream and Uretara River, which provide habitats and migratory pathways for indigenous species of freshwater fish.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	L
	3.5	M
	3.6	N/A
Diversity and Pattern	3.7	H
Naturalness	3.8	H
Ecological Context	3.9	M
	3.10	M
Viability and Sustainability	3.11	H
	3.12	H
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Australasian bittern (Threatened-Nationally Endangered) Black stilt (Threatened-Nationally Critical) Wrybill (Threatened-Nationally Vulnerable) North Island fernbird (At Risk-Declining) Banded rail (At Risk-Naturally Uncommon) Marsh crake (At Risk-Relict) Brown teal (At Risk-Recovering)[1] **Fish:** Giant kōkopu (At Risk-Declining) Inanga (At Risk-Declining) Longfin eel (At Risk-Declining)

[1] Brown teal has been reintroduced into the Bay of Plenty.

Policy	Criteria Met	Explanation
		Redfin bully (At Risk-Declining) Torrentfish (At Risk-Declining)
ii	✓	Black stilt (Critically Endangered) Australasian bittern (Endangered) Brown teal (Endangered)[1] Giant kōkopu (Vulnerable) Wrybill (Vulnerable)
iii		
iv		
v		Regionally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a WBOPDC reserve.
Policy Met:		11(a)
Justification:		Katikati Inlet is consistent with Policy 11(a) because it is a large, high quality example of estuarine and palustrine wetlands, and it provides habitat for a suite of Threatened and At Risk avifauna.

Notes

Identified as a Category 1 natural heritage site in the Tauranga Ecological District (Wildland Consultants 2008a).

An area of former farmland on the eastern side of the mouth of the Uretara River has been partially re-flooded during the past five years. Pampas, searush, and bachelor's button (*Cotula coronopifolia*) are common and there are areas of bare mud and mangrove seedlings. The site is used by a range of bird species and may, in future, meet the criteria for inclusion in the site. Another area of low-lying pasture immediately south of the site, and adjacent to Uretara Stream, has been reflooded and is in the process of being restored to an estuarine wetland (Wildland Consultants 2006c). This has become a notable site for waders and waterbirds including black stilt, wrybill, and brown teal, and has considerable potential to be an intensively-managed wetland site (for example specifically for waterbirds).

References

Beadel 1992a; Owen 1993; Beadel 1994a; Environment Bay of Plenty 2008; Wildland Consultants 2006c; Wildland Consultants 2006g; Wildland Consultants 2008a; BOPRC 2012.

PARK ROAD ESTUARY

Site Number [1]	007
Grid Reference (NZMG)	E2769742 N6402621
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (WBOPDC reserve) and unprotected parts
Site Area	37.5 ha
Altitudinal Range	0 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Mangrove scrub and shrubland.	Intertidal flat
Estuarine	Mangrove-sea rush shrubland.	Intertidal flat
Palustrine	Manuka scrub.	Wetland
Estuarine	Oioi rushland.	Intertidal flat
Estuarine	Sea rush tussockland.	Intertidal flat
Palustrine	Manuka-pampas/*Cyperus ustulatus*-reed sweetgrass (*Glyceria maxima*) shrubland. (Beadel 1994a, Shaw *et al.* 1999a, Wildland Consultants 2008a)	Wetland

Vegetation and Indigenous Flora

Park Road Estuary is dominated by mangrove scrub and shrubland, and mangrove-sea rush shrubland. The areas of oioi rushland and sea rush tussockland include other species such as saltmarsh ribbonwood, harakeke, *Machaerina juncea*, *Bolboschoenus fluviatilis*, and *Isolepis cernua*. The manuka scrub includes ti kouka, harakeke, *Olearia solandri* (a regionally uncommon plant species), *Machaerina juncea*, and hukihuki. There are small, unmapped areas of arrow grass (*Triglochin striata*)-*Isolepis cernua*--glasswort herbfield.

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon) and North Island fernbird (At Risk-Declining) present (Shaw *et al.* 1999a).

Condition/Pressures

Owen (1993) noted reclamation, drainage, stock access, and dumped orchard prunings. In 1999, grazing stock and dumping of refuse were still impacting upon the site (Shaw *et al.* 1999a). Reed sweetgrass is present and forms the dominant cover in a few places in freshwater wetland on the margins of the site (Wildland Consultants 2005i). The site is bounded by residential and agricultural land uses.

Key Site Features

Park Road Estuary comprises a relatively large example of estuarine vegetation with a wide range of habitats which are characteristic of Tauranga Ecological District. It also contains contiguous freshwater wetlands and provides habitat for two At Risk bird species and one regionally uncommon plant species. Neighbouring land uses and several pest plant species are exerting negative pressures on the natural character of the site.

[1] Identified as SVHZ-19 in Wildland Consultants 2006g.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	H
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	M
Viability and Sustainability	3.11	M
	3.12	H
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** North Island fernbird (At Risk-Declining) Banded rail (At Risk-Naturally Uncommon)
ii		
iii		
iv		
v		Regionally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a WBOPDC reserve.
11(b)		
i	✓	Large portions of the site are indigenous.
ii		
iii	✓	Mangrove scrub and shrubland and other estuarine wetland types.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Park Road Estuary provides habitat for two At Risk bird species, but it is not consistent with Policy 11(a) because it is not a particularly large or high quality example of estuarine wetland. Reed sweetgrass is widespread and the site has been modified by dumping and grazing in the past (these practices may continue). However, it is consistent with Policy 11(b) because it is an example of coastal habitat type that is vulnerable to further modification.

Notes	Identified as a Category 2 natural area in the Tauranga Ecological District (Wildland Consultants 2008a). This site is partially fenced with dog and cat proof fence.
References	Owen 1993; Beadel 1994a; Shaw *et al.* 1999a; Wildland Consultants 2005i; Wildland Consultants 2006g; Wildland Consultants 2008a.

TUTAETAKA ISLAND

Site Number [1]	013
Grid Reference (NZMG)	E2770569 N6400064
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	1.2 ha
Altitudinal Range	0 m asl
Geology-Landform Type	Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa forest. (Beadel 1992a)	Harbour island

Vegetation and Indigenous Flora Tutaekaka Island includes a small example of pohutukawa forest. No rare or uncommon plant species have been recorded at this site.

Indigenous Fauna No rare or uncommon species of fauna have been recorded.

Condition/Pressures Large tree privet and pampas are present near the Urupa and the coastal cliffs. Large radiata pine is present on the southern end of the island. (P. Cashmore, Department of Conservation, pers. comm. 2006). The site is vulnerable to coastal erosion.

Key Site Features This island comprises a locally significant, small example of pohutukawa forest. This forest type was formerly abundant on headlands and hillslopes around Tauranga Harbour, but it has been greatly reduced in extent.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	L
	3.3	L
	3.4	L
	3.5	L
	3.6	N/A
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	M
Viability and Sustainability	3.11	M
	3.12	H
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

[1] Identified as SVHZ-20 in Wildland Consultants 2006g.

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Small area of pohutukawa forest with some exotic species present.
ii		
iii	✓	Pohutukawa forest.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Tutaekaka Island is consistent with Policy 11(b) because it is a small, modified example of a coastal habitat type.

Notes

The vegetation was ranked as being of local significance in Beadel (1994a). There is an Urupa on the island which has been excluded from the natural area.

Identified as a Category 3 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References

Beadel 1992a; Beadel 1994a; Wildland Consultants 2006g; Wildland Consultants 2008a.

TETLEY ROAD INLET

Site Number [1]	004
Grid Reference (NZMG)	E2769143 N6400246
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (Department of Conservation, Tetley Road Marginal Strip and WBOPDC reserve) and unprotected parts
Site Area	13.1 ha
Altitudinal Range	0-5 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Mangrove scrub.	Intertidal flat
Estuarine	Oioi rushland and sea rush tussockland.	Intertidal flat
Palustrine	Grey willow forest, raupo reedland, and a mosaic of freshwater vegetation. (Beadel 1992a)	Wetland

Vegetation and Indigenous Flora

Tetley Road inlet includes mangrove scrub, estuarine wetlands of oioi and sea rush, and palustrine wetlands dominated by grey willow and raupo. No rare or uncommon plant species have been recorded at this site.

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon) and spotless crake (At Risk-Relict) were observed here in 1992 (Owen 1993). Upstream of the site, near Tetley Road, giant kōkopu (At Risk-Declining), banded kōkopu and shortfin eel have been recorded (Wildland Consultants 2005m).

Condition/Pressures

Grey willow infestations in freshwater wetlands. Past damming of tidal inlet (Owen 1993). A portion of the site is bounded by a residential area so may be subject to dumping of garden waste.

Key Site Features

Tetley Road Inlet is a small palustrine wetland and intertidal wetland system, containing vegetation types typical of Tauranga Ecological District. It has been modified by construction works and pest plants. At risk giant kōkopu are known from upstream of the site, and two At Risk bird species have been recorded here in the past.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	L
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	H
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	M

[1] Identified as SVHZ-21 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	M
	3.12	H
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Banded rail (At Risk-Naturally Uncommon) (1993) Spotless crake (At Risk-Relict) (1993) **Fish (recorded upstream):** Giant kōkopu (At Risk-Declining)
ii	✓	Giant kōkopu (Vulnerable)
iii		
iv		
v		Locally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a WBOPDC reserve.
11(b)		
i	✓	Mangrove scrub and other indigenous estuarine wetland vegetation types. The palustrine wetland is infested with grey willow.
ii		
iii	✓	Estuarine wetland
iv	N/A	
v	✓	Migratory fish species have been recorded upstream of the site.
vi		
Policy Met:		11(b)
Justification:		Tetley Road Inlet is consistent with Policy 11(b) because it is a small, modified example of an estuarine wetland. It may provide habitat for two At Risk avifauna species that were recorded at the site in 1992, and the stream is a migratory pathway for indigenous freshwater fish.

Notes Category 3 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References Beadel 1992a; Owen 1993; Wildland Consultants 2005m; Wildland Consultants 2006g; Wildland Consultants 2008a.

REREATUKAHIA

Site Number [1] 003
Grid Reference (NZMG) E2768788 N6399129
Local Authority Western Bay of Plenty District Council
Ecological District Tauranga
Protection Status Protected (WBOPDC) and unprotected parts
Site Area 15.0 ha
Altitudinal Range 0 m asl
Geology-Landform Type Estuarine

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Mangrove scrub and shrubland.	Intertidal flats
Estuarine	Sea rush-oioi-saltmarsh ribbonwood tussockland. (Wildland Consultants 2006g)	Intertidal flats

Vegetation and Indigenous Flora

Rereatukahia is dominated by mangrove scrub and shrubland, and estuarine wetlands of sea rush, oioi, and saltmarsh ribbonwood. No rare or uncommon plant species have been recorded at this site.

Indigenous Fauna

Australasian bittern (Threatened-Nationally Endangered) and North Island fernbird (At Risk-Declining) were recorded here in 1992, within riverine and estuarine habitats and on adjacent, in-filled land around the marae (Owen 1993).

Rereatukahia is a roosting and feeding site for Caspian tern, banded dotterel and wrybill (all Threatened-Nationally Vulnerable), and North Island fernbird (At Risk-Declining) (OSNZ 2006).

This site is near the mouth of the Te Rereatukahia and Ngututura Streams, which is a habitat and migratory pathway for indigenous freshwater fish species, including redfin bully, torrentfish, inanga, and longfin eel (all At Risk-Declining) (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

The riverine wetlands were not fenced to exclude to stock and there was Pampas is present on the margins of the site (Owen 1993). The landward side of the site is bounded by pastoral land.

Key Site Features

Four Threatened and one At Risk bird species have been recorded in the vicinity of this site, but it is not known whether they use the site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	L
Rarity or Distinctive Features	3.2	M
	3.3	L
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	L

[1] Identified as Site Number 131 in Wildland Consultants 2008a.

Criterion*	RPS Number*	Ranking**
Ecological Context	3.9	L
	3.10	L
Viability and Sustainability	3.11	L
	3.12	L
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Australasian bittern (Threatened-Nationally Endangered) (1992) Caspian tern (Threatened-Nationally Vulnerable) Banded dotterel (Threatened-Nationally Vulnerable) Wrybill (Threatened-Nationally Vulnerable) North Island fernbird (At Risk-Declining) **Fish:** Inanga (At Risk-Declining) Longfin eel (At Risk-Declining) Redfin bully (At Risk-Declining) Torrentfish (At Risk-Declining)
ii	✓	Australasian bittern (Endangered) (1992) Wrybill (Vulnerable)
iii		
iv		
v		Locally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a WBOPDC reserve.
11(b)		
i	✓	Mangrove scrub and shrubland with smaller areas of saltmarsh.
ii		
iii	✓	Mangrove scrub and shrubland and saltmarsh.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Rereatukahia is consistent with Policy 11(b) because it comprises indigenous estuarine wetlands, an ecosystem type that is confined to the coastal environment. It is dominated by mangroves and includes smaller areas of other estuarine vegetation types. A suite of Threatened and At Risk bird species has been recorded.

Notes Category 4 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References Beadel 1992a, Owen 1993, OSNZ 2006; Wildland Consultants 2008a.

TE REREATUKAHIA

Site Number [1]	001
Grid Reference (NZMG)	E2768586 N6398205
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (WBOPDC reserve) and unprotected parts
Site Area	24.7 ha
Altitudinal Range	0-17 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Riverine	Ti kouka/manuka forest.	Wetland
Riverine	Grey willow forest.	Wetland
Riverine	Raupo reedland.	Wetland
Estuarine	Sea rush tussockland.	Intertidal flat
Estuarine	Oioi-saltmarsh ribbonwood shrub-sedgeland.	Intertidal flat
Estuarine	Oioi rushland.	Intertidal flat
Estuarine	Manuka shrubland.	Intertidal flat
Estuarine	Manuka scrub.	Intertidal flat
Estuarine	Manuka-*Olearia solandri* scrub.	Intertidal flat
Estuarine	Mangrove scrub and shrubland.	Intertidal flat
Estuarine	Harakeke-*Olearia solandri*-saltmarsh ribbonwood-oioi shrubland.	Intertidal flat
Palustrine	*Machaerina articulata* reedland. (Wildland Consultants 2006g and Beadel 1992a)	Wetland

Vegetation and Indigenous Flora

Olearia solandri (a regionally uncommon plant species) occurs at this site.

Indigenous Fauna

Australasian bittern (Threatened-Nationally Endangered), North Island fernbird (At Risk-Declining) and pied stilt (At Risk-Declining) were recorded here in 1992, using both riverine and estuarine vegetation, as well as adjacent, in-filled land around the marae (Owen 1993).

Roosting and feeding site for brown teal[2] (At Risk-Recovering); Caspian tern, wrybill, banded dotterel (all Threatened-Nationally Vulnerable); North Island fernbird (At Risk-Declining) (OSNZ 2006).

This site includes the mouth of Te Rereatakahia Stream, which is a habitat and migratory pathway for indigenous freshwater fish species, including redfin bully and torrentfish (both At Risk-Declining) (K. Owen, Department of Conservation, pers. comm. 2012). This site also includes the mouth of Te Mania Stream, which is habitat and migratory pathway for indigenous freshwater fish species, including inanga, longfin eel, redfin bully, and torrentfish (all At Risk-Declining) (K. Owen, Department of Conservation, pers. comm. 2012). The site also includes the mouth of the Ngututuru Stream, which is probably also a habitat and migratory pathway for indigenous species of freshwater fish.

Condition/Pressures

Most weed problems in 1992 were noted on the small vegetated islets within the saltmarsh. The riverine wetlands were not fenced off and there was

[1] Identified as SVHZ-22 in Wildland Consultants 2006g.
[2] Brown teal has been reintroduced into the Bay of Plenty.

evidence of damage from cattle (Owen 1993). Since 1993 at least part of the riverine wetland has been fenced and planted, as has a steep face on the south side of the estuary (Wildland Consultants 2006g). Pampas is present on the margins of the site.

Key Site Features

The Te Rereatukahia Stream is narrow and convoluted, but locally significant because it functions as a key ecological linkage between Sapphire Springs Recreation Reserve and Kaimai-Mamaku Conservation Park. Four Threatened, three At Risk bird species, and one regionally uncommon plant species have been recorded at this site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	H
Ecological Context	3.9	M
	3.10	M
Viability and Sustainability	3.11	M
	3.12	H
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Australasian bittern (Threatened-Nationally Endangered) (1992) Caspian tern (Threatened-Nationally Vulnerable) Banded dotterel (Threatened-Nationally Vulnerable) Wrybill (Threatened-Nationally Vulnerable) North Island fernbird (At Risk-Declining) Pied stilt (At Risk-Declining) Brown teal (At Risk-Recovering)[1] **Fish:** Inanga (At Risk-Declining) Longfin eel (At Risk-Declining) Redfin bully (At Risk-Declining) Torrentfish (At Risk-Declining)
ii	✓	Australasian bittern (Endangered) (1992)

[1] Brown teal has been reintroduced into the Bay of Plenty.

Policy	Criteria Met	Explanation
		Brown teal (Endangered)[1] Wrybill (Vulnerable)
iii		
iv		
v		Regionally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a WBOPDC reserve.
11(b)		
i	✓	Predominantly indigenous wetlands and scrub.
ii		
iii	✓	Estuarine wetlands.
iv	N/A	
v	✓	The mouth of the Ngututuru Stream is probably a migratory pathway for indigenous freshwater fish.
vi		
Policy Met:		11(b)
Justification:		Te Rereatukahia is consistent with Policy 11(b) because it comprises indigenous vegetation types and ecosystem types that are confined to the coastal environment. A suite of Threatened and At Risk bird species have been recorded at Te Rereatukahia, and fencing and planting undertaken during the past decade have improved its condition.

Notes Category 2 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References Beadel 1992a, Owen 1993, OSNZ 2006; Wildland Consultants 2006g; Wildland Consultants 2008a.

WAITEKOHE STREAM MOUTH

Site Number [1]	010
Grid Reference (NZMG)	E2770272 N6398283
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (WBOPDC reserve) and unprotected parts
Site Area	30.6 ha
Altitudinal Range	0 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Mangrove scrub and shrubland.	Intertidal flat
Estuarine	Sea rush-oioi-(saltmarsh ribbonwood) rushland and tussockland.	Intertidal flat
Terrestrial	Sandspit vegetation.	Beach sands
Terrestrial	*Samolus repens* herbfield.	Beach sands
Palustrine/Estuarine	*Machaerina articulata*-sea rush-oioi reedland.	Wetland
Palustrine	Open water. (Beadel 1992a)	Artificial pond

Vegetation and Indigenous Flora

Waitekohe Stream Mouth is predominantly mangrove scrub and shrubland, with variable mixtures of sea rush, oioi, and saltmarsh ribbonwood along the stream. Towards the north of the site there are small areas of sandspit vegetation, *Samolus repens* herbfield, and *Machaerina articulata*-sea rush-oioi reedland. No rare or uncommon plant species have been recorded at this site.

Indigenous Fauna

Australasian bittern (Threatened-Nationally Endangered), banded rail, little shag (both At Risk-Naturally Uncommon) and North Island fernbird (At Risk-Declining) were recorded here in 1992 (Owen 1993).

Longfin eel, torrentfish, redfin bully (all At Risk-Declining) and shortfin eel have been recorded from the stream, and the stream mouth is important as migratory pathway (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Drainage, stop-banking, stock access, spartina, reclamation and dumping of refuse were pressures on this site in 1992 (Owen 1993). Most of the site is bounded by pastoral land, with smaller areas of horticulture.

Key Site Features

Waitekohe Stream Mouth is a moderately large site which is relatively close to other similar sites (for example Te Rereatukahia and Matahui Road). These features increase its ecological viability. The indigenous vegetation has been modified by human activity and weeds. One Threatened and three At Risk bird species have been recorded from this site, but additional information is required on the nature and extent of current fauna use.

[1] Identified as SVHZ-23 in Wildland Consultants 2006g.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	L
Viability and Sustainability	3.11	M
	3.12	H
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Australasian bittern (Threatened-Nationally Endangered) (1992) North Island fernbird (At Risk-Declining) (1992) Banded rail (At Risk-Naturally Uncommon) (1992) Little shag (At Risk-Naturally Uncommon) (1992) **Fish:** Longfin eel (At Risk-Declining) Redfin bully (At Risk-Declining) Torrentfish (At Risk-Declining)
ii	✓	Australasian bittern (Endangered) (1992)
iii		
iv		
v		Locally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a WBOPDC reserve.
11(b)		
i	✓	Predominantly mangrove scrub and shrubland.
ii		
iii	✓	Mangrove scrub and shrubland and other estuarine wetland types.
iv	N/A	
v	✓	The stream may be a migratory pathway for indigenous fish.
vi		
Policy Met:		11(b)
Justification:		Waitekohe Stream Mouth is consistent with Policy 11(b) because it comprises a coastal ecosystem types and the stream may be a migratory pathway for indigenous fish. Four Threatened or At Risk bird species were recorded at the site in 1992.

Notes	Category 3 natural area in Tauranga Ecological District (Wildland Consultants 2008a).
References	Beadel 1992a; Owen 1993; Wildland Consultants 2006g; Wildland Consultants 2008a.

MATAHUI ROAD

Site Number [1] 012
Grid Reference (NZMG) E2770753 N6396793
Local Authority Western Bay of Plenty District Council
Ecological District Tauranga
Protection Status Protected (WBOPDC reserve) and unprotected parts
Site Area 20.6 ha
Altitudinal Range 0 m asl
Geology-Landform Type Estuarine

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Mangrove scrub and shrubland.	Intertidal flat
Estuarine	Harakeke/*Machaerina juncea*-saltmarsh ribbonwood-oioi rushland.	Intertidal flat
Estuarine	Sea rush tussockland and oioi rushland. (Beadel 1992a, Wildland Consultants 2008a)	Intertidal flat

Vegetation and Indigenous Flora

The Matahui Road site is dominated by mangrove scrub and shrubland, which probably also includes sea rush and oioi. Along the landward edge of the mangroves are areas of harakeke/*Machaerina juncea*-saltmarsh ribbonwood-oioi sedgeland, sea rush tussockland and oioi rushland. No rare or uncommon plant species have been recorded at this site.

Indigenous Fauna

Black stilt/hybrid (black stilt are claasified as Threatened-Nationally Critical); wrybill (Threatened-Nationally Vulnerable) recorded roosting and feeding since 2003 (OSNZ 2006). Banded rail (At Risk-Naturally Uncommon) sign, North Island fernbird (At Risk-Declining), Australasian bittern (Threatened-Nationally Endangered) detected in 1992 (Owen 1993).

Condition/Pressures

Owen (1993) noted stock access and weeds, for example pampas, wattle, and blackberry. Pampas remains present. The site is bounded by pastoral land and small areas of production forest.

Key Site Features

Matahui Road is a relatively large site and is in close proximity to other similar sites (for example Te Rereatukahia and Waitekohe Stream Mouth), which increases its ecological viability. However, the indigenous vegetation has been modified by human and weed impacts. This is a regionally significant area because three Threatened and two At Risk bird species have been recorded from this site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M

[1] Identified as SVHZ-24 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Ecological Context	3.9	M
	3.10	L
Viability and Sustainability	3.11	M
	3.12	H
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Black stilt/hybrid (itinerant record; black stilt are classified as Threatened-Nationally Critical) Australasian bittern (Threatened-Nationally Endangered) (1992) Wrybill (Threatened-Nationally Vulnerable) (1992) Banded rail (At Risk-Naturally Uncommon) (1992) North Island fernbird (At Risk-Declining) (1992)
ii	✓	Black stilt (itinerant record of a black stilt/hybrid, black stilt are classified as Critically Endangered) Australasian bittern (Endangered) Wrybill (Vulnerable)
iii		
iv		
v		Regionally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a WBOPDC reserve.
11(b)		
i	✓	Mangrove scrub and shrubland and other indigenous estuarine wetland vegetation types.
ii		
iii	✓	Mangrove scrub and shrubland and other estuarine wetland vegetation types which have been modified by weeds and domestic stock.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Matahui Road is consistent with Policy 11(b) because it is an example of a predominantly indigenous vegetation type that is found only in the coastal environment, but it is not consistent with Policy 11(a) because it is not one of the best examples of its type in the Tauranga Ecological District.

Notes Category 2 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References Beadel 1992a; Owen 1993; OSNZ 2006; Wildland Consultants 2006g; Wildland Consultants 2008a.

MATAHUI POINT INTERTIDAL FLATS

Site Number [1]	026
Grid Reference (NZMG)	E2773074 N6398044
Local Authority	Western Bay of Plenty District
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	16.4 ha
Altitudinal Range	0 m asl
Geology-Landform Type	Estuarine

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Intertidal flats.	Intertidal flat
Estuarine	Mosaic of estuary margin vegetation types (minor areas). (Beadel 1992a)	Intertidal flat

Vegetation and Indigenous Flora

Matahui Point Intertidal Flats is predominantly unvegetated, though there are limited areas of estuarine margin vegetation. No rare or uncommon plant species have been recorded at this site.

Indigenous Fauna

Matahui Point Intertidal Flats is one of the most important roosting sites for waders in Tauranga Harbour. It regularly hosts thousands of waders, including migrating black stilts (Threatened-Nationally Critical), bar-tailed godwit, ruddy knot, and New Zealand pied oystercatcher (At Risk-Declining) (Owen *et al.* 2006). Its position near the main Tauranga Harbour watershed means it is near to feeding areas exposed for the longest duration between high tides. It is available as a neap high tide roosting site for *c.*20 days per month (Owen *et al.* 2006). Other species recorded here in the last one to three years include Caspian tern (Threatened-Nationally Vulnerable), pied stilt (At Risk-Declining), banded rail (At Risk-Naturally Uncommon), red-billed gull (Threatened-Nationally Vulnerable), and wrybill (Threatened-Nationally Vulnerable) (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

The relative isolation of this site and lack of facilities like boat ramps mean direct human disturbance has been low. However, a grass airstrip on adjacent land may make the site less attractive to birds in the future (Owen *et al.* 2006) and conversion of part of the point to intensive horticulture may also have increased human-related disturbance.

Key Site Features

Matahui Point Intertidal Flats is of national significance as a roosting habitat for large and diverse flocks of international and New Zealand migratory wader species. Pressure and disturbance on this site is low due to its remoteness from facilities like roads, boat ramps, and other means of beach access. Disturbance from a recently constructed grass airstrip on farmland nearby may diminish fauna usage of this site in the future (K. Owen, Department of Conservation, pers. comm. 2008). Four Threatened and three At Risk bird species have been recorded at this site.

[1] Identified as SVHZ-25 Wildland Consultants 2006g.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	M
	3.5	H
	3.6	N/A
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	H
	3.12	M
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Black stilt (Threatened-Nationally Critical) Caspian tern (Threatened-Nationally Vulnerable) Red-billed gull (Threatened-Nationally Vulnerable) Wrybill (Threatened-Nationally Vulnerable) New Zealand pied oystercatcher (At Risk-Declining) Pied stilt (At Risk-Declining) Banded rail (At Risk-Nationally Uncommon)
ii	✓	Black stilt (Critically Endangered) Wrybill (Vulnerable)
iii		Largely unvegetated intertidal flats.
iv		
v	✓	Nationally Significant
vi		Unprotected
Policy Met:		11(a)
Justification:		Matahui Point Intertidal Flats is consistent with Policy 11(a) because it is an important roosting and feeding site for wading birds (including Threatened and At Risk species) and it has previously been identified as being of national significance. It is a high quality example of a neap high tide roost because of its proximity to feeding areas and relatively low levels of human disturbance.

Notes

This site is part of Mid Tauranga Harbour Key Ecological Zone (Wildland Consultants 2006g).

Category 1 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References

Beadel 1992a; B. Chudleigh (OSNZ) pers. comm. 2006; Owen *et al.* 2006; Wildland Consultants 2006g; Wildland Consultants 2008a.

AONGATETE ESTUARY

Site Number[1]	020
Grid Reference (NZMG)	E2772199 N6395892
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (Department of Conservation, Aongatete River Marginal Strip and WBOPDC reserve) and unprotected parts
Site Area	127.2 ha
Altitudinal Range	0-3 m asl
Geology-Landform Type	Estuarine
HVES Number	43

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Mangrove scrub and shrubland.	Intertidal flat
Estuarine	Mangrove-sea rush-oioi shrubland.	Intertidal flat
Estuarine	Sea rush tussockland, oioi rushland, and oioi-saltmarsh ribbonwood shrub-rushland.	Intertidal flat
	(Beadel 1994a, Wildland Consultants 2008a)	

Vegetation and Indigenous Flora

Aongatete Estuary includes examples of mangrove scrub and shrubland, mangrove-sea rush-oioi shrubland, sea rush tussockland, oioi rushland, and oioi-saltmarsh ribbonwood shrub-rushland. No rare or uncommon plant species have been recorded at this site.

Indigenous Fauna

Australasian bittern (Threatened-Nationally Endangered); banded rail, black shag (both At Risk-Naturally Uncommon), North Island fernbird, pied stilt (both At Risk-Declining) are present (K. Owen, Department of Conservation, pers. comm. 2007). Grey teal were present in 1992 (Owen 1993).

The site includes the mouth of the Aongatete River, which is a habitat and migratory pathway of indigenous species of freshwater fish such as longfin eel (At Risk-Declining), banded kōkopu (Environment Bay of Plenty 2008). Aongatete River catchment has redfin bully (At Risk-Declining), inanga (At Risk-Declining), common smelt, shortfin eel, giant bully, and banded kōkopu, so the estuary and river mouth are important as a migratory pathway K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Owen (1993) noted stock access, stormwater discharge, and weeds, i.e. pampas, wattles, wilding pines. The landward margins of the site are bounded by pastoral land.

Key Site Features

Aongatete Estuary is nationally significant due to the high diversity and large extent of high quality mangrove and saltmarsh vegetation types present. It contains large areas of representative mangrove stands which are diverse in stature and density, and contiguous with high quality saltmarsh that is characteristic of the Tauranga Harbour. One Threatened and four At Risk bird species are present. The site includes the mouth of the Aongatete River, which is a habitat and migratory pathway for indigenous species of freshwater fish.

[1] Identiifed as SVHZ-26 in Wildland Consultants 2006g.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	L
	3.5	H
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	H
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	H
	3.12	H
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Australasian bittern (Threatened-Nationally Endangered) Banded rail (At Risk-Naturally Uncommon) Black shag (At Risk-Naturally Uncommon) North Island fernbird (At Risk-Declining) Pied stilt (At Risk-Declining) **Fish:** Inanga (At Risk-Declining) Longfin eel (At Risk-Declining) Redfin bully (At Risk-Declining)
ii	✓	Australasian bittern (Endangered)
iii	✓	High quality estuarine vegetation.
iv		
v	✓	Nationally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a WBOPDC reserve.
Policy Met:		11(a)
Justification:		Aongatete Estuary has previously been classified as nationally significant and a suite of Threatened and At Risk bird species are present. It is consistent with Policy 11(a) because it comprises a relatively large and high quality example of a diversity of estuarine vegetation types.

Notes Identified as a Category 1 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

References Beadel 1992a; Owen 1993; Beadel 1994a; Environment Bay of Plenty 2008; Wildland Consultants 2006g; Wildland Consultants 2008a.

WAINUI ESTUARY

Site Number[1]	023
Grid Reference (NZMG)	E2772999 N6393466
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (WBOPDC reserve) and unprotected parts
Site Area	171.7 ha
Altitudinal Range	0-20 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Mangrove scrub and shrubland.	Intertidal flat
Estuarine	Sea rush tussockland, oioi rushland, and oioi-sea rush rushland.	Intertidal flat
Estuarine	Oioi-saltmarsh ribbonwood shrub-rushland.	Intertidal flat
Estuarine	Sea rush-oioi-saltmarsh ribbonwood-*Machaerina juncea* rushland.	Intertidal flat
Palustrine	Manuka shrubland.	Wetland
Palustrine	Grey willow forest.	Wetland
Palustrine	Kanuka-grey willow/harakeke flaxland.	Wetland
Palustrine	*Machaerina articulata* reedland.	Wetland
	(Beadel 1994a and Wildland Consultants 2005m)	

Vegetation and Indigenous Flora

Wainui Estuary includes relatively large areas of mangrove scrub and shrubland with examples of saline and freshwater wetlands on the landward sides of the mangroves. Species in the estuarine wetlands include sea rush, oioi, *Machaerina juncea*, and saltmarsh ribbonwood. Freshwater wetlands include harakeke, *Machaerina articulata*, manuka, and raupo. No rare or uncommon plant species have been recorded at this site.

Indigenous Fauna

Prestidge Island is another important roost that is used by shorebirds (Owen *et al.* 2006). Australasian bittern (Threatened-Nationally Endangered) was recorded in 2007 (K. Owen, Department of Conservation, pers. comm. 2012). Banded rail (At Risk-Naturally Uncommon), North Island fernbird, and white-fronted tern (both At Risk-Declining) were all recorded in 1991 (Owen 1993), and were still present in good numbers in 2006 (K. Owen, Department of Conservation, pers. comm. 2006). New Zealand pied oystercatcher (At Risk-Declining), pied stilt (At Risk-Declining), wrybill (Threatened-Nationally Vulnerable), Caspian tern (Threatened-Nationally Vulnerable), and little shag (At Risk-Naturally Uncommon) were all recorded in 2009 (K. Owen, Department of Conservation, pers. comm. 2012).

The site includes the mouth of the Wainui River, which is a habitat and migratory pathway of indigenous species of freshwater fish, including shortjaw kōkopu (At Risk-Declining) (Environment Bay of Plenty 2008).

Condition/Pressures

Owen (1993) noted stock access, reclamation, agricultural effluent discharge, and pampas. The landward margins of the site comprise pastoral and horticultural land and residential curtilages. Weed invasion or dumping of garden waste may be issues near residences.

Key Site Features

Wainui Estuary is a relatively large, albeit modified, example of estuarine

[1] Identified as SVHZ-27 in Wildland Consultants 2006g.

habitat. It also contains small examples of freshwater wetlands. Good numbers of Threatened and At Risk bird species inhabit the site today and the Wainui River is a habitat and migratory pathway of indigenous species of freshwater fish.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	M
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	H
Ecological Context	3.9	M
	3.10	L
Viability and Sustainability	3.11	H
	3.12	H
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
I	✓	**Avifauna:** Australasian bittern (Threatened-Nationally Endangered) Caspian tern (Threatened-Nationally Vulnerable) Wrybill (Threatened-Nationally Vulnerable) New Zealand pied oystercatcher (At Risk-Declining) North Island fernbird (At Risk-Declining) Pied stilt (At Risk-Declining) Banded rail (At Risk-Naturally Uncommon) Little shag (At Risk-Naturally Uncommon) White-fronted tern (At Risk-Naturally Uncommon) **Fish:** Shortjaw kōkopu (At Risk-Declining)
ii	✓	Australasian bittern (Endangered) Shortjaw kōkopu (Vulnerable) Wrybill (Vulnerable)
iii	✓	High quality estuarine and palustrine wetland habitats.
iv		
v		Regionally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a WBOPDC reserve.

Policy	Criteria Met	Explanation
Policy Met:		11(a)
Justification:		Wainui Estuary is consistent with Policy 11(a) because it is relatively large and high quality, includes estuarine and palustrine wetlands, and provides habitat for a suite of Threatened and At Risk bird species.

Notes Identified as a Category 1 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

References Owen 1993; Beadel 1994a; Environment Bay of Plenty 2008; Wildland Consultants 2005m; Wildland Consultants 2006g; Wildland Consultants 2008a.

WAINUI ESTUARY WETLANDS

Site Number[1]	019
Grid Reference (NZMG)	E2771364 N6391877
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (Department of Conservation, Wainui River Marginal Strip and QEII covenants and WBOPDC reserve) and unprotected parts
Site Area	11.6 ha
Altitudinal Range	12-20 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium
HVES Number	156

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Oioi-sea rush-(saltmarsh ribbonwood) rushland.	Intertidal flat
Estuarine	Saltmarsh ribbonwood-harakeke-pampas-*Olearia solandri*-(manuka) shrubland.	Intertidal flat
Terrestrial	Black wattle (*Acacia mearnsii*)-*Eucalyptus* sp.-(maritime pine)-(rewarewa)/mamaku-kanuka forest.	Undulating low hills
Palustrine	Grey willow/manuka forest.	Wetland
Palustrine	Grey willow/raupo forest.	Wetland
Palustrine	Ti kouka/manuka-mamaku-grey willow treeland.	Wetland
Palustrine	Mamaku-manuka-harakeke-mahoe-barberry scrub.	Wetland
Estuarine	Manuka-saltmarsh ribbonwood-(harakeke)-(toetoe) shrubland ⇔ oioi-saltmarsh ribbonwood rushland.	Intertidal flat
Palustrine	Raupo reedland. (Beadel 1992a)	Wetland

Vegetation and Indigenous Flora

Wainui wetland comprises estuarine wetlands along the margin of the Wainui River, several small patches of palustrine wetlands, and secondary indigenous forest on the hillslopes adjacent to these. The intertidal flats are mostly vegetated with oioi interspersed with sea rush, although shrublands of saltmarsh ribbonwood, harakeke, pampas and *Olearia solandri* (a regionally uncommon plant species) are also present. Small, peripheral areas of palustrine wetland are generally dominated by grey willow and raupo, with areas of manuka and ti kouka. The forest is dominated by common secondary indigenous species such as mamaku and kanuka, although exotic tree species are frequent emergents.

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon) and North Island fernbird (At Risk-Declining) recorded in 1991 (Owen 1993). The adjacent waterway is habitat for migratory freshwater fish species where shortjaw kōkopu (At Risk-Declining) were recorded in 1994 (NIWA 2006).

Condition/Pressures

Pest plants present at this site include woolly nightshade (*Solanum mauritianum*), grey willow, and black wattle. Tradescantia and moth plant are present adjacent to the site, along the roadside.

Key Site Features

Wainui Estuary Wetlands includes representative examples of estuarine wetlands adjacent to a river, and small examples of freshwater wetlands. The site is located directly upstream from Wainui Estuary, another regionally

[1] Identified as SVHZ-28 in Wildland Consultants 2006g.

significant site with which it forms a representative ecological sequence of estuarine, freshwater, and terrestrial vegetation. It provides reasonably good quality habitat for two At Risk bird species and one regionally uncommon plant species.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	M
	3.5	M
	3.6	M
Diversity and Pattern	3.7	H
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	M
	3.12	H
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Banded rail (At Risk-Naturally Uncommon) North Island fernbird (At Risk-Declining) **Fish:** Shortjaw kōkopu (At Risk-Declining)
ii	✓	Shortjaw kōkopu (Vulnerable)
iii	✓	High quality estuarine and palustrine wetlands adjacent to Wainui River.
iv		
v		Regionally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a WBOPDC reserve.
Policy Met:		11(a)
Justification:		Wainui Estuary Wetlands is consistent with Policy 11(a) because it comprises the best example in Tauranga Ecological District of estuarine and palustrine wetlands adjacent to a river. It provides habitat for two At Risk bird species.

Notes Identified as a Category 1 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

References Owen 1993; Beadel 1992; Beadel 1994a; NIWA 2006; Wildland Consultants 2006g; Wildland Consultants 2008a.

TE HOPAI ISLAND

Site Number[1]	031
Grid Reference (NZMG)	E2774553 N6393180
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	63.3 ha
Altitudinal Range	0 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium
HVES Number	42

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Mangrove scrub and shrubland, and mangrove/oioi-sea rush-glasswort shrubland.	Intertidal flat
Estuarine	Sandspit vegetation.	Beach sands
Estuarine	Oioi-saltmarsh ribbonwood shrub-rushland.	Intertidal flat
Palustrine/estuarine	*Olearia solandri*-*Coprosma propinqua* subsp. *propinqua*-toetoe/oioi-saltmarsh ribbonwood shrubland and *Coprosma propinqua* subsp. *propinqua*-toetoe-saltmarsh ribbonwood-*Olearia solandri*-manuka/oioi rushland.	Wetland, intertidal flat
Palustrine/estuarine	Manuka forest.	Wetland, intertidal flat
Palustrine/estuarine	Harakeke-*Olearia solandri*-saltmarsh ribbonwood-oioi shrubland.	Wetland, intertidal flat
Palustrine/estuarine	Oioi-saltmarsh ribbonwood shrub-rushland ⇔ glasswort herbfield ⇔ mudflats.	Wetland, intertidal flat
Palustrine/estuarine	Mangrove-(glasswort) shrubland.	Wetland, intertidal flat
Palustrine/estuarine	Manuka-*Olearia solandri* scrub.	Wetland, intertidal flat
Palustrine/estuarine	*Olearia solandri*/oioi rushland.	Wetland, intertidal flat
Palustrine/terrestrial	Ngaio (*Myoporum laetum*)/*Coprosma propinqua* subsp. *propinqua*-*Olearia solandri*-saltmarsh ribbonwood shrubland. (Beadel 1992a)	Wetland

Vegetation and Indigenous Flora

Te Hopai Island includes mangrove scrub and shrubland with oioi, sea rush, and glasswort, and oioi-saltmarsh ribbonwood shrub-rushland. An area on the north-western side of the site comprises variable mixtures of *Olearia solandri* (a regionally uncommon plant species), *Coprosma propinqua* subsp. *propinqua*, toetoe, saltmarsh ribbonwood, manuka, harakeke, and oioi. *Austrostipa stipoides* and *Olearia solandri*, both regionally uncommon, are present. The island is the northern limit of *Austroderia toetoe*.

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon) and North Island fernbird (At Risk-Declining) utilise this site (Owen 1993; Owen *et al.* 2006) and it is used as a high tide roost by waders when tidal conditions are suitable. It supports a colony of black-backed gulls (BOPRC 2012).

Condition/Pressures

Low numbers of gorse and hawthorn are present and there are low numbers of Norway rats and mice (Environment Bay of Plenty 2007). The island is low-lying and may be subject to erosion and/or accretion as a result of tidal and wind action.

[1] Identified as SVHZ-29 in Wildland Consultants 2006g.

Key Site Features Te Hopai Island comprises a high quality, varied sequence of vegetation from intertidal flat to palustrine wetland. It is probably the least modified substantial area of estuarine vegetation in Tauranga Harbour (Beadel 1992a). It provides habitat for two At Risk bird species and is used by waders as a high tide roost. Two regionally uncommon plant species have been recorded here.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	H
	3.5	H
	3.6	N/A
Diversity and Pattern	3.7	H
Naturalness	3.8	H
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	H
	3.12	H
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Banded rail (At Risk-Naturally Uncommon) North Island fernbird (At Risk-Declining)
ii		
iii	✓	High quality mosaic of estuarine and palustrine wetlands.
iv	✓	Toetoe (*Austroderia toetoe*) is at its northern limit of distribution.
v	✓	Nationally Significant
vi		Unprotected
Policy Met:		11(a)
Justification:		Te Hopai Island is consistent with Policy 11(a) because it comprises a very high quality mosaic of estuarine wetlands, palustrine wetlands, and coastal scrub which has been assessed as being of national significance. Toetoe (*Austroderia toetoe*) reaches its northern limit on the island. Te Hopai Island is used as a high tide roost by wading birds, and provides habitat for two At Risk avifauna species.

Notes Identified as a Category 1 natural area in the Tauranga Ecological District (Wildland Consultants 2008a). This site is part of the Mid Tauranga Harbour Key Ecological Zone (Wildland Consultants 2006g).

References Beadel 1992a; Owen 1993; Environment Bay of Plenty 2007; Wildland Consultants 2006g; Wildland Consultants 2008a; BOPRC 2012.

APATA ESTUARY

Site Number[1]	030
Grid Reference (NZMG)	E2774412 N6391358
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	66.4 ha
Altitudinal Range	0-20 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Mangrove scrub and shrubland.	Intertidal flat
Estuarine	Oioi-sea rush rushland.	Intertidal flat
Estuarine	Sandspit vegetation.	Beach sands
Palustrine	Raupo reedland.	Wetland
	(Beadel 1992a; Beadel 1994a and Wildland Consultants 2006g)	

Vegetation and Indigenous Flora

Apata Estuary includes a relatively extensive area of mangrove scrub and shrubland, with smaller examples of oioi-sea rush rushland, sandspit vegetation, and raupo reedland along the landward margins of the site. No rare or uncommon plant species have been recorded at this site.

Indigenous Fauna

Australasian bittern (Threatened-Nationally Endangered), banded rail (At Risk-Naturally Uncommon), marsh crake (At Risk-Relict) and North Island fernbird (At Risk-Declining) recorded in 1991 (Owen 1993).

Condition/Pressures

Owen (1993) noted stock access. Weed species that are likely to be present include pampas and gorse. The site is bounded by a rail corridor and pastoral land, and SH2 passes through the southern tip of the site.

Key Site Features

Apata Estuary contains a large, good quality stand of mangroves, with relatively narrow strips of saltmarsh along its margins. One Threatened and three At Risk bird species have been recorded from here in the past.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M

[1] Identified as SVHZ-30 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	M
	3.12	H
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Australasian bittern (Threatened-Nationally Endangered) (1991) North Island fernbird (At Risk-Declining) (1991) Marsh crake (At Risk-relict) (1991) Banded rail (At Risk-Naturally Uncommon) (1991)
ii	✓	Australasian bittern (Endangered) (1991)
iii		
iv		
v		Regionally Significant
vi		Unprotected
11(b)		
i	✓	Mangrove scrub and shrubland, oioi-sea rush rushland, raupo reedland.
ii		
iii	✓	Mangrove scrub and shrubland and oioi-sea rush rushland.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Apata Estuary is dominated by a large stand of mangroves with narrow strips of saltmarsh and palustrine wetlands. It is not one of the best representative examples of estuarine wetland in Tauranga Harbour, so its values are consistent with Policy 11(b). Threatened and At Risk avifauna were recorded at the site in 1991.

Notes Identified as a Category 1 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

References Beadel 1992a; Owen 1993; Beadel 1994a; Wildland Consultants 2006g; Wildland Consultants 2008a.

NGAKAUTUAKINA POINT

Site Number[1]	038
Grid Reference (NZMG)	E2776297 N6392942
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	4.4 ha
Altitudinal Range	0-20 m asl
Geology-Landform Type	Sedimentary (volcanic) unconsolidated

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa forest.	Hills, cliffland
Terrestrial	Mamaku-mahoe-gorse scrub. (Wildland Consultants 2006g)	Hills, cliffland

Vegetation and Indigenous Flora

Ngakautuakina is dominated by pohutukawa forest with smaller areas of secondary scrub. Indigenous species in the understorey of the pohutukawa forest include karaka, kawakawa, ponga, hangehange, *Gahnia* sp., and *Astelia banksii*. *Astelia banksii* is regionally uncommon.

Indigenous Fauna

It is possible that moko skink (At Risk-Relict), which is present at some headlands in the inner Tauranga Harbour, is present at this site (J. Heaphy, Department of Conservation, pers. comm. 2006).

Condition/Pressures

Exotic species include macrocarpa (*Cupressus macrocarpa*), brush wattle, wild ginger, ivy, pampas, and radiata pine. Adjacent residential properties may be a source of future weed invasions. Domestic cats and dogs may also be an issue, for example cats hunting moko skink. In the long-term, erosion of the coastal cliff may threaten the site.

Key Site Features

Ngakautuakina is locally significant because it comprises a small example of coastal pohutukawa forest. Pohutukawa forest was once common in Tauranga Ecological District, but has now been greatly reduced in extent and only small areas remain (for example Mauao, Kauri Point, Tanners Point, Matakana Point, Bowentown Heads, Motuhoa Island) (Beadel 1994a). One regionally uncommon plant species is present at this site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	L
	3.3	L
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	L

[1] Identified as SVHZ-31 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Small area of pohutukawa forest and mamaku scrub modified by exotic species and residential encroachment.
ii		
iii	✓	Pohutukawa forest
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Ngakautuakina Point comprises a small, modified example of pohutukawa forest. The site is consistent with Policy 11(b) because pohutukawa forest has been greatly reduced in extent and relatively few areas remain on the margins of Tauranga Harbour.

Notes Identified as a Category 3 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

References Wildland Consultants 2006g; Wildland Consultants 2008a.

WAIPAPA ESTUARY

Site Number [1]	041
Grid Reference (NZMG)	E2776341 N6391212
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (WBOPDC reserve) and unprotected parts
Site Area	80.0 ha
Altitudinal Range	0-43 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Mangrove scrub.	Intertidal flat
Estuarine	Oioi-saltmarsh ribbonwood shrub-rushland.	Intertidal flat
Estuarine	Mangrove-sea rush-oioi shrubland.	Intertidal flat
Estuarine	Sea rush tussockland.	Intertidal flat
Estuarine	Oioi rushland and sea rush tussockland.	Intertidal flat
Estuarine	Oioi rushland.	Intertidal flat
Estuarine	*Olearia solandri*-oioi rushland.	Intertidal flat
Palustrine	Manuka-harakeke-toetoe shrubland.	Wetland
Palustrine	Manuka scrub.	Wetland
Palustrine	Grey willow forest.	Wetland
Terrestrial	Sandspit vegetation.	Beach sands
Terrestrial	Mamaku treefernland. (Beadel 1992a)	Hillslope

Vegetation and Indigenous Flora

Waipapa Estuary includes intertidal wetlands of mangrove, oioi, sea rush, saltmarsh ribbonwood, and *Olearia solandri* (a regionally uncommon plant species). *Machaerina juncea* and *Schoenoplectus pungens* are also likely to be present. Inland of the intertidal wetlands are freshwater wetlands of manuka, harakeke, toetoe, and grey willow, with an area of mamaku forest on an adjacent hillslope at the southwest of the site.

Indigenous Fauna

Caspian tern (Threatened-Nationally Vulnerable), banded rail (At Risk-Naturally Uncommon), pied stilt, New Zealand pied oystercatcher, North Island fernbird (all At Risk-Declining) were recorded in 1991 (Owen 1993; Owen *et al.* 2006). North Island fernbird were recorded again in 2006 (Wildland Consultants 2006a). Pied shag (Threatened-Nationally Vulnerable) is present (K. Owen, Department of Conservation, pers. comm. 2012).

The site includes the mouth of the Waipapa River, which is a habitat and migratory pathway of indigenous species of freshwater fish, including inanga, longfin eel, redfin bully, torrentfish (At Risk-Declining), shortfin eel, and banded kōkopu (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Owen (1993) recorded stock access and weeds such as woolly nightshade, grey willow, pampas, and wilding pines. The site is bounded by pastoral land and residential areas, which may be a source of weed invasion. Domestic cats and dogs may also encroach into the site.

Key Site Features

Waipapa Estuary is regionally significant because it comprises relatively large, good quality, representative examples of intertidal vegetation and small

[1] Identified as SVHZ-32 in Wildland Consultants 2006g.

examples of freshwater wetlands contiguous with estuarine wetlands. The site also includes a representative, relatively large example of high quality oioi rushland inland from the main harbour and adjacent to a tidal stream (Beadel 1994a). There are recent or past records of two Threatened and four At Risk bird species. The sandspit provides good habitat for high-tide roosting for gulls, terns, waterbirds, pied shag (K. Owen, Department of Conservation, pers. comm. 2012), and waders. The Waipapa River is an important habitat and migratory pathway of indigenous species of freshwater fish.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	H
Naturalness	3.8	H
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	M
	3.12	H
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Caspian tern (Threatened-Nationally Vulnerable) Pied shag (Threatened-Nationally Vulnerable) Pied stilt (At Risk-Declining) New Zealand pied oystercatcher (At Risk-Declining) North Island fernbird (At Risk-Declining) Banded rail (At Risk-Naturally Uncommon) **Fish:** Inanga (At Risk-Declining) Longfin eel (At Risk-Declining) Refin bully (At Risk-Declining) Torrentfish (At Risk-Declining)
ii		
iii	✓	High quality mosaic of estuarine wetlands, small palustrine wetlands, and a sandspit.
iv		
v		Regionally Significant

Policy	Criteria Met	Explanation
vi		Biodiversity values at the site are not formally protected, but part of the site is a WBOPDC reserve.
Policy Met:		11(a)
Justification:		Waipapa Estuary is consistent with Policy 11(a) because it is a relatively large, high quality site that includes small palustrine wetlands contiguous with a much larger estuarine wetland. It also includes a sandspit, which is an important high tide roost for waders, gulls, terns, waterbirds, and pied shag. A suite of Threatened and At Risk avifauna has been recorded at the site. The Waipapa Estuary and River Mouth is an important site for migratory fish passage.

Notes Identified as a Category 1 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

Reference Beadel 1992a; Beadel 1994a; Owen 1993; Owen *et al.* 2006; Wildland Consultants 2006a; Wildland Consultants 2008a.

WAIPAPA ESTUARY WETLAND

Site Number [1]	037
Grid Reference (NZMG)	E2776327 N6391162
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (Nga Whenua Rāhui Kawanata) and unprotected parts
Site Area	2.7 ha
Altitudinal Range	15-20m asl
Geology-Landform Type	Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Grey willow forest. (Wildland Consultants 2006a)	Wetland

Vegetation and Indigenous Flora

The canopy at this site is dominated by grey willow. The relatively open understorey includes hukihuki, and there is a dense groundcover of kiokio, *Carex geminata*, and *Machaerina rubiginosa*. A stream flows out of the site and into drains that cross the pasture and enter the Waipapa River through floodgates in the stopbank. The drains are not fenced and pasture extends to their margins, though there are scattered saltmarsh ribbonwood, *Carex secta*, and *Juncus edgariae* near the water edge. No rare or uncommon plant species have been recorded at this site.

Indigenous Fauna

Inanga, longfin eel, redfin bully, torrentfish (all At Risk-Declining), shortfin eel, and banded kōkopu have been recorded in the Waipapa River catchment (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Dense grey willow infestation. The site is relatively small and is bounded by horticulture and pasture.

Key Site Features

This small freshwater wetland is dominated by grey willow. Freshwater wetlands have been greatly reduced in extent within the Tauranga Ecological District and this site is of local significance. It is near the Waipapa Estuary, which includes freshwater wetlands and large areas of saltmarsh. Wetlands are important for the maintenance of wetland bird populations.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	L
Rarity or Distinctive Features	3.2	L
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	L
Ecological Context	3.9	M
	3.10	L

[1] Identifed as SVHZ-33 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	L
	3.12	L
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Fish:** Inanga (At Risk-Declining) Longfin eel (At Risk-Declining) Redfin bully (At Risk-Declining) Torrentfish (At Risk-Declining)
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	The canopy is dominated by grey willow but the site retains an indigenous understorey.
ii		
iii		
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Waipapa Estuary Wetland is consistent with Policy 11(b) because it is a small palustrine wetland and wetlands have been greatly reduced in extent in Tauranga Ecological District. The canopy of the site is dominated by an exotic species (grey willow) but it retains a predominantly indigenous understorey.

Notes Identified as a Category 3 natural area in the Tauranga Ecological District (Wildland Consultants 2008a). There is floodgate between the stream and Waipapa River.

Reference Beadel 1992a; Wildland Consultants 2006a; Wildland Consultants 2008a.

MANGAWHAI BAY

Site Number[1]	048
Grid Reference (NZMG)	E2778358 N6390309
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (Department of Conservation, Ōmokoroa Beach Marginal Strand and WBOPDC reserve) and unprotected parts
Site Area	10.2 ha
Altitudinal Range	0-12 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Mangrove scrub and shrubland.	Intertidal flat
Estuarine	Sea rush tussockland.	Intertidal flat
Estuarine	Oioi-sea rush-saltmarsh ribbonwood rushland.	Intertidal flat
Palustrine	*Machaerina articulata* reedland and *Bolboschoenus fluviatilis* reedland.	Wetland
Terrestrial	Sandspit vegetation.	Beach sands
Palustrine	Manuka scrub (Beadel 1992a, Wildland Consultants 2006g, Wildland Consultants 2008a)	Wetland

Vegetation and Indigenous Flora

Mangawhai Bay includes mangrove scrub and shrubland, with narrow estuarine and palustrine wetlands on the landward side. No rare or uncommon plant species have been recorded at this site.

Indigenous Fauna

There is a significant high tide roost for waders and waterbirds at the northern end of this site on WBOPDC reserve (Owen 1993; J. Heaphy, Department of Conservation, pers. comm. 2006). The site hosts thousands of godwits, Caspian tern (Threatened-Nationally Vulnerable), New Zealand pied oystercatcher, pied stilt (both At Risk-Declining), variable oystercatcher (At Risk-Recovering) and other waders (Owen *et al.* 2006). Banded dotterel (Threatened-Nationally Vulnerable) and pied shag (Threatened-Nationally Vulnerable) were present in 2009 (Keith Owen, Department of Conservation, pers. comm. 2012). *Oligosoma* sp. (skink) and banded rail (At Risk-Naturally Uncommon) sign were recorded in 1991 (Owen 1993).

Condition/Pressures

The site is bounded by residential development, some of which is relatively recent. Dogs and people often disturb birds at the high tide roost (J. Heaphy, Department of Conservation, pers. comm. 2006). Owen (1993) noted stock access, mangrove destruction, reclamation, and a range of weed species.

Key Site Features

Mangawhai Bay is locally significant because it includes, within a small site, good quality examples of indigenous vegetation (estuarine wetlands) which are relatively common in Tauranga Harbour. There is one wader roost site in the bay. Direct human impacts and pest plants have exerted significant pressure on the natural character of the site. One Threatened and four risk bird species have been recorded here. This site acts as a protective buffer to the nationally significant Mangawhai Bay Intertidal Flats wader roosting area.

[1] Identified as SVHZ-35 in Wildland Consultants 2006g.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	L
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	L
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Banded dotterel (Threatened-Nationally Vulnerable) Caspian tern (Threatened-Nationally Vulnerable) Pied shag (Threatened-Nationally Vulnerable) New Zealand pied oystercatcher (At Risk-Declining) Pied stilt (At Risk-Declining) Banded rail (At Risk-Naturally Uncommon) (1991) Variable oystercatcher (At Risk-Recovering)
ii		
iii		
iv		
v		Locally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a WBOPDC reserve.
11(b)		
i	✓	Mangrove scrub and shrubland, other indigenous estuarine wetland vegetation types, and manuka scrub.
ii		
iii	✓	Mangroves and other estuarine wetlands.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Mangawhai Bay is consistent with Policy 11(b) because it is of moderately-sized, moderate-quality example of estuarine vegetation. A small part of the site is a sandspit that is a high tide roost for Threatened and At Risk avifauna, but it is not among the highest quality roosts in Tauranga Harbour because of

Policy	Criteria Met	Explanation
		its proximity to suburban Ōmokoroa and the frequent disturbance caused by people and dogs.

Notes Identified as a Category 3 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

References Beadel 1992a; Owen 1993; Owen *et al.* 2006; Wildland Consultants 2006g; Wildland Consultants 2008a.

MANGAWHAI BAY INLET

Site Number [1]	043
Grid Reference (NZMG)	E2777137 N6388569
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (Department of Conservation, Ōmokoroa Beach Marginal Strip and WBOPDC reserve) and unprotected parts
Site Area	8.5 ha
Altitudinal Range	0-20 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Mangrove scrub and shrublands.	Intertidal flat
Estuarine	Oioi rushland and sea rush tussockland.	Intertidal flat
Estuarine	Oioi-saltmarsh ribbonwood shrub-rushland.	Intertidal flat
Palustrine	Grey willow forest, manuka shrubland, and raupo reedland. (Beadel 1992a)	Wetland

Vegetation and Indigenous Flora

Mangawhai Inlet includes mangrove scrub and shrublands, oioi rushland, sea rush tussockland, and oioi-saltmarsh ribbonwood shrub-rushland. On the north side of the inlet there is a small area of grey willow forest, manuka shrubland, and raupo reedland. *Sparganium subglobosum*, a regionally uncommon species, is present.

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon) and North Island fernbird (At Risk-Declining) were recorded in 1991 (Owen 1993).

Condition/Pressures

In 2006, pampas was noted on the margins and stock have access to at least parts of the site. The site is bounded by pastoral land.

Key Site Features

Mangawhai Bay Inlet is locally significant because it includes examples of estuarine wetlands which are typical of the vegetation of Tauranga Harbour, and also small examples of freshwater wetlands. Stock access and pest plants are current pressures impacting on the natural character of the site. Two At Risk bird species and one regionally uncommon plant species have been recorded here.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	L
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M

[1] Identified as SVHZ-37 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	M
	3.12	H
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** North Island fernbird (At Risk-Declining) (1991) Banded rail (At Risk-Naturally Uncommon) (1991)
ii		
iii		
iv		
v		Locally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a WBOPDC reserve.
11(b)		
i	✓	Mosaic of indigenous estuarine wetland vegetation types.
ii		
iii	✓	Estuarine wetlands.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Two At Risk bird species were recorded at Mangawhai Bay Inlet in 1991, but the site is not of sufficient quality to be consistent with Policy 11(a). The site is consistent with Policy 11(b) because it comprises indigenous vegetation and habitat types which are confined to the coastal environment. It also provides habitat to one species which is regarded as uncommon in the Region.

Notes Identified as a Category 3 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

References Beadel 1992a; Owen 1993; Wildland Consultants 2006g; Wildland Consultants 2008a.

ŌMOKOROA WETLANDS

Site Number [1]	040
Grid Reference (NZMG)	E2776374 N6388330
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	1.6 ha
Altitudinal Range	20-35 m asl
Geology-Landform Type	Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Grey willow/raupo reedland.	Wetland
Palustrine	Grey willow-(ti kouka)-(mamaku)/raupo reedland. (Wildland Consultants 2006g)	Wetland

Vegetation and Indigenous Flora

This wetland is dominated by grey willow and raupo. The part of the site which is on the east side of State Highway 2 is in considerably better condition than the part which is west of the road. No field survey has been undertaken within this site for Threatened or uncommon species.

Indigenous Fauna

Longfin eel (At Risk-Declining) has been recorded in small streams at the south end of Mangawhai Bay (Wildland Consultants 2006a). This site contains raupo reedland, suitable habitat for spotless crake, which may be present.

Condition/Pressures

The site is relatively long and narrow and is not fenced from adjacent pasture. It is infested with grey willow.

Key Site Features

The site is locally significant because it is an example of a habitat type which has been greatly reduced in extent at all scales (i.e. freshwater wetlands). It acts as a protective buffer to Mangawhai Bay, Tauranga Harbour, and provides habitat for longfin eel. It is degraded and grey willow dominates the canopy in places but the site has potential for restoration.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	L
Rarity or Distinctive Features	3.2	L
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	L
	3.10	L

[1] Identified as SVHZ-38 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	Longfin eel (At Risk-Declining)
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	The canopy is dominated by grey willow but raupo dominates the understorey.
ii		
iii		
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Ōmokoroa Wetlands is consistent with Policy 11(b) because it is a palustrine wetland. Palustrine wetlands have been reduced in both size and quality, to such an extent that sites such as this have ecological value. It may provide habitat for spotless crake (At Risk-Relict) and/or longfin eel (At Risk-Declining), which has been recorded in nearby streams.

Notes Identified as a Category 4 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

References Wildland Consultants 2006a; Wildland Consultants 2006g; Wildland Consultants 2008a.

ŌMOKOROA

Site Number [1]	050
Grid Reference (NZMG)	E2778260 N6388911
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	2.2 ha
Altitudinal Range	0-6 m asl
Geology-Landform Type	Estuarine

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Mangrove scrub and shrublands.	Intertidal flat
Estuarine	Oioi rushland and sea rush tussockland.	Intertidal flat
Estuarine	Sandspit vegetation. (Beadel 1992a)	Beach sands

Vegetation and Indigenous Flora

This site comprises mangrove scrub and shrublands, oioi rushland, and sea rush tussockland. *Samolus repens* herbfield and *Austrostipa stipoides* grassland dominates a small sandspit. *Austrostipa stipoides* is a regionally uncommon species.

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon) was recorded in 1991 (Owen 1993).

Condition/Pressures

Owen (1993) recorded stock access and weed encroachment. The site comprises two small areas bounded by narrow plantations of exotic trees which act as windbreaks for adjacent horticultural land.

Key Site Features

Ōmokoroa is locally significant because it includes small examples of indigenous vegetation (estuarine wetlands) which are typical of the vegetation of Tauranga Harbour. One At Risk bird species and one regionally uncommon plant species have been recorded at this site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M

[1] Identified as SVHZ-39 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	L
	3.12	H
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Banded rail (At Risk-Naturally Uncommon) (1991)
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Mangrove scrub and shrublands, oioi rushland, sea rush tussockland, and sandspit vegetation.
ii		
iii	✓	Mangrove scrub and shrublands, oioi rushland, sea rush tussockland, and sandspit vegetation.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Ōmokoroa is consistent with Policy 11(b) because it comprises small examples of indigenous vegetation and habitat types which are confined to the coastal zone and are vulnerable to modification. Banded rail (At Risk-Naturally Uncommon) were recorded at the site in 1991.

Notes Identified as a Category 4 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

References Beadel 1992a; Owen 1993; Wildland Consultants 2006g; Wildland Consultants 2008a.

JESS ROAD

Site Number [1]	051
Grid Reference (NZMG)	E2778790 N6388145
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (Department of Conservation, Jess Road Wildlife Management Reserve) and unprotected parts
Site Area	26.4 ha
Altitudinal Range	0-17 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Mangrove scrub and shrubland.	Intertidal flat
Estuarine	Sea rush-mangrove rushland.	Intertidal flat
Palustrine	*Ceplant* sedgeland.	Wetland
Palustrine	Raupo reedland.	Wetland
Palustrine	Constructed pond	Pond
	(Wildland Consultants 2005c and 2006e)	

Vegetation and Indigenous Flora

Jess Road comprises mangrove scrub and shrubland on the north-eastern side of a railway embankment, and an area of reflooded agricultural land on the southern side of the railway which is now dominated by mangrove and sea rush with areas of bare mud and some dead manuka. There are constructed ponds on the southern margin of this area, and a small *Carex geminata* wetland and a raupo wetland on the northern margin. No rare or uncommon plant species have been recorded at this site.

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon) recorded in 1991 (Owen 1993) and on several occasions since 2003 (OSNZ 2006). Pied stilt (At Risk-Declining) and other relatively common indigenous species of birds recorded at the site in 1996 include: kingfisher, pukeko, spur-winged plover, white-faced heron, and paradise shelduck (Shaw 2002d).

Condition/Pressures

The site is divided by a railway embankment with a floodgate (now permanently open). The part of the site to the west of the railway embankment began being reflooded with saltwater in 1998, after being drained and grazed for many decades (Wildland Consultants 2005c). It now comprises large areas of intertidal mudflats with densely establishing mangrove seedlings, areas of dead manuka and patches of sea rush. Some illegal earthworks were carried out here in 2001 (Shaw 2002d). Approved earthworks were carried out in 2007-2008 to improve drainage and creation of roosting/nesting islands (K. Owen, Department of Conservation, pers. comm. 2006).

Key Site Features

Jess Road is locally significant because it includes examples of indigenous vegetation types (estuarine wetlands) which are typical of the vegetation of Tauranga Harbour, and small examples of freshwater wetlands. Two At Risk bird species are currently known from this site. The part of this site which is west of the railway line (i.e. within the Wildlife Management Reserve) is highly modified and degraded, but is currently being restored by the local community with the support of Department of Conservation.

[1] Identified as SVHZ-40 in Wildland Consultants 2006g.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	L
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Pied stilt (At Risk-Declining) Banded rail (At Risk-Naturally Uncommon)
ii		
iii		
iv		
v		Locally Significant
vi	✓	Partially protected (Jess Road Wildlife Management Reserve, Department of Conservation)
11(b)		
i	✓	Mangrove scrub and shrubland, sea rush-mangrove wetland, raupo reedland, and *Carex geminata* sedgeland.
ii		
iii	✓	Mangrove scrub and shrubland and sea rush-mangrove wetland.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Jess Road is consistent with Policy 11(b) because it is a recently reflooded area of drained harbour margin where estuarine species are re-establishing. The site is separated from the Tauranga Harbour by a railway embankment and a floodgate. Two At Risk avifauna species have been recorded at the site. Most of the site is legally protected but it is not a sufficient size or quality to satisfy Policy 11(a).

Notes

Jess Road has been identified as a Category 4 natural area in Tauranga Ecological District (Wildland Consultants 2008a). Beadel (1996) provides a detailed description of the vegetation in the inlet as it was 16 years ago, and Shaw (2002d) details changes over the periods 1998-2001 and 2001-2002. The Te Puna Estuary Managers Group and Department of Conservation are currently involved in restoration of the Jess Road site, along with other parts of the wider Te Puna Estuary (Wildland Consultants 2005c).

References

Beadel 1992a; Owen 1993; Beadel 1996; OSNZ 2006; Shaw 2002d; Wildland Consultants 2005c; Wildland Consultants 2006e; Wildland Consultants 2006g; Wildland Consultants 2008a.

TE PUNA ESTUARY

Site Number [1]	047
Grid Reference (NZMG)	E2778195 N6386670
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	18.8 ha
Altitudinal Range	0-20 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium, Sedimentary (volcanic) unconsolidate

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Mangrove shrubland.	Intertidal flat
Estuarine	(Saltmarsh ribbonwood)/oioi-sea rush rushland.	Intertidal flat
Estuarine	Mixed intertidal vegetation (raupo, saltmarsh ribbonwood, harakeke, and oioi and mangrove seedlings).	Intertidal flat
Riverine	Grey willow-manuka/(gorse)/pasture forest.	Wetland
Riverine	Manuka/raupo-toetoe scrub.	Wetland
Terrestrial	Mamaku-(kamahi) forest. (Wildland Consultants 2005c)	Hillslope

Vegetation and Indigenous Flora

Te Puna Estuary includes mangrove shrubland, (saltmarsh ribbonwood)/oioi-sea rush rushland, and mixed intertidal vegetation. *Austrostipa stipoides* (a regionally uncommon plant species, is present. Towards the southern end of the site there is a freshwater wetland which is dominated by grey willow, manuka, raupo, and toetoe.

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon) (sign only) and North Island fernbird (At Risk-Declining) were recorded in 1991 (Owen 1993) and are known to still be present (K. Owen, Department of Conservation, pers. comm. 2008).

The site includes the mouth of the Te Puna Stream, which is a habitat and migratory pathway of indigenous species of freshwater fish, including longfin eel (At Risk-Declining), shortfin eel (Environment Bay of Plenty 2008), and kōaro (At Risk-Declining), inanga (At Risk-Declining), redfin bully (At Risk-Declining), giant bully, and common smelt (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Saltwater paspalum (*Paspalum vaginatum*) is encroaching from the landward margin into the edges of the mangrove shrubland. Grazing animals have access to the freshwater wetlands. Grey willow is encroaching on the margins of the manuka/raupo-toetoe scrub and a serious infestation of pampas was noted in 2005 (Wildland Consultants 2005c). Extensive reclamation was recorded in 1991 Owen (1993).

Key Site Features

Te Puna Estuary is locally significant because it includes examples of indigenous vegetation types (estuarine and freshwater wetlands) that are typical of the vegetation of Tauranga Harbour. One regionally uncommon plant species and two At Risk bird species were recorded in 1991. The

[1] Identified as SVHZ-41 in Wildland Consultants 2006g.

Te Puna Stream is a habitat and migratory pathway of indigenous species of freshwater fish. Stock and pest plants are current threats to the site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	H
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	M
	3.12	H
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** North Island fernbird (At Risk-Declining) Banded rail (At Risk-Naturally Uncommon) **Fish:** Inanga (At Risk-Declining) Kōaro (At Risk-Declining) Longfin eel (At Risk-Declining) Redfin bully (At Risk-Declining)
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Mangrove shrubland, other indigenous estuarine wetland vegetation, manuka-dominated wetland, and mamaku-(kamahi) forest).
ii		
iii	✓	Mangrove shrubland and other estuarine wetland types.
iv	N/A	
v	✓	The Te Puna Stream is a migratory pathway for freshwater fish.
vi		
Policy Met:		11(b)
Justification:		Te Puna Estuary includes the mouth of the Te Puna Stream and estuarine

Policy	Criteria Met	Explanation
		wetlands that are habitat for two At Risk avifauna species and provide a migratory pathway for indigenous freshwater fish. The site is consistent with Policy 11(b) because it is not among the highest quality estuaries in Tauranga Harbour, but it is significant because it is a modified example of an "originally rare" ecosystem type (i.e. estuary) and includes examples of indigenous vegetation types that are confined to the coastal environment.

Notes

Te Puna Estuary was identified as a Category 3 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

This site forms part of the eastern/western edge of the 'Te Puna' corridor (Environment Bay of Plenty 2006) ranked as being second Priority Level 2 (Wildland Consultants 2007b).

Large restoration works are currently being undertaken in the Te Puna Estuary (for example on the eastern side of the harbour, just north of State Highway 2), and these areas are likely to meet the criteria to be included in this natural area in the future.

References

Owen 1993; Beadel 1994a; Environment Bay of Plenty 2008; Wildland Consultants 2005c; Wildland Consultants 2006g; Wildland Consultants 2008a.

SNODGRASS ROAD INLET

Site Number [1]	053
Grid Reference (NZMG)	E2779417 N6386972
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (WBOPDC reserve) and unprotected parts
Site Area	15.8 ha
Altitudinal Range	0-20 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Mangrove scrub and shrubland.	Intertidal flat
Estuarine	(Saltmarsh ribbonwood)/oioi-sea rush rushland.	Intertidal flat
Palustrine	Grey willow forest.	Wetland
Terrestrial	Mamaku forest. (Beadel 1992a)	Hillslope

Vegetation and Indigenous Flora

Snodgrass Road Inlet includes mangrove scrub and shrubland and estuarine wetlands of saltmarsh ribbonwood, oioi, and sea rush. The freshwater wetland is dominated by grey willow, and an adjacent hillslope is clad in mamaku forest. No rare or uncommon plant species have been recorded at this site.

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon) recorded in 1991 (Owen 1993).

Condition/Pressures

Part of the site is infested with grey willow. Owen (1993) noted stock access and weeds. The landward side of the site is bounded by horticultural and grazing lands.

Key Site Features

Snodgrass Road Inlet is locally significant because it includes examples of indigenous vegetation (estuarine wetlands) which are typical of the vegetation of Tauranga Harbour, as well as modified examples of freshwater wetlands. One At Risk bird species has been recorded here in the past.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	N/A
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	L

[1] Identified as SVHZ-42 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	M
	3.12	H
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Banded rail (At Risk-Naturally Uncommon) (1991)
ii		
iii		
iv		
v		Locally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a WBOPDC reserve.
11(b)		
i	✓	Mangrove scrub and shrubland, oioi-sea rush rushland, and mamaku forest.
ii		
iii	✓	Mangrove scrub and shrubland and oioi-sea rush rushland.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Snodgrass Road Inlet is a small mosaic of indigenous estuarine vegetation and grey willow wetland below a hillslope clad in mamaku forest. It includes vegetation types that are confined to the coastal environment so the values of the site are consistent with Policy 11(b). In addition, an At Risk avifauna species was recorded at the site in 1991.

Notes This site forms part of the eastern/western edge of the 'Te Puna' corridor (Environment Bay of Plenty 2006) ranked as being second Priority Level 2 (Wildland Consultants 2007b). It has been identified as a Category 3 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References Beadel 1992a; Owen 1993; Wildland Consultants 2005c; Wildland Consultants 2006g; Wildland Consultants 2008a.

NEWNHAM ROAD

Site Number [1]	052
Grid Reference (NZMG)	E2779600 N6387793
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (WBOPDC reserve) and unprotected parts
Site Area	3.1 ha
Altitudinal Range	0-4 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Mangrove scrub and shrubland.	Intertidal flat
Estuarine	(Saltmarsh ribbonwood)/oioi-sea rush rushland.	Intertidal flat
Palustrine	Manuka scrub.	Wetland
	(Beadel 1992a, Wildland Consultants 2005c)	

Vegetation and Indigenous Flora

Newnham Road is dominated by mangrove scrub and shrubland with estuarine wetlands of saltmarsh ribbonwood, oioi, and sea rush on the landward side. There are also more limited areas of manuka scrub, with adjacent areas of estuarine wetlands which include harakeke. No rare or uncommon plant species have been recorded at this site

Indigenous Fauna

Australasian bittern (Threatened-Nationally Endangered); banded rail (At Risk-Naturally Uncommon) sign recorded, North Island fernbird (At Risk-Declining) possibly detected in 1990 (Owen 1993).

Condition/Pressures

Owen (1993) noted rubbish dumping and weed species. The site is bounded by horticultural land and estuarine margin vegetation.

Key Site Features

Newnham Road is locally significant because it includes examples of indigenous vegetation (estuarine wetlands) which are typical of Tauranga Harbour. One Threatened and one At Risk bird species have been recorded previously at the site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	L
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	L

[1] Identified as SVHZ-43 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	M
	3.12	H
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Australasian bittern (Threatened-Nationally Endangered) (1991) Banded rail (At Risk-Naturally Uncommon) (1991) **Possible Record:** North Island fernbird (At Risk-Declining) (1991)
ii	✓	Australasian bittern (Endangered) (1991)
iii		
iv		
v		Locally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a WBOPDC reserve.
11(b)		
i	✓	Mangrove scrub and shrubland, oioi-sea rush rushland, and manuka scrub.
ii		
iii	✓	Mangrove scrub and shrubland and oioi-sea rush rushland.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Newnham Road is consistent with Policy 11(b) because it includes vegetation types that are confined to the coastal environment. A Threatened species and an At Risk avifauna species were recorded at the site in 1991.

Notes Identified as a Category 3 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References Beadel 1992a; Owen 1993; Wildland Consultants 2005c; Wildland Consultants 2006g; Wildland Consultants 2008a.

WAIKARAKA ESTUARY

Site Number [1]	057
Grid Reference (NZMG)	E2780624 N6388100
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (WBOPDC reserve) and unprotected parts
Site Area	7.5 ha
Altitudinal Range	0-14 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Mangrove scrub and shrubland.	Intertidal flat
Estuarine	Oioi rushland, sea rush tussockland, and oioi-sea rush-*Machaerina juncea* rushland	Intertidal flat
Palustrine	Grey willow forest and manuka scrub. (Beadel 1992a, Wildland Consultants 2003d)	Wetland

Vegetation and Indigenous Flora

Waikaraka Estuary includes mangrove scrub and shrubland and estuarine wetlands dominated by oioi, sea rush, and *Machaerina juncea*. Towards the south of the site there is a small wetland of grey willow and manuka. *Austrostipa stipoides* (a regionally uncommon plant species) is present.

Indigenous Fauna

Australasian bittern (Threatened-Nationally Endangered) sign, banded rail (At Risk-Naturally Uncommon), North Island fernbird (At Risk-Declining) were recorded in 1991 (Owen 1993), and spotless crake (At Risk-Relict) was subsequently recorded by the Waikaraka Estuary Management Group (K. Owen, Department of Conservation, pers. comm. 2008). Fernbird was also present in 2012 (Sarah Beadel pers. obs.). Oturu Stream is a habitat and migratory pathway for indigenous species and freshwater fish, including longfin eel (At Risk-Declining), inanga (At Risk-Declining), and redfin bully (At Risk-Declining) (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Much of the Waikaraka catchment has been cleared for agricultural, horticultural, and residential development. Indigenous coastal forest on the estuary margins has been replaced by tree privet, Lombardy poplar (*Populus nigra* 'Italica'), eucalyptus, and woolly nightshade. Sedimentation and eutrophication has led to a reduction in seagrass beds. Numerous weed infestations are present (for example grey willow) and there are ad hoc structures around the estuary margins (e.g. retaining walls). The Waikaraka Estuary Management Group has been actively restoring this site since 2003, following a restoration plan developed by Wildland Consultants (2003d).

Key Site Features

Waikaraka Estuary is locally significant because it includes examples of indigenous vegetation types which are typical of the vegetation of Tauranga Harbour, within a relatively small site. One Threatened and three At Risk bird species, and one regionally uncommon plant species have been recorded at this site.

[1] Identified as SVHZ-44 in Wildland Consultants 2006g.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Australasian bittern (Threatened-Nationally Endangered) (1991) Banded rail (At Risk-Naturally Uncommon) (1991) North Island fernbird (At Risk-Declining) Spotless crake (At Risk-Relict) **Fish:** Inanga (At Risk-Declining) Lonfin eel (At Risk-Declining) Redfin bully (At Risk-Declining)
ii	✓	Australasian bittern (Endangered) (1991)
iii		
iv		
v		Locally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a WBOPDC reserve.
11(b)		
i	✓	Mangrove scrub and shrubland, oioi rushland, sea rush tussockland, and manuka scrub.
ii		
iii	✓	Mangrove scrub and shrubland, oioi rushland, and sea rush tussockland.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Waikaraka Estuary is consistent with Policy 11(b) because it includes examples of vegetation types that are confined to the coastal environment and

Policy	Criteria Met	Explanation
		which are vulnerable to modification. The site includes estuarine wetlands and palustrine wetland. One Threatened and three At Risk avifauna species have been recorded at the site.

Notes Identified as a Category 3 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References Beadel 1992a; Owen 1993; Wildland Consultants 2003d; Wildland Consultants 2006g; Wildland Consultants 2008a.

WAIPA ROAD

Site Number [1]	058
Grid Reference (NZMG)	E2780577 N6388989
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	1.9 ha
Altitudinal Range	0-9 m asl
Geology-Landform Type	Estuarine

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Mangrove shrubland.	Intertidal flat
Estuarine	Sea rush tussockland, oioi rushland, and oioi-sea rush-*Machaerina juncea* rushland.	Intertidal flat
Terrestrial	*Carex pumila*-glasswort-*Ficinia nodosa*-harestail-spinifex-gorse-brush wattle sandfield.	Sandspit
Terrestrial	Radiata pine/sand treeland. (Beadel 1992a, Wildland Consultants 2003d, Wildland Consultants 2007a)	Sandspit

Vegetation and Indigenous Flora

Waipa Road is predominantly mangrove shrubland and variable mixtures of sea rush, oioi, and *Machaerina juncea*. There is a sandspit at the tip of the point. The sandspit comprises unvegetated sand, scattered tall radiata pines, and, at the end, an area of *Carex pumila*-glasswort-*Ficinia nodosa*-harestail-spinifex-gorse-brush wattle sandfield. A small population of New Zealand spinach (At Risk-Naturally Uncommon) is present. *Zoysia pauciflora* is also present (regionally uncommon).

Indigenous Fauna

Banded rail and North Island fernbird (both At Risk-Declining) were recorded in 1991 (Owen 1993). The sandspit is a breeding site of northern New Zealand dotterel (Threatened-Nationally Vulnerable), with approximately two pairs having been recorded (J. Heaphy, Department of Conservation, pers. comm. 2012), and a roosting area for waders such as bar-tailed godwit, New Zealand pied oystercatcher, pied stilt (both At Risk-Declining), and variable oystercatcher (At Risk-Recovering) (K. Owen, Department of Conservation, pers. comm. 2006). It is a nesting site for banded rail (At Risk-Naturally Uncommon) (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Waipa Estuary is subject to a range of pressures which are typical of many natural areas around/within Tauranga Harbour. Spartina (P. Cashmore, Department of Conservation, pers. comm. 2006), pampas, gorse, blackberry, saltwater paspalum, brush wattle, and wilding radiata pines are present. This site is part of an area which is being managed by the Waikaraka Estuary Management Group (Wildland Consultants 2003d).

Key Site Features

Waipa Road is regionally significant because it provides habitat for one Threatened and five At Risk bird species that have been recorded at this site. The site also provides habitat for one At Risk and one regionally uncommon plant species. The site includes small examples of vegetation and habitat types which are typical of the indigenous biodiversity of the Tauranga Ecological District.

[1] Identified as SVHZ-45 in Wildland Consultants 2006g.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** New Zealand spinach (At Risk-Naturally Uncommon) **Avifauna:** Northern New Zealand dotterel (Threatened-Nationally Vulnerable) North Island fernbird (At Risk-Declining) (1991) New Zealand pied oystercatcher (At Risk-Declining) Pied stilt (At Risk-Declining) Banded rail (At Risk-Naturally Uncommon) (1991) Variable oystercatcher (At Risk-Recovering)
ii	✓	New Zealand dotterel (Endangered)
iii		
iv		
v		Regionally Significant
vi		Unprotected
11(b)		
i	✓	Mangrove shrubland, sea rush tussockland, oioi rushland, and sandspit.
ii	✓	Nesting site of northern New Zealand dotterel (Threatened-Nationally Vulnerable) and banded rail (At Risk-Naturally Uncommon).
iii	✓	Mangrove shrubland, sea rush tussockland, oioi rushland, and sandspit.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		A suite of Threatened and At Risk avifauna species have been recorded at Waipa Road, but the site is not consistent with Policy 11(a) because it is not a particularly large or high quality site. The values of the site are consistent

Policy	Criteria Met	Explanation
		with Policy 11(b) because the site includes coastal vegetation and habitat types and it is a nesting site of northern New Zealand dotterel (Threatened-Nationally Vulnerable) and banded rail (At Risk-Naturally Uncommon).

Notes

This site forms part of the eastern/western edge of the 'Te Puna' corridor (Environment Bay of Plenty 2006) ranked as being second Priority Level 2 (Wildland Consultants 2007b).

Waipa Road was identified as a Category 3 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References

Beadel 1992a; Owen 1993; Wildland Consultants 2003d; Environment Bay of Plenty 2006; Wildland Consultants 2006g; Wildland Consultants 2007a; Wildland Consultants 2007b; Wildland Consultants 2008a.

MOTUHOA ISLAND

Site Number [1]	060
Grid Reference (NZMG)	E2780858 N6390876
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	8.7 ha
Altitudinal Range	0-20 m asl
Geology-Landform Type	Sedimentary (volcanic) unconsolidated

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa forest.	Cliffs
Terrestrial	Karaka forest with brush wattle, ti kouka, and woolly nightshade.	Headland
Terrestrial	Pohutukawa/mamaku-woolly nightshade-brush wattle forest.	Cliffs
Terrestrial	Radiata pine-pohutukawa/brush wattle-mamaku forest. (Beadel 1994a)	Cliffs

Vegetation and Indigenous Flora

This site comprises relatively narrow strips of pohutukawa forest on the margins of Motuhoa Island. A small area of karaka forest occurs on the north eastern headland.

New Zealand spinach (NZFRI 25154), classed as 'At Risk-Naturally Uncommon' is present (P. Cashmore, Department of Conservation, pers. comm. 2008).

Indigenous Fauna

Shore skink (not threatened) are present (J. Heaphy, Department of Conservation, pers. comm. 2006). Neap tide roost for seabirds and some wader species on the south-eastern shore when conditions are right (K. Owen, Department of Conservation, pers. comm. 2006).

Condition/Pressures

A range of weed species were noted in 2003, including woolly nightshade and Mexican devil (P. Cashmore, Department of Conservation, pers. comm. 2006). The site comprises a narrow strip around the coastal margin of the island so it is vulnerable to 'edge effects'. Most of the island comprises horticultural land.

Key Site Features

This site comprises a good quality example of remnant pohutukawa forest within the Tauranga Ecological District (Beadel 1994a). Pohutukawa forest was once abundant on hillslopes and headlands around Tauranga Harbour. One At Risk plant species is present. This site is locally important as a seabird and wader roost.

[1] Identified as SVHZ-46 in Wildland Consultants 2006g.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	L
	3.3	L
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	L
	3.10	L
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** New Zealand spinach (At Risk-Naturally Uncommon)
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Pohutukawa forest and karaka forest.
ii		
iii	✓	Pohutukawa forest and karaka forest.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Motuhoa Island comprises narrow strips of indigenous forest on the margins of the island. The values of the site are consistent with Policy 11(b) because it contains small examples of typically coastal vegetation types.

Notes Identified as a Category 4 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References Beadel 1994a; Wildland Consultants 2006g; Wildland Consultants 2008a.

KUKA ROAD WETLANDS

Site Number [1]	061
Grid Reference (NZMG)	E2781574 N6388791
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	9.1 ha
Altitudinal Range	14-20 m asl
Geology-Landform Type	Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Grey willow forest.	Wetland
Palustrine	Swamp coprosma-manuka/*Machaerina rubiginosa-Gleichenia microphylla* shrubland.	Wetland
Palustrine	Swamp millet-raupo-*Eleocharis acuta* grassland. (Wildland Consultants 2009a)	Wetland

Vegetation and Indigenous Flora

Kuka Road wetland is dominated by grey willow forest with an understorey consisting of mostly indigenous species. Smaller examples of swamp coprosma-manuka/*Machaerina rubiginosa-Gleichenia microphylla* shrubland and swamp millet-raupo-*Eleocharis acuta* grassland are present. Other species within the site include gorse, karo, wattle, pampas, harakeke, blackberry, bracken, woolly nightshade, and eucalyptus. Two regionally uncommon species, maru (*Sparganium subglobosum*) and *Tetraria capillaris,* are present at this site (Wildland Consultants 2009a).

Indigenous Fauna

No rare or uncommon species of fauna have been recorded at this site. Waders roost on adjacent beach when conditions are suitable. Four indigenous species of freshwater fish have been recorded.

Condition/Pressures

The hydrology of the site has been dramatically altered by drainage, stopbanking and floodgates. The site is intensively grazed and there is a range of weed species, including woolly nightshade, pampas, grey willow, blackberry, woolly nightshade, Japanese honeysuckle, and royal fern. It is evident from aerial photographs that vegetation clearance has occurred relatively recently at the eastern end of the site. (Wildland Consultants 2009a).

Key Site Features

Kuka Road contains freshwater wetland, a habitat type that has decreased in extent throughout New Zealand. This site has been modified by altered hydrology, stock access, and a range of weed species. Two regionally uncommon plant species are present and the site is a habitat for indigenous freshwater fish.

[1] Identified as SVHZ-47 in Wildland Consultants 2006g.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	M
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Regionally Significant
vi		Unprotected
11(b)		
i	✓	Indigenous palustrine wetlands.
ii		
iii		
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Kuka Road Wetlands is consistent with Policy 11(b) because it comprises predominantly indigenous vegetation. Palustrine wetlands have been greatly reduced in extent both regionally and nationally, and the site provides habitat for two regionally uncommon plant species.

Notes Identified as a Category 3 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References Beadel 1992a; Owen 1993; Wildland Consultants 2006g; Wildland Consultants 2008a; Wildland Consultants 2009a.

OIKIMOKE

Site Number [1]	069
Grid Reference (NZMG)	E2783123 N6387646
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (WBOPDC reserve) and unprotected parts
Site Area	25.3 ha
Altitudinal Range	0-20 m asl
Geology-Landform Type	Estuarine, Sand

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Mangrove scrub and shrubland.	Intertidal flat
Estuarine	Sea rush tussockland, and oioi rushland, and oioi-*Machaerina juncea* rushland.	Intertidal flat
Terrestrial	Sandspit vegetation. (Beadel 1992a)	Beach sands

Vegetation and Indigenous Flora

Oikimoke occupies the margin of the Tauranga Harbour between Te Puna Beach and the mouth of the Wairoa River. It includes mangrove scrub and shrubland and estuarine wetlands comprising variable mixtures of oioi, sea rush and *Machaerina juncea*. No rare or uncommon plant species have been recorded at this site.

Indigenous Fauna

The sandspit at Oikimoke Point and the shoreline to the south are roosts for a range of shorebird species (Owen *et al.* 2006). Caspian tern (Threatened-Nationally Vulnerable), pied stilt (At Risk-Declining), New Zealand pied oystercatcher (At Risk-Declining), little black shag (At Risk-Naturally Uncommon), little shag (At Risk-Naturally Uncommon), and pied shag (Threatened-Nationally Vulnerable) were recorded in 2008 (OSNZ data, Keith Owen pers. comm. 2012). Australasian bittern (Threatened-Nationally Endangered), banded rail, black shag (both At Risk-Naturally Uncommon), spotless crake (At Risk-Relict), and North Island fernbird (At Risk-Declining) were recorded in 1991 (Owen 1993). It is a breeding site of northern New Zealand dotterel (Threatened-Nationally Vulnerable), with one pair having been recorded (J. Heaphy, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Pampas is common on raised sites where spoil has been placed next to drains. Owen (1993) noted some reclamation, stock access, and weeds such as Spartina, woolly nightshade, pampas, wattle, and grey willow.

Key Site Features

Oikimoke includes typical examples of indigenous vegetation types which are relatively common in Tauranga Harbour, and notable bird species inhabit the site. The site is fragmented and convoluted, which increases its vulnerability to pressures such as invasive weeds and surrounding intensive land uses. It is a locally-important breeding site for northern New Zealand dotterel. Four Threatened and eight At Risk bird species have been recorded here. This site is an important ecological corridor for wildlife, especially banded rail, North Island fernbird, and spotless crake, along the harbour margin.

[1] Identified as SVHZ-48 in Wildland Consultants Cotract Report 1345.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	L
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Australasian bittern (Threatened-Nationally Endangered) (1991) Caspian tern (Threatened-Nationally Vulnerable) Northern New Zealand dotterel (Threatened-Nationally Vulnerable) Pied shag (Threatened-Nationally Vulnerable) Banded rail (At Risk-Naturally Uncommon) (1991) Black shag (At Risk-Naturally Uncommon) (1991) New Zealand pied oystercatcher (At Risk-Declining) (1991) North Island fernbird (At Risk-Declining) (1991) Pied stilt (At Risk-Declining) Little black shag (At Risk-Naturally Uncommon) Little shag (At Risk-Naturally Uncommon) Spotless crake (At Risk-Relict) (1991)
ii	✓	Australasian bittern (Endangered) (1991) New Zealand dotterel (Endangered)
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Mangrove scrub and shrubland, sea rush tussockland, oioi rushland, and sandspit.
ii	✓	Breeding site of northern New Zealand dotterel.
iii	✓	Mangrove scrub and shrubland, sea rush tussockland, oioi rushland, and sandspit.
iv	N/A	

Policy	Criteria Met	Explanation
v		
vi		
Policy Met:		11(b)
Justification:		The values of Oikimoke are consistent with Policy 11(b) because this site comprises somewhat fragmented examples of indigenous vegetation types which are relatively common in Tauranga Harbour and it is a breeding site of northern New Zealand dotterel. Other Threatened and At Risk avifauna have been recorded at the site, but the records for some of the species date from 1991.

Notes Identified as a Category 3 natural area in Tauranga Ecological District (Wildland Consultants 2008a). Restoration of this site through removal of the seaward stopbank and infilling of drains is likely to result in an improvement in habitat condition and values.

References Beadel 1992a; Owen 1993; Owen *et al.* 2006; Wildland Consultants 2006g; Wildland Consultants 2008a.

WAIROA RIVER WETLANDS

Site Number [1]	068
Grid Reference (NZMG)	E2783412 N6385816
Local Authority	Tauranga City Council, Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (Department of Conservation, Margaret Jackson Wildlife Management Reserve) and unprotected parts
Site Area	71.7 ha
Altitudinal Range	<20 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium
HVES Number	45

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Oioi-*Machaerina juncea* rushland.	Intertidal flat
Estuarine	Saltmarsh ribbonwood shrubland.	Intertidal flat
Estuarine	Mangrove scrub and shrubland.	Intertidal flat
Estuarine	Oioi rushland.	Intertidal flat
Estuarine	*Coprosma propinqua* subsp. *propinqua*/oioi rushland.	Intertidal flat
Estuarine	She-oak-wattle treeland.	Intertidal flat
Estuarine	Oioi-saltmarsh ribbonwood shrub-rushland.	Intertidal flat
Palustrine	Sea rush-oioi-(pasture) tussockland.	Wetland
Palustrine	Manuka scrub.	Wetland
Riverine	*Machaerina articulata-Bolboschoenus fluviatilis*-raupo reedland; *Machaerina articulata* reedland; *Schoenoplectus tabernaemontani* reedland.	River margin
Palustrine	Grey willow forest.	Wetland
Palustrine	Raupo-oioi-*Machaerina articulata* reedland.	Wetland
Terrestrial	Brush wattle-mamaku-ti kouka forest.	Hillslope
Terrestrial	Gorse-woolly nightshade scrub. (Beadel 1992a, Wildland Consultants 2005j)	Flat

Vegetation and Indigenous Flora

Wairoa River includes estuarine and freshwater wetlands. North of the railway bridge are estuarine wetlands dominated by oioi, sea rush, *Machaerina juncea*, and saltmarsh ribbonwood. East of the railway bridge freshwater wetlands are dominated by manuka, and grey willow. Towards the southern end of the site there are wetlands of *Coprosma propinqua* subsp. *propinqua,* oioi, raupo, and *Machaerina articulata.* There is also an example of brush wattle-mamaku-ti kouka forest. No rare or uncommon plant species have been recorded at this site.

Indigenous Fauna

Australasian bittern (Threatened-Nationally Endangered), North Island fernbird (At Risk-Declining), and spotless crake (At Risk-Relict) were recorded in 1990 (Owen 1993). There is also a more recent record of North Island fernbird, and records of grey duck (Threatened-Nationally Critical) and red-billed gull (Threatened-Nationally Vulnerable) (Wildland Consultants 2002a; 2005j).

The Wairoa River is a migratory corridor for indigenous freshwater fish including shortjaw kōkopu (At Risk-Declining), inanga (At Risk-Declining), redfin bully (At Risk-Declining), longfin eel (At Risk-Declining), giant kōkopu (At Risk-Declining), shortfin eel, common smelt, common bully, and

[1] Identified as SVHZ-49 in Wildland Consultants 2006g.

giant bully (Environment Bay of Plenty 2008). It is also a whitebait spawning site (BOPRC 2012).

Condition/Pressures

The following weed species are present within the site: smilax (*Asparagus asparagoides*), she-oak, black wattle, tree privet, Chinese privet, woolly nightshade, grey willow, blackberry, brush wattle, gorse, and pampas (Wildland Consultants 2005j).

Weed species which have increased in abundance and distribution at the site since 2000 include brush wattle, she-oak, and possibly black wattle. Grey willow, pampas, and tree privet are widespread in suitable habitat but there has been no detectable change in their distribution and abundance since 2000. This is probably a reflection of the fact that they were widespread in 2000 and already occupied almost all suitable habitats and micro-sites (Wildland Consultants 2005j). There is a building on the Margaret Jackson Wildlife Management Reserve used by whitebaiters and game hunters.

Key Site Features

The Wairoa River site is of regional significance because it is moderately sized, contains a wide range of indigenous vegetation types, contains a representative example of freshwater wetland vegetation adjacent to a river channel (Beadel 1994a), and provides habitat for three Threatened and two At Risk bird species. The river is a migratory corridor for indigenous freshwater fish including At Risk species and is a whitebait spawning site (BOPRC 2012).

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	M
	3.5	H
	3.6	H
Diversity and Pattern	3.7	H
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Grey duck (Threatened-Nationally Critical) Australasian bittern (Threatened-Nationally Endangered) (1990) Red-billed gull (Threatened-Nationally Vulnerable) North Island fernbird (At Risk-Declining) Spotless crake (At Risk-Relict) (1990) **Fish:** Giant kōkopu (At Risk-Declining) Inanga (At Risk-Declining) Longfin eel (At Risk-Declining) Redfin bully (At Risk-Declining)
ii	✓	Australasian bittern (Endangered) (1990) Giant kōkopu (Vulnerable)
iii	✓	One of the highest quality examples of palustrine wetland next to a river in Tauranga Ecological District.
iv		
v		Regionally Significant
vi		Partially protected (Margaret Jackson Wildlife Management Reserve, Department of Conservation)
Policy Met:		11(a)
Justification:		Three Threatened and two At Risk avifauna species have been recorded at Wairoa River Wetlands, but some of those records date from 1990. The site comprises estuarine and palustrine wetlands that are bisected by a railway embankment and include a component of invasive, exotic species. Most of the site is not legally protected. The site is consistent with Policy 11(a) because it includes indigenous vegetation and habitats that are confined to the coastal environment.

Notes Identified as a Category 1 natural area in Tauranga Ecological District (Wildland Consultants 2008a) and a Category 1 Special Ecological Area in Tauranga City (Wildland Consultants 2009b).

References Owen 1993; Beadel 1994a; Environment Bay of Plenty 2008; Wildland Consultants 2005j; Wildland Consultants 2006g; Wildland Consultants 2008a; Wildland Consultants 2009b; BOPRC 2012.

MATUA ESTUARY - YORKE PARK

Site Number [1]	075
Grid Reference (NZMG)	E2785897 N6387185
Local Authority	Tauranga City Council
Ecological District	Tauranga
Protection Status	Protected (TCC reserve and QEII covenants) and unprotected parts
Site Area	49.1
Altitudinal Range	0-20 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium
HVES Number	46

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Gorse-pampas-harakeke-saltmarsh ribbonwood/sea rush-oioi-mangrove tussockland.	Intertidal flat
Estuarine	Sea rush tussockland.	Intertidal flat
Estuarine	Sea rush-mangrove-oioi-saltmarsh ribbonwood tussockland.	Intertidal flat
Estuarine	Sea rush-oioi-mangrove tussockland.	Intertidal flat
Estuarine	Mangrove scrub and shrubland.	Intertidal flat
Palustrine	Manuka scrub.	Wetland
Terrestrial	Akeake (*Dodonea viscosa*)-manuka-tarata (*Pittosporum eugenioides*)-kohuhu-ti kouka-ngaio-koromiko-harakeke scrub (planted).	Flats
Estuarine	(Grey willow)/(manuka)/oioi-sea rush-(raupo) sedgeland.	Intertidal flat
Estuarine	Oioi-sea rush rushland.	Intertidal flat
Palustrine	Raupo reedland.	Wetland
Estuarine	Oioi rushland.	Intertidal flat
Palustrine	Japanese honeysuckle/*Carex geminata* vineland.	Wetland
Palustrine	Manuka-raupo shrubland.	Wetland
Palustrine	Pampas tussockland.	Wetland
Estuarine	Open water.	Estuarine River
Palustrine	(Ti kouka)/harakeke-saltmarsh ribbonwood-raupo scrub and flaxland.	Wetland
	(Beadel 1992a; Wildland Consultants 2005j; current study)	

Vegetation and Indigenous Flora

Matua Estuary-Yorke Park is within Tauranga City and its catchment is predominantly urban. It comprises estuarine wetlands, small freshwater wetlands, and some indigenous plantings. The most abundant species are mangrove, oioi, and sea rush. No rare or uncommon plant species have been recorded.

Indigenous Fauna

Australasian bittern (Threatened-Nationally Endangered); banded rail, little shag (both At Risk-Naturally Uncommon), and North Island fernbird (At Risk-Declining) were recorded in 1990 (Owen 1993). North Island fernbird were heard again in 2012, at the southern end of the site near a boardwalk in the Carmichael Reserve (current study). The site may also be habitat for marsh crake and/or spotless crake (both At Risk-Relict) (BOPRC 2012).

The stream provides a migratory pathway, with giant kōkopu (At Risk-

[1] Identified as SVHZ-50 in Wildland Consultants 2006g.

Declining) recorded upstream of the estuary (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Owen (1993) recorded stock access, extensive reclamation and drainage works, a range of weeds, and stormwater run-off. Wildland Consultants (2005j) recorded the following weed species on site: arum lily, wild ginger, she-oak, Taiwan cherry, tradescantia, black wattle, Chinese privet, Japanese honeysuckle, grey willow, blackberry, brush wattle, gorse, and pampas.

Matua saltmarsh has been the subject of an intensive saltwater paspalum control programme and a community restoration project which has carried out weed control and reduced the distribution and abundance of pampas and wild ginger (and also other weed species). Wild ginger, gorse, and brush wattle were present on the railway embankment and on the margins of the drains, especially towards the centre of the saltmarsh. In contrast, weed control does not appear to have been undertaken in Yorke Park, and grey willow and pampas remain common (Wildland Consultants 2005e).

The southwestern end of the site is bounded by Carmichael Reserve where plantings of indigenous species have been established in a narrow band around the pond and a boardwaolk and shared cyclepaths have been established. The site is separated from the pond by a stopbank.

Key Site Features

Matua Estuary-Yorke Park is a large site supporting a wide range of vegetation types, including representative examples of indigenous estuarine wetlands and small examples of freshwater wetlands. A wide range of pest plant species are present, but the effects of these infestations and other pressures are being alleviated by active restoration efforts. One Threatened and three At Risk bird species have been recorded here.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	H
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	L
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Australasian bittern (Threatened-Nationally Endangered) (1990) North Island fernbird (At Risk-Declining) Banded rail (At Risk-Naturally Uncommon) (1990) Little shag (At Risk-Naturally Uncommon) (1990) **Freshwater fish:** Giant kōkopu (At Risk-Declining)
ii	✓	Australasian bittern (Endangered) (1990) Giant kōkopu (Vulnerable)
iii		
iv		
v		Regionally Significant
vi		Parts of the site are protected (QEII covenant of Tauranga City Council Reserves).
11(b)		
i	✓	Mangrove scrub and shrubland, other indigenous estuarine wetlands, raupo reedland, and planted areas of indigenous scrub.
ii		
iii	✓	Mangrove scrub and shrubland and other indigenous estuarine wetland types.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Matua Estuary-Yorke Park is consistent with Policy 11(b) because it is a good quality example of estuarine vegetation with smaller areas of raupo-dominated wetland and planted indigenous scrub. A range of weed species is also present, but the site is the subject of a community-led restoration project. Threatened and At Risk avifauna species were recorded at the site in 1990, and one At Risk avifauna species was recorded again in 2012.

Notes Identified as a Category 1 natural area in the Tauranga Ecological District (Wildland Consultants 2008a), and as a Category 1 Special Ecological Area in Tauranga City (Wildland Consultants 2009b), and is the subject of a community-led restoration project (Wildland Consultants 2005j).

References Owen 1993; Beadel 1994a; Wildland Consultants 2005j; Wildland Consultants 2006g; Wildland Consultants 2008a; Wildland Consultants 2009b; BOPRC 2012.

WAIKAREAO ESTUARY 1

Site Number [1]	081
Grid Reference (NZMG)	E2787799 N6386419
Local Authority	Tauranga City Council
Ecological District	Tauranga
Protection Status	Protected (TCC reserve) and unprotected parts
Site Area	36.0 ha
Altitudinal Range	0-22 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium
HVES Number	47

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Grey willow forest.	Wetland
Palustrine	Grey willow-manuka-(ti kouka)/raupo-pampas treeland.	Wetland
Palustrine	*Coprosma propinqua* subsp. *propinqua*-manuka-pampas shrubland.	Wetland
Estuarine	Mangrove scrub and shrubland.	Intertidal flat
Terrestrial	Mamaku-tarata-Taiwan cherry-kohuhu-titoki (*Alectryon excelsus*)-karaka-makomako scrub.	Hillslope
Estuarine	Pampas-harakeke-manuka-*Coprosma propinqua* subsp. *propinqua*/raupo-bracken-(*Machaerina articulata*) shrub-tussockland.	Wetland
Estuarine	Saltmarsh ribbonwood/oioi-sea rush rushland.	Intertidal flat
Palustrine	Manuka/oioi-sea rush-saltmarsh ribbonwood rushland. (Beadel 1994b, Wildland Consultants 2005j, Wildland Consultants 2009b)	Wetland

Vegetation and Indigenous Flora

Waikareao Estuary 1 comprises saline wetlands and freshwater wetlands on the north-western side of Waikareao Estuary. The freshwater wetlands are dominated by grey willow. At the north of the site there is a hillside of mixed indigenous-exotic scrub. Regionally uncommon plant species present include *Olearia solandri*, *Austrostipa stipoides*, *Tetraria capillaris*, and *Gahnia xanthocarpa*.

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon), pied stilt (At Risk-Declining), Caspian tern, red-billed gull (both Threatened-Nationally Vulnerable) and North Island fernbird (At Risk-Declining) recorded in 1990 (Owen 1993), and North Island fernbird in 2002 and 2005 (Wildland Consultants 2002a, 2005j). Shorebirds roost along the saltmarsh edges, especially on neap tides (Owen *et al.* 2006).

Condition/Pressures

Waikareao Estuary 1 is within Tauranga City and surrounded by urban development. To the south, it is adjacent to Waikareao Estuary 2. The following weed species are present within the site: plectranthus (*Plectranthus ciliatus*), reed sweetgrass, ladder fern, climbing asparagus, silver poplar (*Populus alba*), arum lily, wild ginger, moth plant, she-oak, Taiwan cherry, tradescantia, black wattle, tree privet, Chinese privet, grey willow, brush wattle, gorse and pampas (Wildland Consultants 2005j).

The distribution of wild ginger and tradescantia has increased over recent

[1] Identified as SVHZ-51 in Wildland Consultants 2006g.

years. Grey willow and Taiwan cherry remain abundant and widespread, and are canopy dominants on the northern, landward, side of the site. Invasive weeds present on the margin of the wetland and at the base of the hillslope include pampas, Japanese honeysuckle, ladder fern, Chinese privet, arum lily, and reed sweetgrass (Wildland Consultants 2005j).

The site is adjacent to residential dwellings and a walking path and boardwalk pass through the site. Domestic cats and dogs, and feral cats, are likely to be present.

Key Site Features

This is a large, relatively compact site with a range of indigenous vegetation types. The large number of weed species present probably reflects its urban setting, as do the impacts of direct human activity. There are records of two Threatened and three At Risk bird species, and four regionally uncommon plant species from this site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	H
Diversity and Pattern	3.7	H
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Caspian tern (Threatened-Nationally Vulnerable) (1990) Red-billed gull (Threatened-Nationally Vulnerable) (1990) Pied stilt (At Risk-Declining) (1990) North Island fernbird (At Risk-Declining) Banded rail (At Risk-Naturally Uncommon) (1990)
ii		
iii	✓	High quality example of palustrine and saline wetlands, including regionally uncommon plant species.
iv		
v		Regionally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a Tauranga City Council reserve.

Policy	Criteria Met	Explanation
Policy Met:		11(a)
Justification:		Waikareao Estuary 1 is consistent with Policy 11(a) because it comprises a relatively large and high quality example of contiguous estuarine and palustrine wetlands which include four flora species which are regionally uncommon. In addition, two Threatened and two At Risk avifauna species were recorded at the site in 1990 and a third, North Island fernbird (At Risk-Declining), has been recorded more recently.

Notes

This site is ranked as a Category 1 Special Ecological Area in Tauranga City (Wildland Consultants 2009b) and a Category 1 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

References

Owen 1993; Beadel 1994a; Wildland Consultants 2002a; Wildland Consultants 2005j; Owen *et al.* 2006; Wildland Consultants 2006g; Wildland Consultants 2008a; Wildland Consultants 2009b.

WAIKAREAO ESTUARY 2

Site Number [1]	082
Grid Reference (NZMG)	E2787880 N6385366
Local Authority	Tauranga City Council
Ecological District	Tauranga
Protection Status	Protected (Department of Conservation, Waikareao Estuary Marginal Strip and TCC reserve) and unprotected parts
Site Area	17.0 ha
Altitudinal Range	0-20 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Grey willow/raupo forest.	Wetland
Estuarine	Mangrove scrub.	Intertidal flat
Terrestrial	Whau-karamu-taupata-manuka-karo-harakeke shrubland.	Hill
Estuarine	Mangrove shrubland.	Intertidal flat
Terrestrial	Mamaku/kawakawa shrubland.	Hill
Palustrine	*Olearia solandri*-harakeke-saltmarsh ribbonwood-oioi-*Machaerina* juncea-pampas-grey willow shrubland.	Wetland
Estuarine	Sea rush-oioi tussockland.	Intertidal flat
Palustrine	Grey willow/pampas-harakeke tussockland.	Wetland
Palustrine	Oioi-saltmarsh ribbonwood shrub-sedgeland.	Wetland
Estuarine	Oioi-sea rush-(saltmarsh ribbonwood) sedgeland	Wetland
Palustrine	Raupo-flax reedland.	Wetland
Estuarine	Mangrove loamfield. (Wildland Consultants 2005j; Wildland Consultants 2009b)	Intertidal flat

Vegetation and Indigenous Flora

Waikareao Estuary 2 is within Tauranga City and surrounded by urban development. To the north, it is adjacent to Waikareao Estuary 1. Waikareao Estuary 2 comprises saline wetlands and small freshwater wetlands on the south-western side of Waikareao Estuary and in a gully that flows into the estuary. The saline wetlands include mangrove, saltmarsh ribbonwood, oioi, and sea rush. The freshwater wetlands include grey willow, harakeke, raupo and pampas. *Olearia solandri* (a regionally uncommon plant species) occurs at this site.

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon), Caspian tern, red-billed gull (both Threatened-Nationally Vulnerable recorded in 1990 (Owen 1993). North Island fernbird (At Risk-Declining) was present in 2005.

The site includes the mouth of the Kopurererua River, which is a habitat and migratory pathway for indigenous freshwater fish including inanga (At Risk-Declining), redfin bully (At Risk-Declining), longfin eel (At Risk-Declining), giant kōkopu (At Risk-Declining), shortfin eel, common smelt, banded kōkopu, and common bully (Environment Bay of Plenty 2008).

[1] Identified as SVHZ-52 in Wildland Consultants Contarct Report 1345.

Condition/Pressures Weed species that are present include pampas and grey willow. Parts of the site are adjacent to residential properties so there is a risk of weed spread and dumping of garden waste. Owen (1993) noted reclamation and drainage works, domestic rubbish dumping, grey willow, wattle and *Spartina* spp.

Key Site Features Waikareao Estuary 2 is locally significant because it includes, within a relatively small site, examples of indigenous vegetation which are typical of the indigenous biodiversity of Tauranga Harbour. One At Risk bird species is present, and two Threatened and one At Risk bird species have been previously recorded at the site. One regionally uncommon plant species is present. The site includes the mouth of the Kopurererua River, which is a habitat and migratory pathway of indigenous freshwater fish.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	H
Diversity and Pattern	3.7	H
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Caspian tern (Threatened-Nationally Vulnerable) (1990) Red-billed gull (Threatened-Nationally Vulnerable) (1990) North Island fernbird (At Risk-Declining) Banded rail (At Risk-Naturally Uncommon) (1990) **Fish:** Inanga (At Risk-Declining) Redfin bully (At Risk-Declining) Longfin eel (At Risk-Declining) Giant kōkopu (At Risk-Declining)
ii	✓	Giant kōkopu (Vulnerable)
iii		
iv		
v		Locally Significant

Policy	Criteria Met	Explanation
vi		Biodiversity values at the site are not formally protected, but part of the site is a Tauranga City Council reserve.
11(b)		
i	✓	Estuarine and palustrine wetlands, including grey willow wetland with an indigenous understorey, mangrove scrub, sea rush-oioi tussockland, and raupo-flax reedland.
ii		
iii	✓	Mangrove scrub and other estuarine wetland types.
iv	N/A	
v	✓	The Kopurererua Stream is a migratory pathway for freshwater fish.
vi	✓	Part of a corridor of indigenous vegetation on the western side of the estuary.
Policy Met:		11(b)
Justification:		Waikareao Estuary 2 is consistent with Policy 11(b) because it comprises relatively narrow strips of estuarine wetland, palustrine wetland, and indigenous shrubland on the margins of the estuary, and it is part of a natural corridor around the estuary. It includes the mouth of the Kopurererua Stream, which is a migratory pathway for a suite of indigenous freshwater fish. Several threatened and At Risk avifauna species have been recorded at the site.

Notes

This site is ranked as a Category 2 Special Ecological Area in Tauranga City (Wildland Consultants 2009b) and a Category 3 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References

Owen 1993; Environment Bay of Plenty 2008; Wildland Consultants 2005j; Wildland Consultants 2006g; Wildland Consultants 2008a; Wildland Consultants 2009b.

MOTUOPAE ISLAND

Site Number [1]	083
Grid Reference (NZMG)	E2788188 N6385972
Local Authority	Tauranga City Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	2.2 ha
Altitudinal Range	0 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Manuka scrub.	Harbour island
Terrestrial	(Brush wattle)-mamaku/gorse-woolly nightshade-mahoe-hangehange scrub.	Harbour island
Estuarine	Sea rush-oioi tussockland. (Wildland Consultants 2003a and Wildland Consultants 2005j)	Intertidal flat

Vegetation and Indigenous Flora

Motupae Island is located within Waikareao Estuary, in Tauranga Harbour. It includes manuka scrub, mamaku-dominated scrub, and sea rush-oioi tussockland. No rare or uncommon plant species have been recorded.

Indigenous Fauna

No specific fauna information.

Condition/Pressures

Scattered pampas and gorse occur amongst the sea rush-oioi tussockland. Saltwater paspalum is present along the margins. Dense pampas and scattered gorse are present on the terrestrial parts of the island. A restoration plan for the island was prepared for Huria Management Trust Lands in 2003 (Wildland Consultants 2003a).

Key Site Features

Motuopae is small but locally significant because it is an island containing indigenous vegetation and habitats which are characteristic of the indigenous biodiversity of Tauranga Ecological District.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	L
	3.3	L
	3.4	L
	3.5	L
	3.6	H
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M

[1] Identified as SVHZ-54 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Manuka scrub and sea rush-oioi tussockland.
ii		
iii	✓	Sea rush-oioi tussockland
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Motuopae Island comprises small areas of indigenous vegetation types that are confined to the coastal environment, so the values of the site are consistent with Policy 11(b).

Notes

This site is ranked as a Category 2 Special Ecological Area in Tauranga City (Wildland Consultants 2009b) and a Category 3 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

There is an Urupa on Motuopae, however the part of the island where the Urupa is located has been excluded from this site (the vegetation cover on the Urupa in 2003 was mainly invasive weeds (Wildland Consultants 2003a)).

References

Wildland Consultants 2003a; Wildland Consultants 2005j; Wildland Consultants 2006g; Wildland Consultants 2008a; Wildland Consultants 2009a; Wildland Consultants 2009a.

KOPURERERUA STREAM WETLAND (PART)

Site Number [1]	079
Grid Reference (NZMG)	E2786157 N6382724
Local Authority	Tauranga City Council
Ecological District	Tauranga
Protection Status	Part protected (unnamed recreation reserve), part unprotected.
Site Area	3.0 ha
Altitudinal Range	0-40 m asl
Geology-Landform Type	Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	(Ti kouka)/manuka scrub and shrubland.	Wetland
Palustrine	*Machaerina articulata* reedland. (Current study)	Wetland

Vegetation and Indigenous Flora

The vegetation is dominated by manuka and *Machaerina articulata.*

Fauna

Pukeko are common at this site, and little shag (At Risk-Naturally Uncommon), spur-winger plover, grey-mallard hybrid and skylark have also been recorded (Wildland Consultants 2008g). Longfin eel (At Risk-Declining)), yelloweyed mullet, and shortfin eel have been recorded in Kopurererua Stream, which flows down a canal alongside the site (NIWA 2008). The stream is likely to provide habitat to other 'At Risk-Declining' fish such as inanga (but there are no records on NZFFD) and a migratory route for At Risk species including redfin bully, longfin eel, and inanga which are present in the upper catchment (Keith Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Pest plants which are present at this site at low-moderate densities include brush wattle, woolly nightshade, Japanese honeysuckle, blackberry, and grey willow.

Key Site Features

This site is of local ecological significance because it is part of a relatively large freshwater wetland for Tauranga Ecological District. Freshwater wetlands have been greatly reduced in extent in New Zealand. It has habitat that supports one At Risk bird species.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	L
	3.3	M
	3.4	L
	3.5	M
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	L
Ecological Context	3.9	M
	3.10	L

[1] Identified as Site Number 148 in Wildland Consultants 2008a.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Little shag (At Risk-Naturally Uncommon) **Fish:** Inanga (At Risk-Declining) Longfin eel (At Risk-Declining).
ii		
iii		
iv		
v		Locally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a Tauranga City Council recreation reserve.
11(b)		
i	✓	Palustrine wetland with indigenous and introduced species.
ii		
iii		
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Kopurererua Stream Wetland (Part) is a palustrine wetland within an area that is being restored by Tauranga City Council and its partners as part of 'Project K'. Palustrine wetlands have been greatly reduced in extent in Tauranga Ecological District and the values of the site are likely to be consistent with Policy 11(b).

Notes

This site is part of a larger site that is ranked as a Category 2 Special Ecological Area in Tauranga City (Wildland Consultants 2009b) and a Category 4 natural area in Tauranga Ecological District (Wildland Consultants 2008a)

The site is part of the 'Hidden Gorge' corridor (Environment Bay of Plenty 2006).

References

Wildland Consultants 2005e; NIWA 2008; Wildland Consultants 2008a; Wildland Consultants 2008g; Wildland Consultants 2009b.

MOTUOPUHI ISLAND

Site Number [1] 087
Grid Reference (NZMG) E2789585 N6383018
Local Authority Western Bay of Plenty District Council
Ecological District Tauranga
Protection Status Protected (TCC reserve) and unprotected parts
Site Area 1.3 ha
Altitudinal Range 0 m asl
Geology-Landform Type Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Robinia-brush wattle-(pohutukawa)-(karaka)-(*Eucalyptus* sp.) treeland.	Harbour Island
Terrestrial	Wattle forest and scrub.	Harbour Island
Estuarine	(Pampas)/(saltmarsh ribbonwood)-sea rush-oioi-*Machaerina juncea* tussockland (with local mangrove in channels). (P. Cashmore, Department of Conservation, pers. comm. 2006)	Harbour Island

Vegetation and Indigenous Flora Seven plants of New Zealand spinach (At Risk-Declining) were noted in 2006 (P. Cashmore, Department of Conservation, pers. comm.).

Indigenous Fauna Wader roosting site for New Zealand pied oystercatcher, pied stilt (both At Risk-Declining), variable oystercatcher (At Risk-Recovering), and other species (P. Cashmore, Department of Conservation, pers. comm. 2006). Tui and New Zealand kingfisher were noted in 2008.

Condition/Pressures A large range of weed species are present including pampas, brush wattle, black wattle, boneseed, coastal banksia (*Banksia* sp.), Japanese spindleberry, (*Euonymus japonicus*), Japanese honeysuckle, Chinese privet, wild ginger, arum lily, moth plant, bamboo, montbretia, smilax, false acacia, cape ivy, kikuyu grass, and tradescantia. There are a range of both exotic and native plantings on the island. Some of the native plantings comprise species which do not occur naturally in Tauranga Ecological District, for example pukanui (*Meryta sinclairii*) (P. Cashmore, Department of Conservation, pers. comm. 2006.). Due to its proximity to the mainland and accessibility at low tide, this island is relatively frequently visited by the public, dogs, and pest animals.

Key Site Features This site comprises a small island in an inner harbour setting containing degraded, predominantly exotic vegetation. One At Risk plant species and three At Risk bird species are present.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	L
Rarity or Distinctive Features	3.2	L
	3.3	L
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L

[1] Identified as Site Number 154 in Wildland Consultants 2008a.

Criterion*	RPS Number*	Ranking**
Naturalness	3.8	L
Ecological Context	3.9	L
	3.10	L
Viability and Sustainability	3.11	L
	3.12	L
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** New Zealand spinach (At Risk-Declining) **Avifauna:** New Zealand pied oystercatcher (At Risk-Declining) Pied stilt (At Risk-Declining) Variable oystercatcher (At Risk-Recovering)
ii		
iii		
iv		
v		Locally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a Tauranga City Council reserve.
11(b)		
i	✓	Estuarine wetland. The forest and treeland is not predominantly indigenous.
ii		
iii	✓	Estuarine wetland
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		A large range of weed species is present on Motuopihi Island, and some of the vegetation types that are present are not predominantly indigenous. However, the site does include small areas of estuarine wetland and one At Risk species, New Zealand spinach, is present. Therefore, the values of the site are consistent with Policy 11(b).

Notes

Motupuhi Island is a Category 2 Special Ecological Site in Tauranga City (Wildland Consultants 2009b) and has been identified as a Category 4 natural area in Tauranga Ecological District (Wildland Consultants 2008a)

This site is also known as Rat Island.

References

Owen *et al.* 2006; Wildland Consultants 2008a; Wildland Consultants 2009b.

WAIMAPU ESTUARY WALKWAY

Site Number [1]	084
Grid Reference (NZMG)	E2788643 N6382856
Local Authority	Tauranga City Council
Ecological District	Tauranga
Protection Status	Protected (TCC reserve) and unprotected parts
Site Area	4.2 ha
Altitudinal Range	0-7 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Grey willow-manuka forest.	Wetland
Palustrine	Raupo-pampas-harakeke-*Machaerina articulata*/ oioi-mangrove-sea rush sedge-tussockland.	Wetland
Estuarine	*Schoenoplectus pungens* sedgeland.	Intertidal flat
Palustrine	*Machaerina articulata*-harakeke-raupo reedland.	Wetland
Estuarine	Mangrove shrubland and loamfield.	Intertidal flat
Estuarine	Oioi-mangrove-sea rush-raupo shrub rushland.	Intertidal flat
Terrestrial	Akeake-manuka-tarata-kohuhu-ti kouka-ngaio-koromiko-harakeke scrub.	Hillslope
Palustrine	Grey willow forest.	Wetland
Estuarine	Oioi-saltmarsh ribbonwood shrub- rushland.	Intertidal flat
Terrestrial	Mamaku-tree privet treeland (Beadel 1994e, Wildland Consultants 2005j)	Hillslope

Vegetation and Indigenous Flora

Waimapu Estuary walkway is located on the north-western margin of Waimapu Estuary, and is adjacent to urban areas and parkland. The site includes mangrove scrub and shrubland, saline wetlands of species such as oioi and sea rush, and grey willow-dominated wetlands. *Tetraria capillaris*, a regionally uncommon species, is present (Beadel 1994e).

Indigenous Fauna

Nearby residents recorded the presence of North Island fernbird (At Risk-Declining) in 1990 (Owen 1993). Banded rail (At Risk-Naturally Uncommon) was present (K. Owen, Department of Conservation, pers. comm. 2006).

The site includes the mouth of the Kaitemako River, which is a habitat and migratory pathway for indigenous freshwater fish including inanga (At Risk-Declining), common smelt, and common bully (Environment Bay of Plenty 2008).

Condition/Pressures

The site is relatively narrow and is bounded by residential dwellings so is vulnerable to weed incursion and dumping of garden waste. The tracks through the site are also potential sites for weed establishment. Vegetation has been cleared from a portion of the site in the past few years.

Key Site Features

This small site is locally significant because it is a typical example of indigenous vegetation and habitat types which are relatively common in the Tauranga Ecological District. A range of pressures, including weed species, reflects its urban setting. Two At Risk bird species have been recorded. One

[1] Identified as SVHZ-55 in Wildland Consultants 2006g.

regionally uncommon plant species is present at this site. The site includes the mouth of the Kaitemako River, which is a habitat and migratory pathway for indigenous freshwater fish.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	L
	3.3	L
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	H
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** North Island fernbird (At Risk-Declining) (1990) Banded rail (At Risk-Naturally Uncommon) **Fish:** Inanga (At Risk-Declining)
ii		
iii		
iv		
v		Locally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a Tauranga City Council reserve.
11(b)		
i	✓	Indigenous estuarine and palustrine wetland vegetation and planted indigenous scrub.
ii		
iii	✓	Estuarine wetlands.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Waimapu Estuary Walkway comprises narrow strips of estuarine and palustrine wetland (dominated by grey willow). The estuarine vegetation

Policy	Criteria Met	Explanation
		types present are confined to the coastal environment and the values of the site are consistent with Policy 11(b).

Notes

This site is ranked as a Category 2 Special Ecological Area in Tauranga City (Wildland Consultants 2009b) and identified as a Category 4 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References

Owen 1993; Beadel 1994e; Environment Bay of Plenty 2008; Wildland Consultants 2005j; Wildland Consultants 2006g; Wildland Consultants 2008a; Wildland Consultants 2009b.

WAIMAPU ESTUARY

Site Number [1]	080
Grid Reference (NZMG)	E2787786 N6381442
Local Authority	Tauranga City Council
Ecological District	Tauranga
Protection Status	Protected (Department of Conservation, Tauranga Harbour Marginal Strip and TCC reserve) and unprotected parts
Site Area	45.1 ha
Altitudinal Range	0-20 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium, Sedimentary (volcanic) unconsolidated
HVES Number	48

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Mangrove scrub and shrubland.	Intertidal flat
Terrestrial	Puriri/mamaku-mahoe/kawakawa treeland.	Hillslope
Terrestrial	Brush wattle-mamaku-ti kouka forest.	Hillslope
Palustrine	Grey willow-manuka forest.	Wetland
Palustrine	Grey willow forest.	Wetland
Palustrine	Manuka scrub.	Wetland
Estuarine	*Coprosma propinqua* subsp. *propinqua* shrubland.	Intertidal flat
Palustrine	Grey willow/pampas-harakeke tussockland.	Wetland
Palustrine	Harakeke-pampas-raupo-gorse-*Coprosma propinqua* subsp. *propinqua*/sea rush-oioi-(saltmarsh ribbonwood)-(*Machaerina articulata*) shrub-tussockland.	Wetland
Estuarine	Sea rush-harakeke-saltmarsh ribbonwood-*Coprosma propinqua* subsp. *propinqua* tussockland.	Intertidal flat
Estuarine	Sea rush-mangrove-oioi-saltmarsh ribbonwood tussockland.	Intertidal flat
Estuarine	Sea rush-oioi tussockland.	Intertidal flat
Estuarine	Oioi-*Machaerina articulata* rushland.	Intertidal flat
Estuarine	Oioi rushland.	Intertidal flat
Estuarine	Oioi-*Machaerina articulata*-saltmarsh ribbonwood rushland.	Intertidal flat
Estuarine	Oioi-saltmarsh ribbonwood shrub-rushland.	Intertidal flat
Estuarine	Arrow grass herbfield.	Intertidal flat
Estuarine	(*Coprosma propinqua* subsp. *propinqua*)-(manuka)/*Machaerina articulata*-mangrove-oioi-(sea rush)/arrow grass herbfield.	Intertidal flat
Palustrine	Grey willow/*Coprosma propinqua* subsp. *propinqua* forest.	Wetland
Estuarine	Open water.	Estuarine river
	(Beadel 1992a, Wildland Consultants 2005j)	

Vegetation and Indigenous Flora

This site is located at the southern end of Waimapu Estuary and includes the outlet of Waimapu Stream. It is dominated by saline wetlands which include mangrove, sea rush, oioi, saltmarsh ribbonwood, and arrow grass. There are also freshwater wetlands which include grey willow, harakeke, *Coprosma*

[1] Identified as SVHZ-56 in Wildland Consultants 2006g.

propinqua subsp. *propinqua*, and raupo. There is a small area of puriri treeland on a hillside near the northern tip of the site and a high quality example of *Coprosma propinqua* subsp. *propinqua* shrubland towards the southern end of the site. One regionally uncommon species is present - *Tetraria capillaris*.

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon), pied stilt (At Risk-Declining), and red-billed gull (Threatened-Nationally Vulnerable) were recorded in 1990 (Owen 1993) and North Island fernbird (At Risk-Declining) were recorded in 2002 and 2005 (Wildland Consultants 2002a, 2005j). White-fronted tern (At Risk-Declining) and several common coastal bird species were also recorded at the site in 2002 (Wildland Consultants 2002a).

The site includes the mouth of the Waimapu Stream, which is a habitat and migratory pathway of indigenous species of freshwater fish, including longfin eel, redfin bully, inanga, and giant kōkopu (all At Risk-Declining) (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

The following weed species are currently present within the site: arum lily, wild ginger, Taiwan cherry, tree privet, Chinese privet, Japanese honeysuckle, woolly nightshade, grey willow, blackberry, brush wattle, gorse and pampas. (Wildland Consultants 2005j)

The abundance and distribution of brush wattle and Japanese honeysuckle increased between 2000 and 2005. No change was detected in the abundance and distribution of grey willow, tree privet, and pampas (Wildland Consultants 2005j).

The following activities have impacted on the site: dumping of organic waste has had a minor negative impact, drainage has had a moderate minor negative impact and weed control has had a minor positive impact (Wildland Consultants 2005j).

Key Site Features

Waimapu Estuary is a relatively large site which comprises a representative example of the estuarine and freshwater vegetation in Tauranga Ecological District. It contains the best example of coastal *Coprosma propinqua* subsp. *propinqua* shrubland in the Bay of Plenty. One Threatened and four At Risk bird species, and one regionally uncommon plant species occur here. The site includes the mouth of the Waimapu Stream, which is a habitat and migratory pathway of indigenous species of freshwater fish.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	H
Diversity and Pattern	3.7	H
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	H

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Red-billed gull (Threatened-Nationally Vulnerable) (1990) Banded rail (At Risk-Naturally Uncommon) (1990) North Island fernbird (At Risk-Declining) Pied stilt (At Risk-Declining) (1990) White-fronted tern (At Risk-Declining) **Fish:** Inanga (At Risk-Declining) Giant kōkopu (At Risk-Declining) Longfin eel (At Risk-Declining) Redfin bully (At Risk-Declining)
ii	✓	Giant kōkopu (Vulnerable)
iii	✓	High quality example contiguous estuarine and palustrine wetlands.
iv		
v	✓	Nationally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a Tauranga City Council reserve.
Policy Met:		11(a)
Justification:		Waimapu Estuary is consistent with Policy 11(a) because it includes high quality examples of coastal vegetation types and it has previously been identified as being nationally significant. In addition, a suite of Threatened and At Risk avifauna species have been recorded at the site, though some have not been recorded since 1990.

Notes This site is ranked as a Category 1 Special Ecological Area in Tauranga City (Wildland Consultants 2009b) and was identified as a Category 1 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

References Owen 1993; Wildland Consultants 2002a; Wildland Consultants 2005j; Wildland Consultants 2006g; Wildland Consultants 2008a; Wildland Consultants 2009b.

POIKE

Site Number [1]	085
Grid Reference (NZMG)	E2788473 N6380941
Local Authority	Tauranga City Council
Ecological District	Tauranga
Protection Status	Protected (TCC reserve) and unprotected parts
Site Area	28.1 ha
Altitudinal Range	0-23 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium
HVES Number	49

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	(Grey willow)/manuka/*Machaerina rubiginosa* shrubland.	Wetland
Palustrine	Grey willow forest and treeland.	Wetland
Palustrine	Grey willow-manuka forest.	Wetland
Palustrine	Manuka scrub.	Wetland
Terrestrial	(Wattle)/mamaku-Japanese honeysuckle-gorse scrub.	Alluvial flat
Palustrine	*Coprosma propinqua* subsp. *propinqua* shrubland.	Wetland
Terrestrial	Manuka-harakeke-toetoe shrubland.	Alluvial flat
Estuarine	Mangrove scrub and shrubland.	Intertidal flat
Estuarine	Pampas tussockland.	Alluvial flat
Palustrine	Grey willow/pampas-harakeke tussockland.	Wetland
Estuarine	Oioi-sea rush-(saltmarsh ribbonwood) rushland.	Intertidal flat
Estuarine	Oioi-sea rush rushland.	Intertidal flat
Estuarine	Oioi-saltmarsh ribbonwood-harakeke-*Machaerina juncea* rushland.	Intertidal flat
	(Wildland Consultants 2005j and 2011a)	

Vegetation and Indigenous Flora

This site is located on the south side of Waimapu Estuary. It includes estuarine wetlands and a grey willow-dominated wetland in a gully which flows into the estuary. The saline wetlands are dominated by sea rush and oioi, and pampas is common, particularly on the margins and along drains. Grey willow dominates the freshwater wetlands which also include indigenous species such as manuka, *Coprosma propinqua* subsp. *propinqua*, harakeke, *Machaerina rubiginosa*,wheki, karamu, toetoe, and species of *Carex*.

Three 'At Risk' species and three regionally uncommon' species are present in the portion of the wetland south of the road. *Dianella haematica* and *Pterostylis paludosa* are both classified At Risk-Declining and *Pterostylis* aff. *graminea* "Sphagnum" is classified Taxonomically Indeterminate - At Risk-Naturally Uncommon. The two *Pterostylis* species and *P. graminea*, which is also present, are not known to occur anywhere else in the Tauranga Ecological District. Maru (burr reed; *Sparganium subglobosum*), *Tetraria capillaris*, and *Nertera scapanioides* are all regionally uncommon and maru is only known from two other sites in the Ecological District.

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon), spotless crake (At Risk-Relict), and North Island fernbird (At Risk-Declining) were recorded in 1990 (Owen 1993). North Island fernbird were recorded again in 2002 and 2005 (Wildland

[1] Identified as SVHZ-57 in Wildland Consultants 2006g.

Consultants 2002a, 2005j). These species were not recorded during a survey of the southern portion of the site in 2011, but weather and traffic noise at the time were bad. A feather of Australasian bittern (Threatened-Nationally Endangered) was found in 2011. White-fronted tern (At Risk-Declining) and several common coastal birds were also recorded in 2002 (Wildland Consultants 2002a).

The site includes the mouth of an unnamed stream which is a habitat and migratory pathway of indigenous species of freshwater fish, including redfin bully (At Risk-Declining), banded kōkopu, and shortfin eel (Bloxham 2007).

Condition/Pressures

The following weed species are currently present within the site: *Pinus* spp., tree privet, Chinese privet, Japanese honeysuckle, woolly nightshade, grey willow, blackberry, brush wattle, gorse and pampas (Wildland Consultants 2005j). Spartina is present (K. Owen, Department of Conservation, pers. comm. 2012). The abundance and distribution of pampas and Japanese honeysuckle have increased in the site in recent years. Grey willow, tree privet, and radiata pine may also have spread (Wildland Consultants 2005j).

The site is vulnerable to vegetation clearance, particularly in the area that is adjacent to the hot pools and camping ground, where clearance has been occurring in recent years.

Key Site Features

This site is of regional significance because it contains a wide range of vegetation communities, including At Risk and regionally uncommon species, and is in close proximity to the nationally significant Waimapu Estuary site. It is a moderate-sized, diverse example of the estuarine and freshwater wetland vegetation of Tauranga Harbour. It supports at least four At Risk bird species. This site is dissected at one end by a state highway. Pest plant infestations appear to be increasing in extent/density.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	H
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	L
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora** *Dianella haematica* (At Risk-Declining) *Pterostylis paludosa* (At Risk-Declining) *Pterostylis* aff. *graminea* "Sphagnum" (Taxonomically Indeterminate, At Risk-Naturally Uncommon) **Avifauna:** Australasian bittern (Threatened-Nationally Endangered) North Island fernbird (At Risk-Declining) White-fronted tern (At Risk-Declining) Spotless crake (At Risk-Relict) (1990) Banded rail (At Risk-Naturally Uncommon) (1990) Fish: Redfin bully (At Risk-Declining)
ii	✓	Australasian bittern (Endangered)
iii	✓	High quality palustrine and estuarine wetlands that support the only known populations in Tauranga Ecological District of two At Risk species.
iv		
v		Regionally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a Tauranga City Council reserve.
Policy Met:		11(a)
Justification:		Poike comprises estuarine and palustrine wetlands. Three At Risk species of plants and three regionally uncommon species of plants have been recorded, including two species which are not known to occur elsewhere in Tauranga Ecological District. Threatened and At Risk avifauna have been recorded at the site. For these reasons, Poike is consistent with Policy 11(a).

Notes This site is ranked as a Category 1 Special Ecological Area in Tauranga City (Wildland Consultants 2009b) and has been identified as a Category 2 natural area in Tauranga Ecological Distrct (Wildland Consultants 2008a).

References Owen 1993; Wildland Consultants 2002a; Wildland Consultants 2005j; Wildland Consultants 2006g; Wildland Consultants 2008a; Wildland Consultants 2009b; Wildland Consultants 2011a.

HAIRINI

Site Number [1] 086
Grid Reference (NZMG) E2789357 N6381824
Local Authority Tauranga City Council
Ecological District Tauranga
Protection Status Unprotected
Site Area 2.2 ha
Altitudinal Range 0-14 m asl
Geology-Landform Type Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Grey willow forest.	Wetland
Estuarine	Saltmarsh ribbonwood shrubland.	Intertidal flat
Palustrine	Grey willow/gorse-*Coprosma propinqua* subsp. *propinqua*-manuka-harakeke shrubland.	Wetland
Estuarine	Mangrove/*Schoenoplectus pungens* sedgeland.	Intertidal flat
Estuarine	Oioi rushland.	Intertidal flat
Estuarine	Oioi-*Machaerina articulata* rushland.	Intertidal flat
Estuarine	*Schoenoplectus pungens* sedgeland.	Intertidal flat
Palustrine	*Machaerina articulata* reedland. (Wildland Consultants 2005j)	Wetland

Vegetation and Indigenous Flora

This is a small site on the margin of Tauranga Harbour, within Tauranga City. The site is dissected by a four-lane causeway. The most abundant vegetation type is grey willow/gorse-*Coprosma propinqua* subsp. *propinqua*-manuka-harakeke shrubland, and there are small areas of grey willow forest, and saline wetlands. No rare or uncommon plant species have been recorded.

Indigenous Fauna

Hairini shoreline is a neap high tide roost for several wader species, for example pied stilt (At Risk-Declining) (Owen *et al.* 2006) and variable oystercatcher (At Risk-Recovering).

Condition/Pressures

Weed species present include grey willow, gorse, and brush wattle. The southern margins of the site may be vulnerable to dumping of garden waste.

Key Site Features

This small site is locally significant because it contains indigenous vegetation and habitat types which are typical of the indigenous biodiversity of Tauranga Ecological District It includes small examples of freshwater wetland, which is a habitat that has been greatly reduced in extent in Tauranga Ecological District. Two At Risk bird species have been recorded at this site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	L
	3.3	L
	3.4	L
	3.5	L
	3.6	H
Diversity and Pattern	3.7	H

[1] Identified as SVHZ-58 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	L
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Pied stilt (At Risk-Declining) Variable oystercatcher (At Risk-Recovering)
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Small areas of indigenous estuarine wetland, grey willow forest with an indigenous understorey, and *Machaerina articulata* reedland.
ii		
iii	✓	Indigenous estuarine wetland.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Hairini is consistent with Policy 11(b) because it comprises small areas of indigenous estuarine and palustrine wetlands. It also includes a freshwater wetland where grey willow dominates the canopy but indigenous species dominate the understorey.

Notes This site is ranked as a Category 2 Special Ecological Area in Tauranga City (Wildland Consultants 2009b) and has been identified as a Category 4 natural area in Tauranga Ecological District (Wildland Consultants 2009b).

References Wildland Consultants 2005j; Owen *et al.* 2006; Wildland Consultants 2006g; Wildland Consultants 2008a; Wildland Consultants 2009b.

KAITEMAKO STREAM MOUTH

Site Number [1]	090
Grid Reference (NZMG)	E2790509 N6381783
Local Authority	Tauranga City Council
Ecological District	Tauranga
Protection Status	Protected (TCC reserve) and unprotected parts
Site Area	16.5 ha
Altitudinal Range	0-20 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Grey willow/manuka treeland.	Wetland
Estuarine	Mangrove scrub.	Intertidal flat
Estuarine	Mangrove shrubland.	Intertidal flat
Palustrine	Manuka shrubland.	Wetland
Palustrine	Grey willow/manuka-raupo shrubland.	Wetland
Palustrine	Manuka-harakeke-ti kouka-(raupo)-(oioi) shrubland.	Wetland
Estuarine	Oioi sedgeland.	Intertidal flat
Estuarine	Oioi-saltmarsh ribbonwood shrub-sedgeland.	Intertidal flat
Estuarine	Oioi-sea rush sedgeland.	Intertidal flat
Palustrine	Oioi-sea rush sedgeland.	Intertidal flat
Estuarine	Oioi-saltmarsh ribbonwood sedgeland.	Intertidal flat
Palustrine	Bolboschoenus fluviatilis reedland.	Wetland
Estuarine	Mangrove loamfield.	Intertidal flat
Estuarine	Open water.	Estuarine River
	(Wildland Consultants 2005j; Wildland Consultants 2009b)	

Vegetation and Indigenous Flora

Kaitemako Stream Mouth is located within Welcome Bay, Tauranga City. The most widespread species within this site is mangrove. There are also areas of saltmarsh which include oioi, sea rush, and saltmarsh ribbonwood. On the northern margins of the site there are variable mixtures of grey willow and manuka, with other species such as raupo and harakeke.

Indigenous Fauna

Banded rail, black shag (both At Risk-Naturally Uncommon), North Island fernbird (At Risk-Declining) recorded in 1990 (Owen 1993). The stream mouth is a migratory pathway for indigenous freshwater fish, including giant kōkopu and inanga (both At Risk-Declining) (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Parts of the site are dominated by grey willow. Owen (1993) recorded weeds (for example wattle, willow, and gorse), drainage works, stormwater discharge, and mangrove removal for boat access.

Key Site Features

Kaitemako Stream Mouth is locally significant because it includes examples of indigenous vegetation (estuarine wetlands) which are relatively common in Tauranga Harbour. This relatively large site is highly fragmented and there are a wide range of pressures operating that are typical of urban estuaries. Three At Risk bird species have been recorded in the past and are likely to still

[1] Identified as SVHZ-59 in Wildland Consultants 2006g.

be present (Owen 1993, K. Owen, Department of Conservation, pers. comm. 2006).

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	H
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** North Island fernbird (At Risk-Declining) (1990) Banded rail (At Risk-Naturally Uncommon) (1990) Black shag (At Risk-Naturally Uncommon) (1990) **Fish:** Giant kōkopu (At Risk-Declining) Inanga (At Risk-Declining)
ii	✓	Giant kōkopu (Vulnerable)
iii		
iv		
v		Locally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a Tauranga City Council reserve.
11(b)		
i	✓	Mangrove scrub and shrubland, estuarine vegetation types, and palustrine wetland.
ii		
iii	✓	Mangrove scrub and shrubland and other estuarine vegetation types.
iv	N/A	
v	✓	The stream mouth is a migratory pathway for indigenous freshwater fish.
vi		
Policy Met:		11(b)
Justification:		Kaitemako Stream Mouth comprises mangrove scrub and shrubland, estuarine wetland, and small areas of palustrine vegetation so its values are consistent

Policy	Criteria Met	Explanation
		with Policy 11(b). It is also a migratory pathway for indigenous species of freshwater fish. Three At Risk species of birds were recorded at the site in 1990.

Notes This site is ranked as a Category 2 Special Ecological Area in Tauranga City (Wildland Consultants 2009b) and identified as a Category 3 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References Owen 1993; Wildland Consultants 2005j; Wildland Consultants 2008a; Wildland Consultants 2009b.

WELCOME BAY

Site Number[1]	091
Grid Reference (NZMG)	E2790871 N6381235
Local Authority	Tauranga City Council
Ecological District	Tauranga
Protection Status	Protected (TCC reserve) and unprotected parts
Site Area	21.7 ha
Altitudinal Range	0-20 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Grey willow/raupo-harakeke-purei treeland.	Alluvial flat
Estuarine	Mangrove scrub.	Intertidal flat
Terrestrial	Akeake-manuka-tarata-kohuhu-ti kouka-ngaio-koromiko-harakeke scrub.	Alluvial flat
Estuarine	Mangrove shrubland.	Intertidal flat
Terrestrial	Whau-karamu-ngaio-(tarata)-(manuka)-(pohutukawa)-(taupata)/kikuyu grass-cocksfoot shrubland.	Alluvial flat
Estuarine	Sea rush tussockland.	Intertidal flat
Riverine	Oioi rushland.	Alluvial flat
Riverine	Raupo reedland.	Alluvial flat
	(Wildland Consultants 2005j; Wildland Consultants 2009b)	

Vegetation and Indigenous Flora

This site is located on the southern margin of Welcome Bay and in an adjacent valley. It includes estuarine wetlands of mangrove, sea rush, and oioi, and freshwater wetlands of grey willow, harakeke, and raupo. In the valley, there are planted areas of indigenous shrubland and scrub which include whau, karamu, akeake, manuka, and ti kouka.

Indigenous Fauna

No marsh birds were recorded here in 1990 (Owen 1993). It may provide habitat for North Island fernbird (At Risk-Declining) and/or banded rail (At Risk-Naturally Uncommon) (BOPRC 2012).

Condition/Pressures

1990 Owen (1993) recorded drainage works, organic rubbish dumping; and weeds (for example taro (*Colocasia esculenta*), *Tradescantia,* wild ginger, banana passionfruit (*Passiflora mollissima*), and woolly nightshade). The landward portions of the site are bounded by a road and grassed recreation areas.

Key Site Features

The Welcome Bay site is locally significant because it comprises indigenous vegetation and habitat types which are typical of the indigenous biodiversity of the Tauranga Ecological District. This site is moderately large, long and narrow in shape, and is impacted by a range of weeds and urban pressures.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	L

[1] Identified as SVHZ-60 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
	3.3	M
	3.4	L
	3.5	L
	3.6	H
Diversity and Pattern	3.7	H
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		
vi		Biodiversity values at the site are not formally protected, but part of the site is a Tauranga City Council reserve.
11(b)		
i	✓	Grey willow above a predominantly indigenous understorey, mangrove scrub and shrubland, planted indigenous scrub, sea rush tussockland, oioi rushland, and raupo reedland.
ii		
iii	✓	Mangrove scrub and shrubland, sea rush tussockland, and oioi rushland.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Welcome Bay is consistent with Policy 11(b) because it includes indigenous vegetation types which are confined to the coastal environment. In addition, palustrine wetlands have been greatly reduced in extent throughout Tauranga Ecological District.

Notes

The part of the site which is within the valley is subject to a community-led project to control weeds and replant with indigenous species. This site is ranked as a Category 2 Special Ecological Area in Tauranga City (Wildland Consultants 2009b) and has been identified as a Category 3 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References

Owen 1993; Wildland Consultants 2005j; Wildland Consultants 2006g; Wildland Consultants 2008a; Wildland Consultants 2009b.

TYE PARK INLET

Site Number [1] 096
Grid Reference (NZMG) E2792216 N6381662
Local Authority Tauranga City Council
Ecological District Tauranga
Protection Status Unprotected
Site Area 2.5 ha
Altitudinal Range 0-11 m asl
Geology-Landform Type Estuarine

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Sandfield.	Intertidal flat
Estuarine	Oioi rushland.	Intertidal flat
Estuarine	Mangrove scrub.	Intertidal flat
Estuarine	Mangrove-oioi-sea rush scrub.	Intertidal flat
Estuarine	Open water.	Intertidal flat
	(Wildland Consultants 2005j; Wildland Consultants 2009b)	

Vegetation and Indigenous Flora Tye Park Inlet is a small site in Welcome Bay. It comprises estuarine wetlands of mangrove, oioi, and sea rush. No rare or uncommon plant species have been recorded at this site.

Indigenous Fauna Banded rail (At Risk-Naturally Uncommon) recorded in 1990 (Owen 1993). Pied stilts utilise this site (At Risk-Declining) (Owen *et al.* 2006).

Condition/Pressures Pampas is present on the margins of the site. The site is surrounded by exotic vegetation (for example brush wattle-woolly nightshade scrub to the east and mown grass to the west) and residential development. Some unauthorised mangrove clearance has occurred in past years (P. Cashmore, Department of Conservation, pers. comm. 2006.).

Key Site Features Tye Park Inlet is locally significant because it contains small examples of indigenous mangrove scrub and estuarine wetlands. Two At Risk bird species have been recorded at the site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	L
	3.4	L
	3.5	L
	3.6	N/A
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M

[1] Identified as SVHZ-61 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Pied stilt (At Risk-Declining) Banded rail (At Risk-Naturally Uncommon) (1990)
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Sandfield, oioi rushland, and mangrove scrub.
ii		
iii	✓	Sandfield, oioi rushland, and mangrove scrub.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Tye Park Inlet is consistent with Policy 11(b) because it comprises indigenous vegetation types which are confined to the coastal environment. Two At Risk avifauna species have been recorded at the site, though banded rail have not been recorded since 1990, and some unauthorised mangrove clearance has occurred since then.

Notes This site is ranked as a Category 2 Special Ecological Area in Tauranga City (Wildland Consultants 2009b) and as a Category 4 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References Owen 1993; Owen *et al.* 2006; Wildland Consultants 2005j; Wildland Consultants 2006g; Wildland Consultants 2008a; Wildland Consultants 2009b.

RANGINUI ROAD

Site Number [1]	097
Grid Reference (NZMG)	E2792497 N6382221
Local Authority	Tauranga City Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	2.0 ha
Altitudinal Range	0-11 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Grey willow/raupo treeland.	Wetland
Estuarine	Mangrove shrubland.	Intertidal flats
Estuarine	Sea rush-(pasture) tussockland.	Intertidal flats
Estuarine	Sandfield.	Intertidal flats
	(Wildland Consultants 2009b)	

Vegetation and Indigenous Flora Small area of mangrove shrubland sheltered by a small sandbank, backed by a small area of freshwater wetland now dominated by grey willow. No rare or uncommon plant species have been recorded at this site.

Indigenous Fauna No information

Condition/Pressures The freshwater wetland is dominated by grey willow. Sedimentation exerts significant pressure on estuarine systems throughout Tauranga Harbour.

Key Site Features Ranginui Road is locally significant because it contains small examples of indigenous mangrove scrub and estuarine wetlands.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	L
Rarity or Distinctive Features	3.2	L
	3.3	L
	3.4	L
	3.5	L
	3.6	L
Diversity and Pattern	3.7	L
Naturalness	3.8	L
Ecological Context	3.9	M
	3.10	L
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

[1] Identified as Site number 22 in Wildland Consultants 2009b.

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Locally significant
vi		Unprotected
11(b)		
i	✓	Grey willow above raupo, mangrove shrubland, sea rush tussockland, and sandfield.
ii		
iii	✓	Mangrove shrubland, sea rush tussockland, and sandfield.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Ranginui Road is a small area of estuarine wetland that is consistent with Policy 11(b) because it comprises indigenous vegetation types which are confined to the coastal environment.

Notes This site is ranked as a Category 2 Special Ecological Area in Tauranga City (Wildland Consultants 2009b).

References Wildland Consultants 2009b.

NGĀPEKE ROAD WETLANDS

Site Number [1]	099
Grid Reference (NZMG)	E2793522 N6382435
Local Authority	Tauranga City Council
Ecological District	Tauranga
Protection Status	Protected (Department of Conservation, Tauranga Harbour Marginal Strip and Ngāpeke Rd Conservation Area and TCC reserve) and unprotected parts
Site Area	21.0 ha
Altitudinal Range	0-20 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Grey willow forest.	Wetland
Estuarine	Mangrove scrub.	Intertidal flat
Palustrine	Grey willow/manuka-raupo scrub.	Wetland
Palustrine	Manuka-grey willow/harakeke-*Machaerina juncea*- saltmarsh ribbonwood shrubland.	Wetland
Estuarine	Mangrove shrubland.	Intertidal flat
Palustrine	Manuka-(raupo) shrubland.	Wetland
Palustrine	Harakeke-pampas-manuka-saltmarsh. ribbonwood/sea rush-oioi tussockland.	Wetland
Estuarine	Sea rush-oioi tussockland.	Intertidal flat
Estuarine	Sea rush-oioi-mangrove tussockland.	Intertidal flat
Palustrine	Raupo reedland.	Wetland
Estuarine	Sandfield.	Flats
Estuarine	Mangrove loamfield.	Intertidal flat
	(Wildland Consultants 2005j; Wildland Consultants 2009b)	

Vegetation and Indigenous Flora

Ngāpeke Road Wetland is on the southern side of the Rangataua Estuary. It includes saline wetlands on the estuary margin and freshwater wetlands in an adjacent gully. The saline wetlands are dominated by mangrove, sea rush, and oioi. The freshwater wetland in the valley is dominated by grey willow.

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon) sign, and North Island fernbird (At Risk-Declining) were recorded in 1990 (Owen 1993).

Condition/Pressures

Gorse, grey willow, blackberry, pampas, and she-oak are present (Owen 1993, Wildland Consultants 2005j). The site is bounded by pastoral and horticultural landuses.

Key Site Features

Ngāpeke Road Wetland is locally significant because it includes examples of indigenous vegetation types which occur widely in Tauranga Harbour. The site is narrow and convoluted, which decreases its resilience to the wide range of pest plant pressures operating on it. Two At Risk bird species were recorded here in 1990.

[1] Identified as SVHZ-62 in Wildland Consultants 2006g.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	H
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** North Island fernbird (At Risk-Declining) (1990) Banded rail (At Risk-Naturally Uncommon) (1990)
ii		
iii		
iv		
v		Locally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a Tauranga City Council reserve.
11(b)		
i	✓	Mangrove scrub, grey willow above a canopy of indigenous species, manuka dominated wetlands, wetlands dominated by oioi and sea rush, and raupo reedland.
ii		
iii	✓	Mangrove scrub and wetlands dominated by oioi and sea rush.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Ngāpeke Road Wetlands is consistent with Policy 11(b) because it comprises estuarine wetlands where, in the past, two At Risk bird species have been recorded.

Notes This site is ranked as a Category 2 Special Ecological Site (SES) in Tauranga City (Wildland Consultants 2005j), and was identified as a Category 2 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References Owen 1993; Wildland Consultants 2005j; Wildland Consultants 2006g; Wildland Consultants 2008a; Wildland Consultants 2009b.

WAITAO STREAM

Site Number [1]	102
Grid Reference (NZMG)	E2795010 N6382694
Local Authority	Tauranga City Council
Ecological District	Tauranga
Protection Status	Protected (TCC reserve) and unprotected parts
Site Area	53.5 ha
Altitudinal Range	0-14 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium
HVES Number	50

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Grey willow forest.	Wetland
Palustrine	Ti kouka/grey willow-manuka forest.	Wetland
Estuarine/Palustrine	Manuka scrub.	Intertidal flat, wetland
Estuarine	Mangrove shrubland and loamfield.	Intertidal flat
Estuarine	Sea rush tussockland.	Intertidal flat
Estuarine	Oioi-saltmarsh ribbonwood shrub-rushland.	Intertidal flat
Estuarine	Oioi-sea rush rushland.	Intertidal flat
Estuarine	*Bolboschoenus fluviatilis* reedland.	Intertidal flat
Estuarine	Sea rush-oioi-mangrove tussockland.	Intertidal flat
	(Beadel 1992a, Wildland Consultants 2005j)	

Vegetation and Indigenous Flora

This site is located at the mouth of the Waitao Stream in the Rangataua Estuary of Tauranga Harbour. Much of the site comprises saline wetlands of sea rush, oioi, and mangrove. Towards the northern end of the site there is a freshwater wetland of ti kouka/grey willow-manuka forest.

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon), Caspian tern (Threatened-Nationally Vulnerable), New Zealand pied oystercatcher and North Island fernbird (both At Risk-Declining) recorded in 1990 (Owen 1993) and again in 2002 (Wildland Consultants 2002a).

The site includes the mouth of the Waimapu Stream, which is a habitat and migratory pathway of indigenous species of freshwater fish, including longfin eel, redfin bully, and inanga (all At Risk-Declining) (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Stock access; drainage works; *Spartina* and other weeds were present in 1990 (Owen 1993). Weeds that were recorded in 2005 include banana passionfruit, moth plant, she-oak, black wattle, *Pinus* spp., woolly nightshade, grey willow, blackberry, brush wattle, gorse and pampas (Wildland Consultants 2005j). Pampas is present on the margins of the site and on raised areas, such as where spoil from drains has been dumped. Grey willow is common in one vegetation type and pines are common. She-oak is established in the sea rush tussockland (Wildland Consultants 2005j).

Key Site Features

Waitao Stream is a large substantial site, with a wide range of vegetation types that are representative of the Tauranga Ecological District. It is also valuable as a protective buffer to the nationally significant Te Maunga wader roost. Surveys have recorded one Threatened and three At Risk bird species. The

[1] Identified as SVHZ-63 in Wildland Consultants 2006g.

stream is a habitat and migratory pathway for indigenous species of freshwater fish.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	H
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	L
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Caspian tern (Threatened-Nationally Vulnerable) Banded rail (At Risk-Naturally Uncommon) New Zealand pied oystercatcher (At Risk-Declining) North Island fernbird (At Risk-Declining) **Fish:** Inanga (At Risk-Declining) Longfin eel (At Risk-Declining) Redfin bully (At Risk-Declining)
ii		
iii		
iv		
v		Regionally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a Tauranga City Council reserve.
11(b)		
i	✓	Mangrove shrubland, sea rush tussockland, other estuarine wetland types, and manuka wetland.
ii		
iii	✓	Mangrove shrubland, sea rush tussockland, other estuarine wetland types.
iv	N/A	
v	✓	The site includes the mouth of Waitao Stream, which is a migratory pathway for indigenous species of freshwater fish.
vi		

Policy	Criteria Met	Explanation
Policy Met:		11(b)
Justification:		Waitao Stream is consistent with Policy 11(b) because it is an indigenous estuarine wetland, and the mouth of Waitao Stream is an important migratory pathway for indigenous species of freshwater fish. In addition, it provides habitat for several Threatened and At Risk avifauna species.

Notes Ranked as a Category 1 Special Ecological Area in Tauranga City (Wildland Consultants 2009b) and has been identified as a Category 1 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References Owen 1993; Wildland Consultants 2002a; Wildland Consultants 2005j; Wildland Consultants 2006g; Wildland Consultants 2008a; Wildland Consultants 2009b.

MANGATAWA

Site Number [1] 103
Grid Reference (NZMG) E2795461 N6384595
Local Authority Tauranga City Council
Ecological District Tauranga
Protection Status Unprotected
Site Area 8.9 ha
Altitudinal Range 0-4 m asl
Geology-Landform Type Estuarine

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Sea rush-oioi tussockland.	Intertidal flat
Estuarine	Sea rush tussockland.	Intertidal flat
Estuarine	Mangrove scrub, shrubland and loamfield.	Intertidal flat
Estuarine	Oioi-*Bolboschoenus fluviatilis* rushland. (Wildland Consultants 2005j)	Intertidal flat

Vegetation and Indigenous Flora

Mangatawa is a small site on the northern side of Rangataua Estuary below Mangatawa Marae. It comprises estuarine wetlands of mangrove, sea rush, oioi, and *Bolboschoenus fluviatilis*. The site is adjacent to created wetlands within the sewage treatment works.

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon) present in 1990 (Owen 1993). North Island fernbird (At Risk-Declining) was present in 2007 (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Owen (1993) noted stock access, gorse, pampas, drainage and reclamation works, and stormwater discharge. The site is enclosed on three sides by the Mangatawa Wastewater Treatment Plant and may be vulnerable if the area of the plant is expanded in future.

Key Site Features

Mangatawa is locally significant because it comprises estuarine vegetation typical of the vegetation of Tauranga Harbour. There are records of two At Risk bird species from this site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	L

[1] Identified at SVHZ-65 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** North Island fernbird (At Risk-Declining) Banded rail (At Risk-Naturally Uncommon) (1990)
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Mangrove scrub and shrubland, wetlands dominated by oioi, sea rush, and *Bolboschoenus fluviatilis*.
ii		
iii	✓	Mangrove scrub and shrubland, wetlands dominated by oioi, sea rush, and *Bolboschoenus fluviatilis*.
iv	N/A	
v	✓	Mouth of Mangatawa Stream may be a migratory pathway for indigenous species of freshwater fish.
vi		
Policy Met:		11(b)
Justification:		Mangatawa is consistent with Policy 11(b) because it is a small area of estuarine vegetation with provides habitat for At Risk avifauna. The site includes the mouth of Mangatawa Stream, which may be a migratory pathway for indigenous freshwater fish species.

Notes This site is ranked as a Category 2 Special Ecological Area in Tauranga City (Wildland Consultants 2009b) and has been identified as a Category 4 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References Owen 1993; Wildland Consultants 2005j; Wildland Consultants 2006g; Wildland Consultants 2008a; Wildland Consultants 2009b.

RANGATAUA BAY A

Site Number [1]	100
Grid Reference (NZMG)	E2793818 N6385100
Local Authority	Tauranga City Council
Ecological District	Tauranga
Protection Status	Protected (Department of Conservation, Tauranga Harbour Marginal Strip) and unprotected parts
Site Area	57.3 ha
Altitudinal Range	0-7 m asl
Geology-Landform Type	Estuarine

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	*Ficinia nodosa*-sea rush/*Samolus repens*-glasswort tussockland.	Intertidal flat
Estuarine	Saltmarsh ribbonwood/sea rush-*Ficinia nodosa* tussockland.	Intertidal flat
Estuarine	Sea rush tussockland.	Intertidal flat
Estuarine	Saltmarsh ribbonwood/sea rush-*Ficinia nodosa*/ *Samolus repens*-glasswort tussockland.	Intertidal flat
Estuarine	Saltmarsh ribbonwood/oioi-sea rush sedgeland.	Intertidal flat
Estuarine	Mangrove scrub, shrubland, and loamfield. (Wildland Consultants 2005j)	Intertidal flat

Vegetation and Indigenous Flora

Rangataua Bay A includes saline wetlands dominated by mangroves, oioi, and sea rush. No rare or uncommon plant species have been recorded at this site.

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon) and North Island fernbird (At Risk-Declining) were recorded in 1990 (Owen 1993). Fernbird are still present, and banded rail are also likely to be present (W.B. Shaw, Wildland Consultants, pers. comm. 2006). Australasian bittern (Threatened-Nationally Endangered) occasionally use this habitat (BOPRC 2012)

Condition/Pressures

Owen (1993) recorded stock access, *Spartina* sp., grey willow, pampas, drainage and reclamation works, and stormwater discharge from the highway. Pampas continues to be a problem, though control has been carried out on the margins of the site close to the road.

Key Site Features

Rangataua Bay A is regionally significant because it includes estuarine wetland that provides habitat for one Threatened and two At Risk bird species. It also provides a protective buffer to the Te Maunga oxidation pond embankments wader roost.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	M

[1] Identified as part of SVHZ-66 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Diversity and Pattern	3.7	M
Naturalness	3.8	H
Ecological Context	3.9	M
	3.10	L
Viability and Sustainability	3.11	M
	3.12	H
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Australasian bittern (Threatened-Nationally Endangered) North Island fernbird (At Risk-Declining) Banded rail (At Risk-Naturally Uncommon) (1990)
ii	✓	Australasian bittern (Endangered)
iii		
iv		
v		Regionally Significant
vi		Unprotected
11(b)		
i	✓	Estuarine wetlands of sea rush, oioi, saltmarsh ribbonwood, mangrove, *Ficnia nodosa, Samolus repens* and glasswort.
ii		
iii	✓	Estuarine wetlands of sea rush, oioi, saltmarsh ribbonwood, mangrove, *Ficnia nodosa, Samolus repens* and glasswort.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Rangataua Bay A is consistent with Policy 11(b) because it comprises good quality estuarine wetlands. In addition, it provides habitat for one Threatened bird species, one At Risk species (fernbird), and another At Risk species (banded rail) is likely to be present.

Notes

This site, together with Rangataua Bay B, is ranked as a Category 2 Special Ecological Area in Tauranga City (Wildland Consultants 2009b) and has been identified as a Category 3 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References

Owen 1993; Wildland Consultants 2006g; Wildland Consultants 2008a; Wildland Consultants 2009b; BOPRC 2012.

RANGATAUA BAY B

Site Number [1]	101
Grid Reference (NZMG)	E2793818 N6385100
Local Authority	Tauranga City Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	12.0 ha
Altitudinal Range	0-7 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Sea rush-oioi tussockland.	Intertidal flat
Terrestrial	Ti kouka/pampas tussockland.	Alluvial flat
Palustrine	Manuka scrub.	Wetland
Palustrine	Ti kouka/grey willow-manuka forest.	Wetland
Palustrine	Grey willow forest.	Wetland
	(Wildland Consultants 2005j)	

Vegetation and Indigenous Flora

On the western side of this site there is a small example of a willow-dominant freshwater wetland. At the north-eastern end of the site there is a small area of manuka scrub and an area of ti kouka/pampas tussockland.

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon) and North Island fernbird (At Risk-Declining) were recorded in 1990 (Owen 1993). Fernbird are still present and banded rail are also likely to be present (W.B. Shaw, Wildland Consultants, pers. comm. 2006).

Condition/Pressures

Owen (1993) recorded stock access, *Spartina* sp., grey willow, pampas, drainage and reclamation works, and stormwater discharge from the highway. Pampas continues to be a problem at this site. The proposed Tauranga southern sewage pipeline may bisect both parts of the site described above.

Key Site Features

Rangataua Bay B is locally significant because it includes wetland vegetation typical of that present on the margins of Tauranga Harbour, and provides habitat for two At Risk bird species. It also provides a protective buffer to the Te Maunga oxidation pond embankments wader roost and to the Rangataua Bay A site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M

[1] Identified as part of SVHZ-66 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Ecological Context	3.9	M
	3.10	L
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** North Island fernbird (At Risk-Declining) Banded rail (At Risk-Naturally Uncommon) (1990)
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Sea rush-oioi tussockland, manuka scrub, and forest of ti kouka and manuka with grey willow.
ii		
iii	✓	Sea rush-oioi tussockland.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		The values of Rangataua Bay B are consistent with Policy 11(b) because it is a small example of estuarine wetland that provides habitat for one At Risk species (fernbird) and another At Risk species (banded rail) is likely to be present. In addition, part of the site is contiguous with Rangataua Bay A.

Notes This site is part of a Category 2 Special Ecological Area in Tauranga City (Wildland Consultants 2009b) and has been identified as a Category 3 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References Owen 1993; Wildland Consultants 2005j; Wildland Consultants 2006g; Wildland Consultants 2008a; Wildland Consultants 2009b.

WAIPU BAY MARGINS

Site Number [1]	094
Grid Reference (NZMG)	E2791953 N6385871
Local Authority	Tauranga City Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	41.5 ha
Altitudinal Range	0-14 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Grey willow forest.	Wetland
Palustrine	Grey willow-manuka forest.	Wetland
Palustrine	Grey willow/manuka treeland.	Wetland
Estuarine	Mangrove scrub, shrubland, and loamfield.	Intertidal flat
Estuarine	*Ficinia nodosa*-sea rush tussockland.	Intertidal flat
Palustrine	Raupo reedland.	Wetland
Estuarine	Sea rush tussockland.	Intertidal flat
Estuarine	Sea rush-oioi sedgeland.	Intertidal flat
Estuarine	Sea rush-(pasture) tussockland.	Intertidal flat
Estuarine	Brush wattle-grey willow/harakeke-pampas tussockland.	Intertidal flat
Estuarine	Saltmarsh ribbonwood/oioi-sea rush sedgeland.	Intertidal flat
Estuarine	*Machaerina juncea*-harakeke-oioi sedgeland.	Intertidal flat
Estuarine	Mangrove/*Schoenoplectus pungens* sedgeland.	Intertidal flat
Estuarine	Manuka/oioi-sea rush-saltmarsh ribbonwood sedgeland.	Intertidal flat
Estuarine	*Schoenoplectus pungens* sedgeland.	Intertidal flat
Palustrine	*Machaerina articulata*-pohuehue reedland.	Wetland
Palustrine	Grey willow/raupo-harakeke-pampas reedland.	Wetland
Terrestrial	Manuka-gorse scrub.	Alluvial flats
Palustrine	Manuka scrub.	Wetland
Estuarine	Sea rush-*Samolus repens*-saltmarsh ribbonwood-*Machaerina juncea*-oioi tussockland.	Intertidal flat
Estuarine	Glasswort sandfield. (Wildland Consultants 2005j; Wildland Consultants 2009b)	Intertidal flat

Vegetation and Indigenous Flora

This site includes multiple examples of estuarine wetlands on the margins of Waipu Bay, between the Matapihi Peninsula and Tauranga Airport. The saline wetlands are dominated by mixtures of mangrove, sea rush, oioi, and saltmarsh ribbonwood. Non-tidal parts of the site include freshwater wetlands of grey willow, raupo, and harakeke, and manuka scrub. No rare or uncommon plant species have been recorded at this site.

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon), pied stilt, and North Island fernbird (both At Risk-Declining) were recorded in 1990 (Owen 1993).

Condition/Pressures

Parts of the site are dominated by grey willow, and pampas and brush wattle are present. Owen (1993) also recorded these weeds, plus radiate pine, extensive reclamation and drainage works, stock access, industrial and

[1] Identified as SVHZ-68 in Wildland Consultants 2006g.

domestic rubbish dumping, and recreational horse-riding. Airport-related activities may disturb avifauna in the northern portions of the site which are adjacent to the airport.

Key Site Features This site acts as a protective buffer to a nationally significant wader feeding area at Waipu Bay Intertidal Flats. It contains a wide range of vegetation types.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	H
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Pied stilt (At Risk-Declining) (1990) North Island fernbird (At Risk-Declining) (1990) Banded rail (At Risk-Naturally Uncommon) (1990)
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Grey willow forest with an indigenous understorey, raupo reedland, manuka scrub, mangrove scrub and shrubland, and other estuarine wetlands dominated by sea rush, oioi, saltmarsh ribbonwood, and *Schoenopectus pungens*.
ii		
iii	✓	Mangrove scrub and shrubland, and other estuarine wetlands dominated by sea rush, oioi, saltmarsh ribbonwood, and *Schoenopectus pungens*.
iv	N/A	
v		
vi		

Policy	Criteria Met	Explanation
Policy Met:		11(b)
Justification:		Waipu Bay Margins is consistent with Policy 11(b) because it comprises multiple areas of indigenous estuarine and palustrine wetlands. Three At Risk avifauna species were recorded at the site in 1990, and they may still be present.

Notes

This site includes five areas which are all ranked as Category 2 Special Ecological Areas in Tauranga City (Waipu Bay 1 to 5 in Wildland Consultants 2009b) and a Category 4 natural area in Tauranga Ecological District (Wildland Consultants 2008a). This site is part of the Waipu Bay Key Ecological Zone (Wildland Consultants 2006g).

References

Owen 1993; Wildland Consultants 2005j; Wildland Consultants 2006g; Wildland Consultants 2008a; Wildland Consultants 2009b.

MATAKANA ISLAND 1

Site Number [1]	062
Grid Reference (NZMG)	E2779307 N6403951
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (Matakana Island Wildlife Refuge) and unprotected parts
Site Area	503.2 ha
Altitudinal Range	0-10 m asl
Geology-Landform Type	Sand
HVES Number	38

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Spinifex sandfield.	Berm and incipient foredune.
Terrestrial	(*Ficinia nodosa*)-(sea rocket)-(lupin) sandfield.	Incipient and established foredune
Terrestrial	Spinifex-pingao/shore bindweed grassland.	Incipient foredune
Terrestrial	(Radiata pine)/spinifex-pingao-(*Ficinia nodosa*) grassland.	Incipient foredune
Terrestrial	Spinifex-pingao-marram grassland.	Incipient foredune
Terrestrial	(Maritime pine)/gorse-pampas shrubland.	Incipient foredune
Terrestrial	Marram-spinifex/(shore bindweed) grassland.	Established foredune
Terrestrial	Radiata pine/spinifex-*Ficinia nodosa*/shore bindweed grassland.	Established foredune
Terrestrial	(Radiata pine)/marram-spinifex-*Ficinia nodosa*-pohuehue grassland.	Established foredune
Terrestrial	(*Leptospermum laevigatum*)/(*Ficinia nodosa*)/(shore bindweed) sandfield.	Established foredune
Terrestrial	*Ficinia nodosa*/pohuehue/*Carex testacea* sedgeland.	Established foredune
Terrestrial	(Radiata pine)-pampas/*Ficinia nodosa*-pohuehue sedgeland.	Established foredune
Terrestrial	Radiata pine/pampas/*Ficinia nodosa*/spinifex-pohuehue sedgeland.	Established foredune
Terrestrial	*Ficinia nodosa*/pohuehue vineland.	Established foredune
Terrestrial	*Ficinia nodosa*/pohuehue sedgeland.	Established foredune and transgressive dunefield.
Terrestrial	*Ficinia nodosa*/pohuehue-shore bindweed-(*Carex testacea*) vineland.	Established foredune and transgressive dunefield.
Terrestrial	Radiata pine-*Leptospermum laevigatum*/ *Ficinia nodosa*/pohuehue shrubland.	Established foredune and Transgressive dunefield.
Terrestrial	*Leptospermum laevigatum* scrub.	Established foredune and transgressive dunefield.
Terrestrial	Radiata pine-maritime pine/pampas-radiata pine-maritime pine/pohuehue-*Ficinia nodosa*-(mingimingi)/*Zoysia pauciflora* treeland.	Established foredune and transgressive dunefield.
Terrestrial	(Radiata pine)/*Ficinia nodosa*-marram-pohuehue sedgeland.	Transgressive dunefield

[1] Identified as SVHZ-69 in Wildland Consultants 2006g.

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Radiata pine/*Ficinia nodosa*-pohuehue-*Carex testacea* treeland.	Transgressive dunefield
Terrestrial	Radiata pine/gorse-pampas-mingimingi/*Ficinia nodosa*-*Machaerina juncea* scrub.	Transgressive dunefield
Terrestrial	Radiata pine/marram-pohuehue-*Ficinia nodosa* forest.	Transgressive dunefield
Terrestrial	Radiata pine/mingimingi-harakeke treeland (ground layer mosaic of *Zoysia pauciflora* on old dunes and *Machaerina juncea*-oioi in old dune swales).	Transgressive dunefield
Terrestrial	Radiata pine/-pampas-(mingimingi)/*Ficinia nodosa*-pohuehue-bracken forest.	Transgressive dunefield
Terrestrial	Radiata pine/bracken/pohuehue treeland.	Transgressive dunefield
Terrestrial	Radiata pine-maritime pine/*Leptospermum laevigatum*/pampas-(mingimingi)-maritime pine-(ti kouka)/*Ficinia nodosa*-oioi-*Zoysia pauciflora* treeland.	Transgressive dunefield
Terrestrial	Radiata pine-maritime pine/pampas/*Ficinia nodosa*-oioi-*Machaerina juncea*-pohuehue-(mingimingi) forest.	Transgressive dunefield and foredune plain
Terrestrial	Pampas/*Ficinia nodosa*-marram tussockland.	Foredune plain
Terrestrial	Radiata pine/gorse-pampas/*Ficinia nodosa*-mingimingi/*Zoysia pauciflora* treeland.	Foredune plain
Terrestrial	Radiata pine/oioi-*Ficinia nodosa*/*Zoysia pauciflora*-*Cladina confusa* treeland (with local *Coprosma acerosa*).	Foredune plain
Terrestrial	Radiata pine/oioi-*Ficinia nodosa*-*Machaerina juncea*-pohuehue forest.	Foredune plain
Terrestrial	Radiata pine/(pohutukawa)/mingimingi-shining karamu-harakeke-mapou/*Machaerina juncea* treeland.	Foredune plain
Terrestrial	Radiata pine-mapou-karamu/*Ficinia nodosa*-oioi-mingimingi sedgeland.	Foredune plain
Paulstrine	(Radiata pine)/(pohutukawa)-(manuka)-(saltmarsh ribbonwood)/*Machaerina juncea*-*Machaerina arthrophylla*-harakeke-(*Cyperus ustulatus*) reedland.	Foredune plain
Terrestrial	Grey willow-(radiata pine)/gorse-pampas-(mapou)/*Machaerina juncea* scrub.	Foredune plain
Palustrine	Radiata pine/grey willow/mingimingi-mapou-koromiko-karamu-ti kouka-pampas shrubland.	Wetland
Palustrine	Radiata pine/grey willow-mapou-hangehange-mingimingi/harakeke treeland.	Wetland
Palustrine	Grey willow/*Machaerina juncea*-mingimingi scrub.	Wetland
Palustrine	Grey willow-(mapou)/*Machaerina juncea*-*Machaerina arthrophylla* shrubland.	Wetland
Palustrine	Grey willow/*Machaerina juncea*-*Machaerina articulata*-*Carex secta*-(harakeke) shrubland.	Wetland
Palustrine	Manuka-(mapou)-(ti kouka)/*Machaerina juncea*-*Cyperus ustulatus* reedland.	Wetland
Palustrine	*Machaerina juncea*-*Carex secta*-(*Machaerina arthrophylla*)/*Cyclosorus interruptus* sedgeland.	Wetland
Palustrine	Raupo-*Machaerina articulata*-*Schoenoplectus tabermaemontani*/*Carex secta*-*Eleocharis acuta*-*Persicaria decipiens* reedland.	Wetland
Palustrine	Raupo-*Schoenoplectus tabernaemontani*/*Machaerina juncea*-*Cyperus ustulatus* reedland.	Wetland

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Raupo reedland.	Wetland
Palustrine	Raupo/*Ranunculus sceleratus*-*Rorippa palustris*-duckweed (*Lemna minor*) reedland.	Wetland
Palustrine	*Rorippa palustris*-arrow grass-*Eleocharis gracilis* herbfield.	Wetland
Palustrine	Open water.	Pond/Lake
Terrestrial	Sandfield.	Dunes
	(Beadel 1992a; Beadel 1994a, Wildland Consultants 2008a)	

Vegetation and Indigenous Flora

Pingao (At Risk-Relict) and sand pimelea (At Risk-Declining) are present on the sand dunes. A 1989 census detected 64 individuals of sand pimelea on Matakana (Beadel 1989a). In 2008 22 individuals were observed at two widely separated sites. A small population of coastal mahoe is present (Beadel 1989a and Beadel 2009). This species is uncommon on the Bay of Plenty mainland. Sand coprosma (At Risk-Declining) is relatively widespread on Matakana. Sand tussock is not present on the island, despite the presence of large areas of habitat similar to other sites where it occurs in the ecological district at the western and eastern ends of the island associated with the large berms around the harbour entrances. *Dianella haematica* (At Risk-Declining) is also present in the wetlands (Sarah Beadel pers. obs.).

Thelypteris confluens, *Cyclosorus interruptus*, (both At Risk-Declining) and *Ranunculus macropus* (Data Deficient) are present with large populations of *Cyclosorus interruptus* and *Thelypteris confluens* observed in 2008 and 2009 (Sarah Beadel pers. obs.). One kauri ricker is present on the margins of one wetland within this site, and appears to be of natural occurrence (S.M. Beadel pers. obs. 2006).

Asplenium appendiculatum subsp. *maritimum*, a regionally uncommon species, occurs underneath the pines in this site. A large population of *Zoysia pauciflora* (another regionally uncommon species) occurs within this site.

Several other regionally uncommon plant species have been recorded at this site - *Schoenus nitens*, *Juncus caespiticius*, *Rorippa palustris*, *Oxalis rubens*, *Senecio biserratus*, *Senecio glomeratus*, *Ranunculus acaulis*, and *Poa pusilla*. Two of these - *Schoenus nitens* and *Poa pusilla* - are not known to occur elsewhere in the Bay of Plenty. Another species present (*Pseudognaphalium* "coast") has not been recorded from elsewhere in the Ecological District.
The pine plantation and wilding pine understorey are generally dominated by low-growing indigenous plant species (for example mainly sedges and reeds, with local shrubs, grasses and orchids) but can contain Threatened species, for example pingao and sand pimelea within their seaward margin (Beadel 1990b).

Indigenous Fauna

Regarded by Department of Conservation (J. Heaphy, Department of Conservation, pers. comm. 2006) as one of the best coastal wetland complexes for fauna in the Bay of Plenty. Matakana has the full range of Threatened and At Risk wetland birds known in the region. Australasian bittern (Threatened-Nationally Endangered), spotless crake (At Risk-Relict), banded rail (At Risk-Naturally Uncommon), marsh crake (At Risk-Relict), North Island fernbird (At Risk-Declining), New Zealand pied oystercatcher (At Risk-Declining), grey duck (Threatened-Nationally Critical), and black shag (At Risk-

Naturally Uncommon). as well as occasional pateke or brown teal[1] (At Risk-Recovering). Several New Zealand scaup were seen during 2005 (Wildland Consultants 2006g)

The dunes and beach along the entire outer Matakana Island coastline from Waikoura Point to Panepane Point are used by northern New Zealand dotterel (Threatened-Nationally Vulnerable) as breeding grounds, especially Waikoura Point and Panepane Point. This is the main nesting area in the Bay of Plenty, and one of the top two in the country with 43 breeding pairs recorded in the 2004-2005 nesting season (Murray 2007). Sixteen northern New Zealand dotterel and several banded dotterel (Threatened-Nationally Vulnerable) were observed in this area (Wildland Consultants 2008a). Variable oystercatcher (At Risk-Recovering) also nest in good numbers along the entire coastline dunes (J. Heaphy, Department of Conservation, pers. comm. 2006).

Along with the Bowentown Shellbanks, the north-west end (Waikoura Point) of Matakana Island is the principal high tide roosts for waders and other coastal birds in the northern part of Tauranga Harbour. This area is often used whenever the Bowentown Shellbanks roost is affected by storms or erosion. Panepane Point, at the south-eastern end of the island, is also an important wader roost (Owen *et al.* 2006).

Other birds observed roosting and feeding along the length of the beach include variable oystercatcher (At Risk-Recovering), Caspian tern (Threatened-Nationally Vulnerable), white-fronted tern (At Risk-Declining), and pied shag (Threatened-Nationally Vulnerable).

The katipo spider (*Latrodectus katipo*) (Chronically Threatened-Serious Decline) resides along the dunes and beaches of Matakana Island. This is the most extensive surviving population in the Bay of Plenty. Information on native lizard fauna is limited; no geckos are known from here, and only shore skinks have been recorded (J. Heaphy, Department of Conservation, pers. comm. 2006, Wildland Consultants 2008a).

North Island kākā (Threatened-Nationally Vulnerable) were repeatedly observed in pine forest around the mill, suggesting that a small number of birds are seasonal visitors to the island. Although this area does not include this site, it is likely to be a part of the home range of these birds.

The wetlands which are connected to the sea are likely to have indigenous fish present. Indigenous freshwater fish species may be present in the waterways and waterbodies in this site.

The fauna described for this site does not constitute an exhaustive account. A wide variety of indigenous invertebrates will be present in microsites with indigenous habitats, including, but not limited to, Crustaceans, Myriopods, Arachnids, and Hexapods including Diplurans, Proturans, Collembolids, and Insecta.

Condition/Pressures

There are local infestations of marram along the foredune which are not being controlled, and these have expanded in size since 1989 (Beadel 1989a, Wildland Consultants 2006g, Wildland Consultants 2008a). Control of marram is a high priority.

[1] Brown teal has been reintroduced into the Bay of Plenty.

Coastal tea tree (*Leptospermum laevigatum*) is being controlled via helicopter spraying with Escort© herbicide.

Royal fern is widespread in the wetlands, and is being monitored and controlled by Bay of Plenty Regional Council. A large mature population was discovered in 2006 and controlled in early 2007. The other occurrences are scattered and generally younger plants (W. Stahel, Bay of Plenty Regional Council, pers. comm. 2008). Ongoing royal fern control is of high priority for all the wetlands and Matakana Island.

Grey willow has greatly expanded at the northern end of this site and adjacent wetland sites since 1989.

Saltwater paspalum has also greatly expanded in extent in one inlet within this site (and is present at other sites; change of extent unknown). Control of this species should be considered.

Other weeds present include reed sweet grass, Mexican daisy, blackberry, kikuyu grass, buffalo grass, lupin, dimorphotheca, pampas, *Banksia integrifolia, Yucca gloriosa,* Italian buckthorn, woolly nightshade, gorse, radiata pine and maritime pine. Most of these weeds are currently present in very low numbers at one or two sites only, but all are likely to increase in abundance on dunes (or in wetlands) with time.

In order to benefit northern New Zealand dotterel nesting sites, the Department of Conservation traps stoats, rats, cats and possums around the northern end of the site. Southern black-backed gulls are also controlled by Department of Conservation when high populations begin to affect the northern New Zealand dotterels (J. Heaphy, Department of Conservation, pers. comm. 2012). Panepane Point wader roost and breeding area is subject to high disturbance by anglers and surfers over summer (Owen *et al.* 2006).

Possum are inflicting heavy browsing damage to some coastal mahoe individuals. Rabbits are browsing several species, including *Coprosma acerosa*, pingao, and spinifex.

Key Site Features

This very large site contains a diverse range of vegetation types, including high quality, examples of sand dune and wetland vegetation which are of national significance. Seven At Risk and ten regionally uncommon plant species, six Threatened and nine At Risk bird species occur within this site. This site provides the best habitat and/or supports the largest population of several of these species in the Bay of Plenty. This site also provides feeding and roosting habitat for a range of migratory wader species.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	H
	3.5	H
	3.6	H
Diversity and Pattern	3.7	H
Naturalness	3.8	M-H

Criterion*	RPS Number*	Ranking**
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	H
	3.12	H
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** Pingao (At Risk-Relict) Sand pimelea (At Risk-Declining) *Thelypteris confluens* (At Risk-Declining) *Cyclosorus interruptus* (At Risk-Declining) *Dianella haematica* (At Risk-Declining) Sand coprosma (At Risk-Declining) *Ranunculus macropus* (Data Deficient) **Avifauna:** Grey duck (Threatened-Nationally Critical) Australasian bittern (Threatened-Nationally Endangered) Banded dotterel (Threatened-Nationally Vulnerable) Caspian tern (Threatened-Nationally Vulnerable) Northern New Zealand dotterel (Threatened-Nationally Vulnerable) Pied shag (Threatened-Nationally Vulnerable) New Zealand pied oystercatcher (At Risk-Declining) North Island fernbird (At Risk-Declining) White-fronted tern (At Risk-Declining) Marsh crake (At Risk-Relict) Spotless crake (At Risk-Relict) Banded rail (At Risk-Naturally Uncommon) Black shag (At Risk-Naturally Uncommon) Brown teal (At Risk-Recovering)[1] Variable oystercatcher (At Risk-Recovering) **Other Fauna:** Katipo spider (Chronically Threatened-Serious Decline)
ii	✓	Brown teal (Endangered)[1] Australasian bittern (Endangered) New Zealand dotterel (Endangered)
iii	✓	High quality examples of an intact foredune contiguous with a wetland and a small dune lake.
iv		
v	✓	Nationally Significant
vi		Part of site has limited protection (Matakana Island Wildlife Refuge)

[1] Brown teal has been reintroduced into the Bay of Plenty.

Policy	Criteria Met	Explanation
Policy Met:		11(a)
Justification:		Matakana Island 1 comprises foredunes on the open coast, palustrine wetlands, and a small lake at the northern end of the island. The site is a very high quality example of its type, is of national significance and is an important habitat for a suite of Threatened and At Risk fauna and plant species. For these reasons, the site is consistent with Policy 11(a). In addition, it is one of the most important breeding areas for northern New Zealand dotterel (Threatened-Nationally Vulnerable) in New Zealand, the northern part of the site is a principal high tide roost for wading birds in the northern part of Tauranga Harbour, the katipo population is one of the most important in the Bay of Plenty, and a suite of regionally uncommon plant species is present. Only a small proportion of the site is legally protected.

Notes

The seaward edge of Matakana barrier island is a nationally significant geological feature (Kenny and Hayward 1996).

Identified as a Category 1 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

References

Beadel 1989a; Beadel 1989c; Beadel 1989g; Beadel 1990b; Beadel 1992a; Beadel 1994a; Beadel 2009; Kenny and Hayward 1996; Owen 1993; Owen *et al.* 2006; Wildland Consultants 2006g; Wildland Consultants 2008a.

MATAKANA WETLANDS A

Site Number [1]	036
Grid Reference (NZMG)	E2775713 N6408778
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (Matakana Island Wildlife Refuge)
Site Area	5.6 ha
Altitudinal Range	0 m asl
Geology-Landform Type	Sand
HVES Number	38

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Ti kouka-grey willow/*Machaerina arthrophylla*-mingimingi-oioi-pampas shrubland.	Wetland
Palustrine	Grey willow-(mapou)-(ti kouka)-gorse/ *Machaerina juncea-Machaerina arthrophylla* shrubland.	Wetland
Palustrine	Grey willow-(mapou)/*Machaerina juncea-Machaerina arthrophylla* shrubland.	Wetland
Terrestrial	Radiata pine/*Ficinia nodosa*-oioi-*Machaerina juncea*-mingimingi/pohuehue-*Zoysia pauciflora* sedgeland. (Wildland Consultants 2008a)	Foredune plain

Vegetation and Indigenous Flora

These wetlands comprises several areas dominated by grey willow, ti kouka, and manuka with occasional mapou and swamp coprosma above a ground layer dominated by indigenous wetland sedges and rushes including oioi, *Machaerina arthrophylla*, *M. juncea*, *Carex maorica*, *C. virgata,* swamp kiokio, and occasionally the grass swamp millet. *Cyclosorus interruptus* (At Risk-Declining) occurs within grey willow forest. Juvenile royal fern occur sporadically on wet ground throughout the site. One area within this site bears reedland dominated by oioi and *Ficinia nodosa* with pohuehue and low growing shrubs of mingimingi, mapou, and karamu. Natural or semi-natural areas on sand dunes within the foredune plain are now uncommon on Matakana. One regionally uncommon plant species (*Zoysia pauciflora*) is present at this site.

Indigenous Fauna

Australasian bittern (Threatened-Nationally Endangered), grey duck (Threatened-Nationally Critical), spotless crake (At Risk-Relict) and black shag (At Risk-Naturally Uncommon) were recorded at this site in 1992 (Owen 1993).

Condition/Pressures

Radiata pine forestry surrounds all parts of this site and considerably affects its quality. A large infestation of royal fern was discovered in 2006 and aerial control was undertaken in 2006/07 (W. Stahel, Bay of Plenty Regional Council, pers. comm. 2008). A few individuals of royal fern are still present. These are being monitored and controlled by Bay of Plenty Regional Council (W. Stahel, Bay of Plenty Regional Council, pers. comm. 2010).

Key Site Features

This site is regionally significant because it comprises indigenous freshwater wetland, which is a habitat type that has become greatly reduced in extent in

[1] Identified as SVHZ-70 in Wildland Consultants 2006g.

Tauranga Ecological District. The site itself is significantly affected by surrounding land use but it is complementary to other freshwater wetlands at the north-western end of Matakana Island. Two Threatened and two At Risk bird species, and one At Risk and one regionally uncommon plant species have been recorded at this site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	M
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	L
Ecological Context	3.9	M
	3.10	M
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** *Cyclosorus interruptus* (At Risk-Declining) **Avifauna:** Grey duck (Threatened-Nationally Critical) (1992) Australasian bittern (Threatened-Nationally Endangered) (1992) Spotless crake (At Risk-Relict) (1992) Black shag (At Risk-Naturally Uncommon) (1992)
ii	✓	Australasian bittern (Endangered) (1992)
iii		
iv		
v		Regionally Significant
vi	✓	Protected (Matakana Island Wildlife Refuge)
11(b)		
i	✓	Canopy of grey willow or radiata pine or ti kouka with a predominantly indigenous understorey.
ii		
iii		
iv	N/A	
v		
vi		

Policy	Criteria Met	Explanation
Policy Met:		11(b)
Justification:		Matakana Wetlands A is a habitat of Threatened and At Risk species, but the site is not among the highest quality examples of its type in Tauranga Ecological District or on Matakana Island. Part of the canopy of the site is dominated by exotic species (grey willow and radiata pine) but the understorey is predominantly indigenous. Therefore, the site is consistent with Policy 11(b).

Notes Identified as a Category 3 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References Owen 1993; Wildland Consultants 2006g; Wildland Consultants 2008a.

MATAKANA WETLANDS B

Site Number [1]	032
Grid Reference (NZMG)	E2774496 N6408803
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (Matakana Island Wildlife Refuge)
Site Area	21.2 ha
Altitudinal Range	0 m asl
Geology-Landform Type	Sand
HVES Number	38

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Radiata pine/grey willow-shining karamu-wheki-mingimingi/pampas scrub with hangehange, ponga and gorse.	Foredune plain
Palustrine	Grey willow-ti kouka-(mapou)-(mingimingi)/ *Machaerina juncea*-oioi scrub.	Wetland
Palustrine	Raupo-*Machaerina articulata*-*Schoenoplectus tabernaemontani*/*Machaerina juncea*-*Carex secta*-*Eleocharis acuta*- *Cyclosorus interruptus*-*Persicaria decipiens* reedland. (Wildland Consultants 2008a)	Wetland

Vegetation and Indigenous Flora

The center of this wetland is dominated by raupo reedland with smaller areas of *Persicaria decipiens* herbfield, *Machaerina articulata* reedland, *Eleocharis sphacelata* reedland, and *Carex secta* tussockland. The northern margin of the site and the arm that extends from the south of the site are dominated by grey willow and ti kouka. This wetland contains one of the largest areas of raupo reedland in the Bay of Plenty Region, and also possibly the only natural occurrence of kahikatea on Matakana Island. Four pole kahikatea are emergent over grey willow-ti kouka forest on the northern central edge of the wetland. There are large populations of *Cyclosorus interruptus* and *Thelypteris confluens* (both At Risk-Declining) and *Ranunculus macropus* (Data Deficient).

Indigenous Fauna

Spotless crake (At Risk-Relict) and grey duck (Threatened-Nationally Critical) were recorded in 1992 (Owen 1993). Indigenous freshwater fish species may be present in the waterways and waterbodies in this site.

Condition/Pressures

The margins of the raupo reedland are being encroached upon by grey willow. Reed sweet grass occurs locally on the western side of the wetland. A few individuals of royal fern are present. These are being monitored and controlled by Bay of Plenty Regional Council (W. Stahel, Bay of Plenty Regional Council, pers. comm. 2006 and 2008). The site is surrounded by exotic plantation forest so is vulnerable to disturbance associated with plantation forestry operations.

Key Site Features

This site contains a large representative example of wetland vegetation, including one of the largest areas of raupo reedland in the Bay of Plenty Region. It supports large populations of two At Risk plant species and one Data Deficient plant species. Four kahikatea are present, a species which is not known to occur naturally elsewhere on Matakana Island. The wetland

[1] Identified as SVHZ-71 in Wildland Consultants 2006g.

provides ideal habitat for a At Risk marshbird species.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	H
	3.5	H
	3.6	H
Diversity and Pattern	3.7	H
Naturalness	3.8	H
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	H
	3.12	M
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** *Cyclosorus interruptus* (At Risk-Declining) *Thelypteris confluens* (At Risk-Declining) *Ranunculus macropus* (Data Deficient) **Avifauna:** Grey duck (Threatened-Nationally Critical) (1992) Spotless crake (At Risk-Relict) (1992)
ii		
iii		
iv		
v	✓	Nationally Significant
vi	✓	Protected (Matakana Island Wildlife Refuge)
Policy Met:		11(a)
Justification:		Matakana Wetlands B is consistent with Policy 11(a) because it is protected as a Wildlife Refuge, is nationally significant, and provides habitat for a suite of At Risk plant species. It may also provide habitat for At Risk or Threatened avifauna species that were recorded at the site in 1992. The site is part of a larger complex of wetlands and dunes at the northern end of Matakana Island and includes one of the largest areas of raupo reedland in the Bay of Plenty Region.

Notes Identified as a Category 1 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References Beadel 1989c; Beadel 1989e; Owen 1993; Beadel 1994a; Wildland Consultants 2006g; Wildland Consultants 2008a.

MATAKANA WETLANDS C

Site Number [1]	033
Grid Reference (NZMG)	E2774885 N6408246
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (Matakana Island Wildlife Refuge) and unprotected parts
Site Area	41.2 ha
Altitudinal Range	0-1 m asl
Geology-Landform Type	Sand
HVES Number	38

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Radiata pine/pampas-gorse tussockland.	Foredune plain
Terrestrial	Mamaku/gorse-pampas-mapou-Spanish heath (*Erica lusitanica*)-hangehange scrub.	Foredune plain
Palustrine	Grey willow/pampas-(wheki)/*Carex secta-Carex virgata-Machaerina arthrophylla-Machaerina juncea-Carex maorica*-swamp kiokio forest.	Wetland
Palustrine	Grey willow/mamaku-wheki/pampas-gorse-hangehange shrubland.	Wetland
Palustrine	Ti kouka-karamu-pampas-mamaku/*Machaerina juncea* scrub (with manuka, swamp coprosma, grey willow, wheki, and mahoe).	Wetland
Palustrine	Grey willow/*Carex virgata-Machaerina juncea-Machaerina tenax*-karamu-pampas scrub.	Wetland
Palustrine	Grey willow-ti kouka/pampas-*Carex virgata/ Machaerina arthrophylla-Cyperus ustulatus* tussockland.	Wetland
Palustrine	(Ti kouka)/pampas-harakeke-mamaku tussockland. (Wildland Consultants 2008a)	Wetland

Vegetation and Indigenous Flora

This is the largest wetland on Matakana Island. Most of the site comprises a continuous grey willow canopy over a ground layer dominated by *Carex virgata* with other indigenous sedges and rushes including *Machaerina arthrophylla, M. juncea, M. tenax, Carex maorica,* and *C. secta*. Indigenous shrubs including swamp coprosma, wheki and ti kouka are scattered through the grey willow canopy. The western end of the site is a mosaic of vegetation types, including *Carex secta* tussockland, *Eleocharis sphacelata* reedland, raupo reedland, *Machaerina articulata* reedland, and pampas tussockland. The abundance of pampas at this end of this wetland is possibly related to drier conditions associated with drainage. Pukatea seedlings, *Cyclosorus interruptus* (At Risk-Declining), *Hypolepis distans* (regionally uncommon), swamp kiokio, and royal fern were seen in grey willow forest during a walk through survey of the site in 2008 (Wildland Consultants 2008a).

Indigenous Fauna

There are past or recent records of Australasian bittern (Threatened-Nationally Endangered), grey duck (Threatened-Nationally Critical), spotless crake (At Risk-Relict), banded rail (At Risk-Naturally Uncommon), marsh crake (At Risk-Relict), and North Island fernbird (At Risk-Declining). The site was ranked as 'moderate' quality marshbird habitat by Owen (1993).

Indigenous freshwater fish species may be present in the waterways and

[1] Identified as SVHZ-72 in Wildland Consultants 2006g.

waterbodies in this site.

Condition/Pressures

This wetland has been extensively drained and as a consequence has a lower diversity of natural plant communities than it would have had originally. Grey willow is better established here than in other large wetlands on Matakana Island. A few individuals of royal fern are present. These are being monitored and controlled by Bay of Plenty Regional Council (W. Stahel, Bay of Plenty Regional Council, pers. comm. 2006 and 2008). The site is surrounded by exotic plantation forest so is vulnerable to disturbance associated with plantation forestry operations.

Feral pigs were observed in the wetland in 2006. Possum and rabbit damage has been noted in the past (Owen 1993).

Key Site Features

This site comprises a large example of freshwater wetland vegetation, albeit modified through drainage and infestations of grey willow. It provides good habitat for one At Risk and one regionally uncommon plant species. There are past or recent records of two Threatened and four At Risk bird species.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	M
	3.5	M
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	L
Ecological Context	3.9	M
	3.10	M
Viability and Sustainability	3.11	H
	3.12	M
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** *Cyclosorus interruptus* (At Risk-Declining) **Avifauna:** Grey duck (Threatened-Nationally Critical) Australasian bittern (Threatened-Nationally Endangered) North Island fernbird (At Risk-Declining) Marsh crake (At Risk-Relict) Spotless crake (At Risk-Relict) Banded rail (At Risk-Naturally Uncommon)

Policy	Criteria Met	Explanation
ii	✓	Australasian bittern (Endangered)
iii		
iv		
v		Regionally Significant
vi	✓	Partially protected (Matakana Island Wildlife Refuge)
11(b)		
i	✓	The canopy is dominated by grey willow, but the site retains an indigenous understorey.
ii		
iii		
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Matakana Wetlands C is consistent with Policy 11(b) because, while there are past or recent records of a suite of Threatened and At Risk avifauna species, the site is not amongst the highest quality examples of its type. Grey willow and pampas are well-established and the site has been extensively drained in the past. However, the site is consistent with Policy 11(b) because the site retains a predominantly indigenous understorey and is part of a larger wetland complex at the northern end of Matakana Island.

Notes Identified as a Category 2 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References Beadel 1989c; Beadel 1989e; Beadel 1992a; Beadel 1994a; Owen 1993; Wildland Consultants 2006g; Wildland Consultants 2008a.

MATAKANA WETLANDS D

Site Number [1]	035
Grid Reference (NZMG)	E2775708 N6408392
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (Matakana Island Wildlife Refuge)
Site Area	5.1 ha
Altitudinal Range	0 m asl
Geology-Landform Type	Sand
HVES Number	38

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Grey willow-ti kouka/*Carex secta* forest.	Wetland
Terrestrial	Mahoe-mapou/sweet fern forest.	Flat
Palustrine	Raupo reedland.	Wetland
Palustrine	Open water.	Pond/Lake
	(Wildland Consultants 2006g)	

Vegetation and Indigenous Flora

Most of this site comprises open water. This vegetation is dominated by a canopy of grey willow and ti kouka above pampas, harakeke, karamu, kohuhu, mingimingi, and koromiko. In the centre of the site there is an area of raupo reedland. Other species include *Machaerina articulata* and *Carex* spp. *Cyclosorus interruptus* and *Thelypteris confluens* (both At Risk-Declining) occur under grey willow around the edges of this wetland.

Indigenous Fauna

No bird species were recorded here during a survey in 1992 but Owen (1993) judged that spotless crake were likely to be present and ranked the site as 'moderate' quality marshbird habitat. There is no recent fauna information available for this site.

Condition/Pressures

Large infestations of grey willow and pampas. Disturbance from surrounding plantation forestry operations.

Key Site Features

This site is regionally significant because it includes populations of two At Risk plant species and examples of modified indigenous freshwater wetland, a habitat type which has been greatly reduced in extent in Tauranga Ecological District. It is also part of the extensive wetland complex at the northern end of Matakana Island (see the nationally significant sites Matakana Island 1 and Matakana Wetlands B and C).

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	L

[1] Identified as SVHZ-73 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Ecological Context	3.9	M
	3.10	L
Viability and Sustainability	3.11	L
	3.12	L
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** *Cyclosorus interruptus* (At Risk-Declining) *Thelypteris confluens* (At Risk-Declining)
ii		
iii		
iv		
v		Regionally Significant
vi	✓	Protected (Matakana Island Wildlife Refuge)
11(b)		
i	✓	Open water, raupo reedland, and wetland with a canopy dominated by grey willow above an indigenous understorey.
ii		
iii		
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Matakana Island Wetlands D is a relatively small wetland that is predominantly open water. Vegetated areas include raupo reedland and forest with a canopy of grey willow and ti kouka above an understorey that is largely indigenous. The site is consistent with Policy 11(b) because it is a small representative example of indigenous palustrine wetland with two At Risk plant species occurring on the margins. In addition, it is part of a larger complex of wetlands and dunes at the northern end of Matakana Island.

Notes Identified as a Category 2 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References Beadel 1992a; Owen 1993; Wildland Consultants 2006g; Wildland Consultants 2008a.

CENTRAL MATAKANA WETLANDS

Site Number [1]	034
Grid Reference (NZMG)	E2775285 N6406435
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	68.3 ha
Altitudinal Range	0 m asl
Geology-Landform Type	Sand

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Harakeke-manuka/*Machaerina juncea*-pampas flaxland with scattered radiata pine.	Wetland
Palustrine	Manuka scrub ⇔ *Machaerina juncea* sedgeland.	Wetland
Palustrine	Manuka-ti kouka-pampas shrubland.	Wetland
Palustrine	Manuka-mingimingi-ti kouka-swamp coprosma-*Coprosma propinqua* subsp. *propinqua*/harakeke-pampas-*Machaerina juncea-Machaerina arthrophylla-Gleichenia microphylla* shrubland, with a few planted eucalyptus and pines.	Wetland
Palustrine	(Pines)/rushland with saltmarsh ribbonwood.	Wetland
Palustrine	Manuka-(mingimingi)-(swamp coprosma) scrub.	Wetland
Palustrine	(Pine)/harakeke-manuka flaxland.	Wetland
	(Wildland Consultants 2008a)	

Vegetation and Indigenous Flora

This site comprises a mosaic of indigenous dominated wetlands and mixed indigenous-plantation shrublands. Indigenous wetlands occur along the coastal fringe, and are dominated by harakeke or *Machaerina juncea*. The shrublands consist of indigenous shrubs, with pampas and sedges with taller pines and eucalyptus in rows within them. Some of the wetlands have also had radiata pine planted into them. Most of the area surrounding these sites, and including some of the sites themselves, has been cleared of previous vegetation which was a mix of eucalyptus and indigenous species resulting from failed efforts to establish plantation forestry. Following clearance most of the area was hummocked into lines upon which eucalyptus have been planted. Manuka, mingimingi and other indigenous species as well as pampas and brush wattle have established following this disturbance, resulting in the current vegetation.

Indigenous Fauna

No information.

Condition/Pressures

Large infestations of pampas are present and the site is subject to disturbance from plantation forestry operations. Most of the area surrounding the site, and some of the site itself, has been cleared of vegetation and windrowed. Six drains dissect this site.

Key Site Features

This site is locally significant because it includes examples of modified indigenous freshwater wetland, a habitat type which has been greatly reduced in extent in Tauranga Ecological District. This site is part of the extensive wetland complex at the northern end of Matakana Island (Matakana Island 1,

[1] Identified as Site Number 089 in Wildland Consultants 2008a.

Matakana Wetlands B and C sites). It also acts as a buffer to Matakana Island 2.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	L
	3.3	M
	3.4	M
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	L
Ecological Context	3.9	M
	3.10	L
Viability and Sustainability	3.11	L
	3.12	L
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Mosaic of wetlands dominated by indigenous species with areas of plantation radiata pine and eucalyptus.
ii		
iii		
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Central Matakana Wetlands is consistent with Policy 11(b) because it comprises predominantly indigenous wetlands. In addition, the site bounds Tauranga Harbour and is part of a larger complex of wetlands at the northern end of Matakana Island.

Notes

This site is highly modified. It was cleared and drained, along with surrounding land, in preparation for planting as a eucalyptus-pine plantation forest. However, either this area was not planted or the crop failed. The overall extent of the site is difficult to determine because it is difficult to

distinguish from the adjacent areas of exotic plantation on aerial photographs. There may be other natural or semi-natural areas in this vicinity on Matakana Island that were not identified as a component of this study.

Identified as a Category 3 natural area in Tauranga Ecological District (Wildland Consultants 2008a).

References

Wildland Consultants 2008a.

MATAKANA ISLAND 2

Site Number [1]	042
Grid Reference (NZMG)	E2776510 N6403937
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	47.7 ha
Altitudinal Range	0-2 m asl
Geology-Landform Type	Estuarine, Sand

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Mangrove scrub and shrubland.	Intertidal flat
Palustrine	*Machaerina juncea* sedgeland, and *Machaerina juncea*-saltmarsh ribbonwood-oioi sedgeland, and harakeke/*Machaerina juncea*-oioi-saltmarsh ribbonwood sedgeland, and sea rush tussockland, and oioi rushland.	Wetland
Terrestrial	Sandspit vegetation.	Sandspit
Terrestrial	Radiata pine/*Austrostipa stipoides* forest. (Beadel 1994a, Wildland Consultants 2006g, Wildland Consultants 2008a)	Sandspit

Vegetation and Indigenous Flora

This is a long, narrow site on the harbour margin of Matakana Island. It is dominated by estuarine wetlands, including species such as mangrove, *Machaerina juncea,* oioi, sea rush, and saltmarsh ribbonwood. There is an area of radiata pine on the sandspit at the northern end of the site. *Austrostipa stipoides*, which is regarded as a regionally uncommon species, occurs under the pines.

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon) and North Island fernbird (At Risk-Declining) were recorded in 1992 by Owen (1993) who also identified the area as being an outstanding marshbird habitat.

Condition/Pressures

Wilding pine, grey willow and pampas infestations are present. Some drainage works are evident in the northern end of the site. The site is buffered from forestry-related disturbance by Central Matakana Wetlands.

Key Site Features

This relatively large site contains good quality representative example of wetland vegetation types, which are characteristic of the Tauranga Ecological District (Beadel 1994a). It is part of the extensive wetland complex at the north-western end of Matakana Island. A regionally uncommon plant species is present and, based on the habitat and records from 1992, Threatened marshbird species are likely to be present. This site provides a protective buffer to seagrass beds and intertidal flats in a nationally significant part of the Tauranga Harbour.

[1] Identified as SVHZ-75 in Wildland Consultants 2006g.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	M
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	H
	3.12	M
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** North Island fernbird (At Risk-Declining) (1992) Banded rail (At Risk-Naturally Uncommon) (1992)
ii		
iii	✓	High quality, contiguous estuarine and palustrine wetlands.
iv		
v		Regionally Significant
vi		Unprotected
Policy Met:		11(a)
Justification:		Matakana Island 2 is consistent with Policy 11(a) because it is a high quality example of contiguous estuarine and palustrine wetlands that provide habitat for two At Risk bird species. In addition, one regionally uncommon plant species is present. The site is adjacent to the Mid Tauranga Harbour Key Ecological Zone.

Notes Identified as a Category 2 natural area in the Tauranga Ecological District (Wildland Consultants 2008a). The site is part of Mid Tauranga Harbour Key Ecological Zone (Wildland Consultants 2006g).

References Owen 1993; Beadel 1994a; Wildland Consultants 2006g; Wildland Consultants 2008a.

MATAKANA ISLAND 4

Site Number [1]	049
Grid Reference (NZMG)	E2778234 N6401689
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	18.9 ha
Altitudinal Range	0-4 m asl
Geology-Landform Type	Estuarine, Sand

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Mangrove scrub and shrubland.	Intertidal flat
Estuarine	Sea rush tussockland, oioi rushland, and *Machaerina juncea* sedgeland.	Intertidal flat
Palustrine	*Olearia solandri*-toetoe-harakeke-manuka shrubland and harakeke flaxland.	Intertidal flat, wetland
Terrestrial	(Radiata pine)-(*Eucalyptus* sp.)/manuka-brush wattle-pampas scrub.	Sandspit
	(Beadel 1992a and Wildland Consultants 2006g)	

Vegetation and Indigenous Flora

This site is long and narrow, extending along part of the harbour margin of Matakana Island. The site comprises a strip of mangrove scrub, estuarine wetland, and palustrine wetlands. Species present include sea rush, oioi, *Machaerina juncea*, *Olearia solandri* (a regionally uncommon plant species), toetoe, harakeke, and manuka. *Gleichenia microphylla* and *Hypolepis distans* are present underneath manuka in places. *Hypolepis distans* is also regarded as regionally uncommon.

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon) and North Island fernbird (At Risk-Declining) present in 1992 (Owen 1993). The habitat quality of this site for marsh birds was ranked as 'high' by Owen (1993).

Condition/Pressures

Wilding pines, pampas and brush wattle are problem weed infestations in the freshwater wetland areas. The landward side of this site is bounded by exotic plantation forest, which makes the site vulnerable to disturbance associated with forestry activities.

Key Site Features

This site includes good quality, representative examples of saltmarsh and freshwater vegetation. Two At Risk wetland bird species and two regionally uncommon plant species are known from this site. This site acts as a protective buffer to seagrass beds and intertidal flats in a nationally significant area of the Tauranga Harbour. A small part of the site is modified by weeds.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L

[1] Identified as SVHZ-76 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** North Island fernbird (At Risk-Declining) (1992) Banded rail (At Risk-Naturally Uncommon) (1992)
ii		
iii		
iv		
v		Regionally Significant
vi		Unprotected
11(b)		
i	✓	Mangrove scrub and shrubland, sea rush tussockland, oioi rushland, and other estuarine wetland types.
ii		
iii	✓	Mangrove scrub and shrubland, sea rush tussockland, oioi rushland, and other estuarine wetland types.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Matakana Island 4 is a long, narrow strip of mangrove scrub, other estuarine wetland types, and palustrine wetlands. The site has been modified by weed infestations. It is consistent with Policy 11(b) because it comprises a habitat type that is confined to the coastal environment. In addition, it supports populations of two regionally uncommon plant species and two At Risk bird species were recorded at the site in 1992.

Notes

This site is part of the Mid Tauranga Harbour Key Ecological Zone (Wildland Consultants 2006g).

Identified as a Category 2 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

References

Beadel 1992a; Owen 1993; Wildland Consultants 2006g; Wildland Consultants 2008a.

DUCK BAY

Site Number [1]	076
Grid Reference (NZMG)	E2786695 N6392469
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	6.8 ha
Altitudinal Range	0 m asl
Geology-Landform Type	Estuarine

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Mangrove-oioi-sea rush scrub.	Inter-tidal flats
Estuarine	Sea rush-oioi tussockland. (Wildland Consultants 2006g)	Inter-tidal flats

Vegetation and Indigenous Flora

This site is dominated by vegetation types which are typical of estuarine wetlands in Tauranga Harbour, including mangrove scrub, and estuarine wetlands of sea rush, and oioi. *Austrostipa stipoides*, regionally uncommon within the Tauranga Ecological District, is present at this site.

Fauna

Rasch (1989) ranks the whole harbour as a wildlife habitat of "Outstanding" value. The estuarine and marine systems support very high numbers and diversity of wading and seabird populations. This site contains intertidal flats which provide outstanding feeding grounds for waders (principally bar-tailed godwit, oystercatcher) and waterbirds (swan, ducks, geese).

Banded rail (At Risk-Naturally Uncommon) and North Island fernbird (At Risk-Declining) are known to occur in similar sites elsewhere on Matakana Island, such as Otapu Bay (Owen 1993), and probably also inhabit this site.

Condition/Pressures

Invasion of estuarine saltmarsh vegetation by saltwater paspalum would degrade this habitat and reduce its value to marsh birds, wading birds and waterfowl. Saltwater paspalum is well established at Otapu Bay, and could spread to this site. The landward margins of this site are bounded by exotic plantation forest.

Key Site Features

Duck Bay provides reasonably good quality habitat for At Risk marshbird species, as well as feeding and roosting habitat for the wide range of waders that inhabit Tauranga Harbour. It is also a good quality, representative example of a saltmarsh-mangrove complex on intertidal flats and provides a protective buffer to a nationally significant area of the Tauranga Harbour. One regionally uncommon plant species is present at this site.

[1] Identified as Site Number 163 in Wildland Consultants 2008a.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	H
Ecological Context	3.9	M
	3.10	L
Viability and Sustainability	3.11	M
	3.12	H
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Mangrove scrub and sea rush-oioi tussockland.
ii		
iii	✓	Mangrove scrub and sea rush-oioi tussockland.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Duck Bay is a small example of estuarine wetland and is, therefore, consistent with Policy 11(b). In addition, a regionally uncommon plant species is present, and it is potentially habitat for At Risk bird species such as banded rail and fernbird.

Notes Identified as a Category 4 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

References Owen 1993; Wildland Consultants 2008a.

TIROHANGA MANGROVES

Site Number [1]	039
Grid Reference (NZMG)	E2776281 N6398271
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	212.9 ha
Altitudinal Range	0 m asl
Geology-Landform Type	Estuarine
HVES Number	41

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Mangrove scrub and shrubland. (Beadel 1994a, Wildland Consultants 2008a)	Intertidal flat

Vegetation and Indigenous Flora

This site contains the largest example of mangrove scrub and shrublands in the harbour. No uncommon plant species have been recorded (Beadel 1994a). This area of mangroves is distinctive because it forms a compact island in the harbour, separated from the shoreline by open water.

Indigenous Fauna

Used as a roost at high tide periods by good numbers of little shag (At Risk-Naturally Uncommon), pied shag (Threatened, Naturally Vulnerable), black shag (At Risk-Naturally Uncommon), and white-faced heron (Owen 1993). It has the potential to be used by nesting shags in the future. It may also be habitat for fernbird (At Risk-Declining) and banded rail (At Risk-Naturally Uncommon) (BOPRC 2012). Little black shag (At Risk-Naturally Uncommon) is present (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

The site is a discrete area located within Tauranga Harbour so is isolated from direct human impacts. It is probably vulnerable to erosion and accretion caused by tides, currents, and wind action.

Key Site Features

The Tirohanga mangroves are nationally significant because they are the largest example of mangrove scrub and shrubland in the Tauranga Harbour. The site is very large, unified, and relatively isolated, increasing its resilience to the range of pressures characteristic around Tauranga Harbour. Black shag roost on the mangroves within this site.

[1] Identified as SVHZ-77 in Wildland Consultants 2006g.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	L
	3.3	M
	3.4	M
	3.5	H
	3.6	N/A
Diversity and Pattern	3.7	L
Naturalness	3.8	H
Ecological Context	3.9	H
	3.10	L
Viability and Sustainability	3.11	H
	3.12	H
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Pied shag (Threatened-Nationally Vulnerable) Black shag (At Risk-Naturally Uncommon) Little black shag (At Risk-Naturally Uncommon) Little shag (At Risk-Naturally Uncommon)
ii		
iii	✓	High quality, mid-harbour example of mangrove scrub and shrubland.
iv		
v	✓	Nationally Significant
vi		Unprotected
Policy Met:		11(a)
Justification:		Tirohanga Mangroves is distinctive because it is a large area of mangrove scrub and shrublands that forms an island in Tauranga Harbour. It is used as a high tide roost by a range of Threatened, At Risk, and common avifauna species, and is regarded as being of national significance. This is the only sizeable island in the harbour covered entirely by mangroves.

Notes

Identified as a Category 1 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

This site is part of the Mid Tauranga Harbour Key Ecological Zone (Wildland Consultants 2006g).

References

Owen 1993; Beadel 1994a; Wildland Consultants 2006g; Wildland Consultants 2008a; BOPRC 2012.

BLUE GUM BAY 1

Site Number [1]	059
Grid Reference (NZMG)	E2781408 N6398648
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (Nga Whenua Rāhui Kawenata) and unprotected parts
Site Area	177.3 ha
Altitudinal Range	0-8 m asl
Geology-Landform Type	Estuarine, Sand, Low gradient alluvium
HVES Number	40

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Grey willow forest, ti kouka-grey willow-manuka forest and raupo reedland.	Wetland
Palustrine/Estuarine	Manuka forest and scrub.	Wetland, intertidal flat
Palustrine/Estuarine	Manuka-mingimingi-*Olearia solandri* shrubland.	Wetland, intertidal flat
Palustrine/Estuarine	Manuka-harakeke-toetoe shrubland, harakeke flaxland, *Machaerina teretifolia-Machaerina arthrophylla*/*Gleichenia* fernland, ti kouka/ *Machaerina juncea*-swamp coprosma-*Machaerina articulata* treeland.	Wetland, intertidal flat
Estuarine	*Machaerina juncea*-sea rush-oioi sedgeland, oioi rushland, oioi-saltmarsh ribbonwood shrub-rushland, *Schoenoplectus pungens* sedgeland.	Intertidal flat
Estuarine	Mangrove shrubland.	Intertidal flat
Terrestrial	Radiata pine forest.	Flats
Palustrine	Raupo reedland.	Wetland
Palustrine	Grey willow forest.	Wetland
	(Beadel 1994a and Wildland Consultants 2006g)	

Vegetation and Indigenous Flora

Blue Gum Bay 1 includes freshwater and estuarine wetlands. The freshwater wetlands include large areas which are dominated by grey willow. Other species include manuka, *Olearia solandri* (a regionally uncommon plant species), *Machaerina* spp., ti kouka, harakeke, and toetoe. Estuarine species include *Machaerina juncea*, sea rush, oioi, saltmarsh ribbonwood, and *Schoenoplectus pungens*. *Dianella haematica* (At Risk-Declining) is likely to be present. There is also a small area of radiata pine forest.

Indigenous Fauna

High numbers of banded rail (At Risk-Naturally Uncommon), North Island fernbird (At Risk-Declining), and Australasian bittern (Threatened-Nationally Endangered) were recorded in 1992 by Owen (1993) who ranked the site as outstanding for marshbirds. BOPRC (2012) suggests the site may be habitat for marsh crake (At Risk-Relict) and spotless crake (both At Risk-Relict).

Condition/Pressures

The freshwater wetland vegetation is more modified than the saltmarsh vegetation, with expanding grey willow and wilding pine populations. The landward margins of the site are bounded by exotic plantation forest so may be vulnerable to disturbance associated with forestry activities.

Key Site Features

This site comprises a very large, relatively unmodified and representative complex of estuarine and freshwater wetlands. Two Threatened and two At

[1] Identified as SVHZ-78 in Wildland Consultants 2006g.

Risk bird species, and one regionally uncommon plant species have been recorded at this site, and it may provide habitat for a further two At Risk bird species and one At Risk plant species. This site is a nationally significant representative example of the vegetation and habitats of the Tauranga Harbour. Parts of the site are affected by invasive weeds.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	M
	3.5	H
	3.6	H
Diversity and Pattern	3.7	H
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	H
	3.12	M
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Australasian bittern (Threatened-Nationally Endangered) (1992) North Island fernbird (At Risk-Declining) (1992) Banded rail (At Risk-Naturally Uncommon) (1992)
ii	✓	Australasian bittern (Endangered) (1992)
iii	✓	High quality, relatively large, complex of estuarine and palustrine wetlands.
iv		
v	✓	Nationally Significant
vi		Unprotected
Policy Met:		11(a)
Justification:		Blue Gum Bay 1 is a large complex of estuarine and palustrine wetlands that is nationally significant. Therefore, it is consistent with Policy 11(a). Large numbers of one Threatened and two At Risk avifauna species were recorded in 1992, and species are likely to still be present.

Notes Identified as a Category 1 natural area in the Tauranga Ecological District (Wildland Consultants 2008a). This site is part of the Mid Tauranga Harbour Key Ecological Zone (Wildland Consultants 2006g).

References Owen 1993; Beadel 1994a; Wildland Consultants 2006g; Wildland Consultants 2008a; BOPRC 2012.

BLUE GUM BAY 2

Site Number [1]	065
Grid Reference (NZMG)	E2781097 N6397826
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (Nga Whenua Rāhui Kawenata, WBOPDC Reserve) and unprotected parts
Site Area	74.6 ha
Altitudinal Range	0-18 m asl
Geology-Landform Type	Estuarine, Sand, Low gradient alluvium, Sedimentary (volcanic) unconsolidated

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Grey willow forest.	Wetland
Palustrine	Ti kouka-grey willow-manuka forest and raupo reedland.	Wetland
Estuarine	Sea rush tussockland and oioi rushland.	Intertidal flat
Palustrine	Grey willow forest and ti kouka-grey willow-manuka forest and raupo reedland.	Wetland
Palustrine	*Machaerina articulata* reedland.	Wetland
Estuarine	Oioi rushland, and oioi-saltmarsh ribbonwood shrub-rushland, and *Machaerina juncea* sedgeland, and *Schoenoplectus pungens* sedgeland.	Intertidal flat
Palustrine	Manuka scrub and raupo reedland.	Wetland
Estuarine	Mangrove scrub and shrubland.	Intertidal flat
	(Beadel 1992a; Beadel 1994a; Wildland Consultants 2006g)	

Vegetation and Indigenous Flora

Estuarine and palustrine wetlands are present in Blue Gum Bay and in the gullies which drain into the bay. No rare or uncommon plant species have been recorded, but there has not been a botanical survey of this site.

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon) and North Island fernbird (At Risk-Declining) were recorded in 1992 (Owen 1993) along the western margins of Blue Gum Bay, at the northern end of the site.

Condition/Pressures

This site includes modified wetland areas fringing and buffering the nationally significant wetlands of Blue Gum Bay 1. These areas have been affected variously by the following pressures: weed infestation (especially grey willow, woolly nightshade, pampas, wattle species and gorse), drainage, planting of exotic trees (for example *Eucalyptus* sp.), wilding trees (for example radiata pine), domestic and farm rubbish dumping, cattle grazing, effluent run-off, and other agricultural impacts.

Key Site Features

This site is fragmented, convoluted in shape and affected by a wide range of pest plants and human activity. These modified wetlands are locally significant as ecological linkages and partial buffers to the nationally significant wetlands at the centre of Blue Gum Bay (Blue Gum Bay 1). Two At Risk wetland bird species have been recorded here.

[1] Identified as SVHZ-79 in Wildland Consultants 2006g.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	L
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	L
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	L
	3.12	L
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** North Island fernbird (At Risk-Declining) (1992) Banded rail (At Risk-Naturally Uncommon) (1992)
ii		
iii		
iv		
v		Locally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a WBOPDC reserve.
11(b)		
i	✓	Grey willow forest with an indigenous understorey, sea rush tussockland, oioi rushland, raupo reedland, *Machaerina articulata* reedland, manuka scrub, and mangrove scrub.
ii		
iii	✓	Sea rush tussockland, oioi rushland, and mangrove scrub.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Blue Gum Bay 2 comprises several areas of estuarine and palustrine wetlands that have been modified by invasive weeds, drainage, and dumping. The site is consistent with Policy 11(b) because it is predominantly indigenous in character and includes some habitat types which are confined to the coastal environment.

Notes	Identified as a Category 3 natural area in the Tauranga Ecological District (Wildland Consultants 2008a). It includes site numbers 40 and 50 from Owen (1993) which were both ranked moderate for habitat quality. This site is part of the Mid Tauranga Harbour Key Ecological Zone (Wildland Consultants 2006g).
References	Owen 1993; Beadel 1994a; Wildland Consultants 2006g; Wildland Consultants 2008a.

TIROHANGA POINT BEACH

Site Number [1]	045
Grid Reference (NZMG)	E2778001 N6399072
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	0.8 ha
Altitudinal Range	0-10 m asl
Geology-Landform Type	Sand

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Sandfield. (Wildland Consultants 2006g)	Beach sands

Vegetation and Indigenous Flora This site comprises unvegetated, mobile sands.

Indigenous Fauna The beach is a regular nesting area for a pair of northern New Zealand dotterel (Threatened-Nationally Vulnerable) (J. Heaphy, Department of Conservation, pers. comm. 2006).

Condition/Pressures Possible stock access.

Key Site Features Tirohanga Point Beach is a small site that nonetheless provides breeding habitat for the Threatened northern New Zealand dotterel. The largest population of this species in the Bay of Plenty Region is centred on Tauranga Harbour.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	L
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	N/A
Diversity and Pattern	3.7	L
Naturalness	3.8	H
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	L
	3.12	H
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

[1] Identified as SVHZ-80 in Wildland Consultants 2006g.

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Northern New Zealand dotterel (Threatened-Nationally Vulnerable)
ii	✓	New Zealand dotterel (Endangered)
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Unvegetated sandfield
ii	✓	Nesting site for northern New Zealand dotterel.
iii	✓	Sandfield
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Tirohanga Point Beach comprises unvegetated sand, a habitat that is largely confined to the coastal environment, and it is a site where a pair of northern New Zealand dotterel regularly nest. Therefore, it is consistent with Policy 11(b).

Notes Identified as a Category 3 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

References Wildland Consultants 2006g; Wildland Consultants 2008a.

TIROHANGA POINT POHUTUKAWA

Site Number [1]	044
Grid Reference (NZMG)	E2777799 N6398818
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	0.8 ha
Altitudinal Range	2-21 m asl
Geology-Landform Type	Sedimentary (volcanic) unconsolidated

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa/woolly nightshade-karaka forest. (Wildland Consultants 2006g)	Hillslope, headland

Vegetation and Indigenous Flora

The forest canopy is dominated by pohutukawa. Woolly nightshade and karaka are the most common species in the understorey and exotic grasses form the groundcover. No rare or uncommon plant species have been recorded at this site.

Indigenous Fauna

No specific information on fauna.

Condition/Pressures

Woolly nightshade is the most common species in the understorey and is an invasive weed. Pampas is also present at the bottom of the face. The groundcover is dominated by exotic grasses, which may prevent indigenous species from establishing/regenerating.

Key Site Features

This site comprises one of only three examples of pohutukawa forest on Matakana Island and all are relatively small. Pohutukawa forest was once common in Tauranga Ecological District, but has now been greatly reduced in extent and only small areas remain (e.g. Mauao, Kauri Point, Tanners Point, Ngakautuakina Point, Bowentown Heads, Motuhoa Island) (Beadel 1994a).

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	L
Rarity or Distinctive Features	3.2	L
	3.3	L
	3.4	L
	3.5	L
	3.6	H
Diversity and Pattern	3.7	L
Naturalness	3.8	L
Ecological Context	3.9	M
	3.10	L

[1] Identified as SVHZ-81 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	L
	3.12	L
	3.13	L

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** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Pohutukawa forest
ii		
iii	✓	Pohutukawa forest
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Tirohanga Point Pohutukawa is consistent with Policy 11(b) because it is a small example of a habitat type that is largely confined to the coastal environment. Pohutukawa forest has been greatly reduced in extent in Tauranga Ecological District, so even relatively small areas are of ecological significance.

Notes Identified as a Category 4 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

References Wildland Consultants 2006g; Wildland Consultants 2008a.

MATAKANA POINT

Site Number [1]	046
Grid Reference (NZMG)	E2778104 N6395821
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	1.8 ha
Altitudinal Range	0-20 m asl
Geology-Landform Type	Sedimentary (volcanic) unconsolidated

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa-(radiata pine) forest. (Wildland Consultants 2006g)	Hillslope, headland

Vegetation and Indigenous Flora Matakana Point comprises pohutukawa dominated forest with an understorey that includes karamu, houpara, rangiora, and hangehange. No rare or uncommon plant species have been recorded.

Indigenous Fauna No specific fauna information.

Condition/Pressures Radiata pines are present in the canopy. Erosion of the coastal cliff has created areas of bare soil which are being colonised by brush wattle, pampas, gorse, and woolly nightshade, in addition to indigenous species.

Key Site Features This site is one of three remaining areas of pohutukawa forest on Matakana Island and all are relatively small sites. Pohutukawa forest was once common in Tauranga Ecological District, but has now been greatly reduced in extent and only small areas remain (for example Mauao, Kauri Point, Tanners Point, Ngakautuakina Point, Bowentown Heads, Motuhoa Island) (Beadel 1994a).

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	L
Rarity or Distinctive Features	3.2	L
	3.3	L
	3.4	L
	3.5	L
	3.6	L
Diversity and Pattern	3.7	L
Naturalness	3.8	L
Ecological Context	3.9	M
	3.10	L
Viability and Sustainability	3.11	L
	3.12	L
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

[1] Identified as SVHZ-82 in Wildland Consultants 2006g.

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Pohutukawa forest
ii		
iii	✓	Pohutukawa forest
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Matakana Point is consistent with Policy 11(b) because it is a small example of a habitat type that is largely confined to the coastal environment. Pohutukawa forest has been greatly reduced in extent in Tauranga Ecological District, so even relatively small areas are of ecological significance.

Notes

There is an urupa on the headland.

Identified as a Category 4 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

References

Wildland Consultants 2006g; Wildland Consultants 2008a.

TAHUNAMANU POHUTUKAWA

Site Number	054
Grid Reference (NZMG)	E2779670 N6395227
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	4.4 ha
Altitudinal Range	0-20 m asl
Geology-Landform Type	Sedimentary (volcanic) unconsolidated

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa forest. (Wildland Consultants 2011d)	Hillslope

Vegetation and Indigenous Flora

This site comprises pohutukawa forest with kanuka, kawakawa, kanuka, mamaku, ti kouka, and pampas. No rare or uncommon plant species have been recorded.

Indigenous Fauna

No specific fauna information.

Condition/Pressures

Erosion of the coastal cliff has created areas of bare soil which are being colonised by brush wattle and pampas, in addition to indigenous species.

Key Site Features

This site is one of three remaining areas of pohutukawa forest on Matakana Island (the others are at Tirohanga Point and Matakana Point. All of the sites are relatively small. Pohutukawa forest was once common in Tauranga Ecological District, but has now been greatly reduced in extent and only small areas remain (for example Mauao, Kauri Point, Tanners Point, Ngakautuakina Point, Bowentown Heads, Motuhoa Island) (Beadel 1994a).

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	L
Rarity or Distinctive Features	3.2	L
	3.3	L
	3.4	L
	3.5	L
	3.6	L
Diversity and Pattern	3.7	L
Naturalness	3.8	L
Ecological Context	3.9	M
	3.10	L
Viability and Sustainability	3.11	L
	3.12	L
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Pohutukawa forest
ii		
iii	✓	Pohutukawa forest
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		This site is consistent with Policy 11(b) because it is a small example of a habitat type that is largely confined to the coastal environment. Pohutukawa forest has been greatly reduced in extent in Tauranga Ecological District, so even relatively small areas are of ecological significance.

References Wildland Consultants 2011d

TAHUNAMANU ISLAND

Site Number [1]	056
Grid Reference (NZMG)	E2780690 N6394500
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	1.5 ha
Altitudinal Range	0-5 m asl
Geology-Landform Type	Estuarine
HVES Number	200

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Glasswort herbfield and sandspit vegetation. (Beadel 1992a)	Intertidal flat, dune and beach sands

Vegetation and Indigenous Flora

No uncommon plant species have been recorded.

Indigenous Fauna

The name 'tahuna' (sandbank) 'manu' (bird) suggests that this site has long been recognised by Māori as important to birds. These inner harbour sandspits and sandbanks are very important high tide roosts and nesting areas for northern New Zealand dotterel (Threatened-Nationally Vulnerable), Caspian tern (Threatened-Nationally Endangered), white-fronted tern, New Zealand pied oystercatcher, pied stilt (all At Risk-Declining), and variable oystercatcher (At Risk-Recovering) (Owen 1993; Owen *et al.* 2006). It is a wader roost of increasing importance for species such as bar-tailed godwit, turnstone, lesser or red knot as other central Tauranga Harbour roosts become less favorable through factors like disturbance or erosion (Owen *et al.* 2006). Also recorded from this site are the following: red-billed gull (Threatened-Nationally Vulnerable), wrybill (Threatened-Nationally Vulnerable), banded dotterel (Threatened-Nationally Vulnerable), little black shag (At Risk-Naturally Uncommon), and little shag (At Risk-Naturally Uncommon), (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Gorse and other pest weeds are present. Cattle access part of the site and fencing to exclude stock is required (K. Owen, Department of Conservation, pers. comm. 2012). However, apart from this, the island is in good condition.

Key Site Features

Tahunamanu Island supports a representative example of the vegetation occurring on sandspits in Tauranga Harbour. It is a very important nesting and roosting area for two Threatened and four At Risk bird species, as well as high numbers of waders. It includes one of the larger, better quality examples of glasswort herbfield in the Tauranga Harbour (Beadel 1994a). This site complements the nearby, nationally significant Opureora Spit.

[1] Identified as SVHZ-83 in Wildland Consultants 2006g.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	M
	3.5	M
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Caspian tern (Threatened-Nationally Endangered) Banded dotterel (Threatened-Nationally Vulnerable) Northern New Zealand dotterel (Threatened-Nationally Vulnerable) Red-billed gull (Threatened-Nationally Vulnerable) Wrybill (Threatened-Nationally Vulnerable) New Zealand pied oystercatcher (At Risk-Declining) Pied stilt (At Risk-Declining) White-fronted tern (At Risk-Declining) Little black shag (At Risk-Naturally Uncommon) Little shag (At Risk-Naturally Uncommon) Variable oystercatcher (At Risk-Recovering)
ii	✓	New Zealand dotterel (Endangered) Wrybill (Vulnerable)
iii	✓	Important nesting site and high tide roost for avifauna.
iv		
v		Regionally Significant
vi		Unprotected
Policy Met:		11(a)
Justification:		Tahunamanu Island is consistent with Policy 11(a) because it is a high quality, important nesting site and roosting site for a variety of wading birds, terns, gulls, and shags, including several Threatened and At Risk species.

Notes

This site is part of Motungaio Key Ecological Zone (Wildland Consultants 2006g).

Identified as a Category 1 natural area in the Tauranga Ecological District

(Wildland Consultants 2008a).

References

Owen 1993; Beadel 1994a; Owen *et al.* 2006; Wildland Consultants 2006g; Wildland Consultants 2008a.

OPUREORA

Site Number [1]	067
Grid Reference (NZMG)	E2782242 N6393084
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (WBOPDC reserve) and unprotected parts
Site Area	35.2 ha
Altitudinal Range	0 m asl
Geology-Landform Type	Estuarine, Sand, Low gradient alluvium
HVES Number	185

Hydrosystem	Vegetation/Habitat Type	Landform
	Opureora Spit	
Palustrine	Manuka scrub and shrubland.	Wetland
Estuarine	Oioi-saltmarsh ribbonwood shrub-rushland.	Intertidal flat
Estuarine	Sea rush tussockland and *Austrostipa stipoides*-oioi-*Machaerina juncea*-sea rush tussockland.	Intertidal flat
Terrestrial	Sandfield.	Dune and beach sands
Estuarine	Oioi-saltmarsh ribbonwood shrub-rushland ⇔ sea rush tussockland and *Austrostipa stipoides*-oioi-*Machaerina juncea*-sea rush tussockland. (Beadel 1992a, Wildland Consultants 2008a)	Intertidal flat
	Opureora Islet	
Terrestrial	Manuka-*Olearia solandri* scrub.	Sandbank
Estuarine	Sea rush tussockland, and oioi-saltmarsh ribbonwood shrub-rushland.	Intertidal flat
Estuarine	Samolus repens herbfield. (Beadel 1992a, Wildland Consultants 2008a)	Intertidal flat
	Motungaio Island	
Terrestrial	Manuka forest and scrub.	Dune and beach sands
Estuarine	*Olearia solandri*/oioi rushland.	Intertidal flat
Estuarine	*Machaerina juncea*-saltmarsh ribbonwood-oioi rushland.	Intertidal flat
Estuarine	Sea rush tussockland.	Intertidal flat
Estuarine	Oioi saltmarsh ribbonwood shrub-rushland. (Beadel 1992a, Wildland Consultants 2008a)	Intertidal flat

Vegetation and Indigenous Flora

The centre of Motungaio Island is manuka forest and scrub which is surrounded by *Olearia solandri*/oioi rushland and *Machaerina juncea*-saltmarsh ribbonwood-oioi sedgeland. The seaward margins of the site comprise sea rush tussockland. There are also small, unmapped areas of *Samolus repens* herbfield. One of the species present, *Olearia solandri*, is a regionally uncommon species.

The *Austrostipa stipoides* (regionally uncommon)-oioi-*Machaerina juncea*-sea rush tussockland which occurs on Opureora Spit is a distinctive vegetation type, found only once in the Tauranga Harbour in the 1992 harbour-wide survey (Beadel 1994a).

Opureora Islet is dominated by sea rush tussockland and oioi-saltmarsh

[1] Identified as SVHZ-84 (Opureora Spit), SVHZ-86 (Opueora Islet) and SVHZ-87 (Motungaio Island) in Wildland Consultants 2006g.

ribbonwood shrub-rushland which enclose areas of manuka-*Olearia solandri* scrub. There are patches of *Samolus repens* herbfield within the tussockland.

Indigenous Fauna

The sandspit at Opureora Spit is a nesting area for northern New Zealand dotterel (Threatened-Nationally Vulnerable), New Zealand pied oystercatcher (At Risk-Declining) and variable oystercatcher (At Risk-Recovering). The saltmarshes here are habitat for North Island fernbird (At Risk-Declining) (Owen 1993; J. Heaphy, Department of Conservation, pers. comm. 2006). As well, banded rail (dead), spotless crake (At Risk-Relict), and Caspian tern (Threatened-Nationally Vulnerable) were recorded in 1992 (Owen 1993). Used by waders, shags, herons, and gulls as a high tide roost site (K. Owen, Department of Conservation, pers. comm. 2008).

North Island fernbird (At Risk-Declining) was recorded at Opureora Islet in 1992 (Owen 1993) and North Island fernbird (At Risk-Declining), banded rail (At Risk-Naturally Uncommon), variable oystercatcher (At Risk-Recovering) and Caspian tern (Threatened-Nationally Vulnerable) were recorded at Motungaio Island in 1992 (Owen 1993). North Island fernbird was still present on Motungaio Island and Opuerora Islet in 2006 (J. Heaphy, Department of Conservation, pers. comm. 2006).

Condition/Pressures

Owen (1993) noted vehicle impacts, and weeds such as pampas, gorse, wattle, woolly nightshade, and blackberry. Vehicle tracks are still present and the islet is commonly used as an accessway between Opureora settlement and Rangiwāea Island (Wildland Consultants 2006g).

Key Site Features

Opureora provides important breeding habitat for two Threatened bird species, and is used by four (or possibly five) At Risk bird species. Together with Tahunamanu Island, it is of national significance. This site includes a distinctive vegetation type, *Austrostipa stipoides*-oioi-*Machaerina juncea*-sea rush tussockland, which is not found elsewhere in the Tauranga Harbour. It supports two regionally uncommon plant species.

Motungaio Island, within this site, represents a good quality example of an ecological sequence grading from terrestrial/estuarine forest to estuarine saltmarsh.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	M
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	H
Ecological Context	3.9	H
	3.10	H

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	H
	3.12	H
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Caspian tern (Threatened-Nationally Vulnerable) (1992) Northern New Zealand dotterel (Threatened-Nationally Vulnerable) New Zealand pied oystercatcher (At Risk-Declining) North Island fernbird (At Risk-Declining) Spotless crake (At Risk-Relict) (1992) Variable oystercatcher (At Risk-Recovering).
ii	✓	New Zealand dotterel (Endangered)
iii	✓	High quality estuarine wetlands important for avifauna for nesting and roosting.
iv		
v	✓	Nationally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a WBOPDC reserve.
Policy Met:		11(a)
Justification:		Opureora comprises good quality estuarine wetlands, a sandspit, and islets that are consistent with Policy 11(a) because they are important breeding, roosting, and feeding grounds for Threatened and At Risk avifauna species. The estuarine wetlands include two regionally uncommon plant species.

Notes

This site is part of Motungaio Key Ecological Zone (Wildland Consultants 2006g).

Identified as Category 1 and Category 2 natural areas in the Tauranga Ecological District (Wildland Consultants 2008a).

References

Beadel 1992a; Beadel 1994a; Owen 1993; Wildland Consultants 2006g; Wildland Consultants 2008a.

OPUREORA INLET

Site Number [1]	063
Grid Reference (NZMG)	E2782012 N6393568
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	6.5 ha
Altitudinal Range	0 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Sea rush tussockland.	Intertidal flat
Estuarine	Oioi-saltmarsh ribbonwood shrub-rushland.	Intertidal flat
Palustrine	(Ti kouka)/*Cyperus ustulatus* sedgeland. (Wildland Consultants 2006g and Beadel 1992a)	Wetland

Vegetation and Indigenous Flora Opureora Inlet comprises sea rush tussockland, oioi-saltmarsh ribbonwood shrub-rushland, and (ti kouka)/*Cyperus ustulatus* sedgeland. No rare or uncommon plant species have been recorded at this site.

Indigenous Fauna Habitat for North Island fernbird (At Risk-Declining) (J. Heaphy, Department of Conservation, pers. comm. 2006).

Condition/Pressures Weeds are present in the freshwater wetland and stock may graze the margins. 4WD vehicles are also a potential threat.

Key Site Features This relatively small site contains freshwater and estuarine wetlands and acts as a protective buffer to the nationally significant Opureora Spit.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	L
Rarity or Distinctive Features	3.2	L
	3.3	M
	3.4	M
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

[1] Identified as SVHZ-85 in Wildland Consultants 2006g.

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Sea rush tussockland, oioi-saltmarsh ribbonwood wetlands, and *Cyperus ustulatus* sedgeland.
ii		
iii	✓	Sea rush tussockland and oioi-saltmarsh ribbonwood wetlands.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Opureora Inlet is consistent with Policy 11(b) because it comprises indigenous vegetation types, including habitats that are confined to the coastal environment.

Notes This site is part of Motungaio Key Ecological Zone (Wildland Consultants 2006g). Identified as a Category 3 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

References Owen 1993; Beadel 1992a; Wildland Consultants 2006g; Wildland Consultants 2008a.

WAIHIRERE ROAD WETLAND

Site Number [1]	064
Grid Reference (NZMG)	E2782137 N6395837
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	1.3 ha
Altitudinal Range	0-3 m asl
Geology-Landform Type	Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Grey willow/*Machaerina tenax*-*Carex secta*-*Glyceria declinata*-swamp coprosma-swamp millet-karamu forest.	Wetland
Palustrine	Grey willow/*Carex virgata*-*Carex secta* forest.	Wetland
Palustrine	Raupo reedland.	Wetland
Estuarine	Oioi rushland, and oioi-*Machaerina juncea* rushland.	Intertidal flat

Vegetation and Indigenous Flora

This site comprises palustrine and estuarine wetlands. At the north-western end of the site the wetland canopy is dominated by grey willow. The understorey beneath the grey willow forest is variable but is generally dominated by indigenous species. Indigenous species increase in dominance as the site grades towards the harbour. On the seaward side of the palustrine wetland the estuarine wetlands are dominated by oioi and *Machaerina juncea*.

Indigenous Fauna

Common bird species were recorded during field inspection.

Condition/Pressures

The palustrine portion of this site is dominated by grey willow. The wetland is partially fenced. Woolly nightshade, gorse and blackberry buffer the wetland on three sides, however stock can enter via the cattle race. Woolly nightshade and gorse are scattered within the wetland, and *Glyceria declinata* is common on the margins alongside the cattle race.

Key Site Features

This site comprises a small, modified tidal inlet and freshwater wetland with moderate ecological values. It acts as a protective buffer to a part of the Tauranga Harbour which is of national significance.

[1] Identified at SVHZ-88 in Wildland Consultants 2006g.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	L
Rarity or Distinctive Features	3.2	L
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	L
Ecological Context	3.9	H
	3.10	L
Viability and Sustainability	3.11	L
	3.12	L
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	This site comprises a palustrine wetland canopy dominated by grey willow but with an indigenous understorey, and an estuarine rushland wetland.
ii		
iii		
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Waihīerere Road Wetland comprises a small area of estuarine wetland and modified palustrine that is consistent with Policy 11(b).

Notes Ranked 'moderate' quality marshbird habitat by Owen (1993). Identified as a Category 4 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

References Owen 1993; Wildland Consultants 2006g; Wildland Consultants 2008a.

OTAPU BAY

Site Number [1]	066
Grid Reference (NZMG)	E2782688 N6396275
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (Nga Whenua Rāhui Kawenata) and unprotected parts
Site Area	53.9 ha
Altitudinal Range	0-1 m asl
Geology-Landform Type	Estuarine, Sand, Low gradient alluvium
HVES Number	44

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Grey willow forest.	Wetland
Palustrine	Manuka scrub and shrubland (with local scattered grey willow).	Wetland
Palustrine	(Manuka)/*Machaerina teretifolia*/*Gleichenia dicarpa* fernland (with local scattered grey willow).	Wetland
Estuarine	Oioi rushland, and oioi-*Machaerina juncea* rushland, and oioi-saltmarsh ribbonwood shrub-rushland, and *Schoenoplectus pungens* sedgeland, and sea rush tussockland.	Intertidal flat
Estuarine	Sea rush tussockland (with small areas of oioi rushland, sandspit vegetation, and mangrove shrubland).	Intertidal flat
Estuarine	*Schoenoplectus pungens* sedgeland. (Beadel 1994a)	Intertidal flat

Vegetation and Indigenous Flora

This site comprises palustrine and estuarine wetlands. At the northern end of the site, in Otapu Bay, are palustrine wetlands dominated by manuka, *Machaerina* spp., and *Gleichenia dicarpa* with a strip of grey willow on the western margin. Seaward of the palustrine wetlands and in the southern part of the site are estuarine wetlands of oioi, sea rush, *Machaerina juncea*, saltmarsh ribbonwood, and *Schoenoplectus pungens*. *Austrostipa stipoides,* which is regarded as regionally uncommon, was observed during this study. *Tetraria capillaris*, another regionally uncommon species, is also present. A small population of wire rush is present.

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon) and North Island fernbird (At Risk-Declining) recorded in 1992; earlier reports of Australasian bittern (Threatened-Nationally Endangered) (Owen 1993). Fernbird were heard in 2008 (Wildland Consultants 2008a).

Condition/Pressures

Willow, gorse, pampas and brush wattle are all invading palustrine wetlands at the northern end of the site. The estuarine wetlands are largely weed-free but saltwater paspalum and gorse have established on marginal sand spits surrounding the salt marshes. The saltwater paspalum is penetrating into the salt marshes themselves, and is severely degrading this habitat. Owen (1993) noted stock access, a range of weeds, domestic rubbish dumping, and vehicle access and use. Most of the landward margin of the site is bounded by exotic plantation forest.

[1] Identified as SVHZ-89 in Wildland Consultants 2006g.

Key Site Features

Otapu Bay is a large, relatively intact, high quality, representative example of a contiguous estuarine and freshwater wetland vegetation sequence (Beadel 1994a). One Threatened and two At Risk species of wetland birds have been recorded at this site. Given the size and quality of habitat these populations are likely to persist. This site is a nationally significant, representative example of vegetation and habitat in the Tauranga Harbour.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	H
	3.5	H
	3.6	M
Diversity and Pattern	3.7	H
Naturalness	3.8	H
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	H
	3.12	H
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Australasian bittern (Threatened-Nationally Endangered) (1992) North Island fernbird (At Risk-Declining) Banded rail (At Risk-Naturally Uncommon) (1992)
ii	✓	Australasian bittern (Endangered) (1992)
iii	✓	High quality mosaic of estuarine and palustrine wetlands.
iv		
v	✓	Nationally Significant
vi		Unprotected
Policy Met:		11(a)
Justification:		Otapu Bay is consistent with Policy 11(a) because it comprises high quality estuarine and palustrine wetlands dominated by indigenous plant species, including two regionally uncommon species. Australasian bittern (Threatened-Nationally Endangered) were recorded at the site in 1992, and a population may still be present. The site is also habitat for two At Risk bird species.

Notes

This site has previously been known as 'Hunters Creek'. The name 'Otapu

Bay' has been used to acknowledge the name originally given to the bay by tangata whenua.

The site was ranked as nationally significant vegetation in Beadel (1994a) and as a mainly outstanding quality marshbird habitat in Owen (1993). It has also been identified as a Category 1 natural heritage site in the Tauranga Ecological District (Wildland Consultants 2008a).

This site is part of the Motungaio Key Ecological Zone (Wildland Consultants 2006g).

References

Owen 1993; Beadel 1994a; Wildland Consultants 2006g; Wildland Consultants 2008a.

RANGIWĀEA ISLAND FORESHORE

Site Number [1]	070
Grid Reference (NZMG)	E2783675 N6393878
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (WBOPDC reserve) and unprotected parts
Site Area	12.5 ha
Altitudinal Range	0 m asl
Geology-Landform Type	Estuarine, Sand

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine Estuarine	Manuka scrub and harakeke flaxland. Sea rush tussockland, and oioi-saltmarsh ribbonwood shrub-rushland, and *Austrostipa stipoides* tussockland, and *Samolus repens* herbfield, and glasswort herbfield. (Beadel 1992a; Owen 1993, Wildland Consultants 2006g, Wildland Consultants 2008a))	Wetland Intertidal flat

Vegetation and Indigenous Flora

This site comprises an estuarine wetland which is a mosaic of vegetation types, and a palustrine wetland dominated by manuka. *Austrostipa stipoides*, which is regarded as regionally uncommon, is present at this site. There is a large population of this species at the southern end of the site.

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon) has been sighted amongst *Austrostipa stipoides* (Wildland Consultants 2006g). North Island fernbird (At Risk-Declining) were recorded in 1992 (Owen 1993). Shore skink (not threatened) are present (J. Heaphy, Department of Conservation, pers. comm. 2006).

Condition/Pressures

Pampas and *Hakea* sp. infestations are present on the inland edge of the site, and there is also extensive vehicle damage to vegetation, for example bulldozed tracks and evidence of tractor and trail bike usage (Owen 1993). The eastern margin of the site is bounded by exotic plantation forest.

Key Site Features

This moderate-sized site contains a good quality example of saltmarsh vegetation, and provides a protective buffer to a part of Tauranga Harbour which is of national significance. Human impacts have significantly modified the natural character of the site. The site supports a regionally uncommon plant species, and there are current or past records of two At Risk bird species.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M

[1] Identified as SVHZ-90 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** North Island fernbird (At Risk-Declining) (1992) Banded rail (At Risk-Naturally Uncommon)
ii		
iii		
iv		
v		Regionally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a WBOPDC reserve.
11(b)		
i	✓	Manuka scrub, harakeke flaxland, sea rush tussockland, glasswort herbfield, *Austrostipa stipoides* tussockland, and *Samolus repens* herbfied.
ii		
iii	✓	Sea rush tussockland, glasswort herbfield, *Austrostipa stipoides* tussockland, and *Samolus repens* herbfied.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Rangiwāea Island Foreshore is a mosaic of estuarine and palustrine wetlands. It is a good quality example of indigenous vegetation and of a habitat that is confined to the coastal environment so is consistent with Policy 11(b).

Notes

Identified as a Category 2 natural area in the Tauranga Ecological District (Wildland Consultants 2008a). Owen (1993) ranked the site as moderate quality habitat for marshbirds.

Part of this site is in Motungaio Key Ecological Zone (Wildland Consultants 2006g).

References

Beadel 1992a; Beadel 1994a; Owen 1993; Wildland Consultants 2006g; Wildland Consultants 2008a.

MOTUTANGAROA ISLE FORESHORE

Site Number [1]	071
Grid Reference (NZMG)	E2784365 N6392904
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	12.3 ha
Altitudinal Range	0 m asl
Geology-Landform Type	Estuarine, Sand

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Oioi-saltmarsh ribbonwood shrub-rushland.	Intertidal flat
Estuarine	Sea rush tussockland.	Intertidal flat
Terrestrial	Sandspit vegetation.	Sandspit
Palustrine	Manuka-grey willow-woolly nightshade-(mamaku) forest.	Wetland
Terrestrial	Shrubland.	Harbour island
	(Beadel 1992a, Owen 1993, Wildland Consultants 2006g, Wildland Consultants 2008a)	

Vegetation and Indigenous Flora

The estuarine portions of this site are dominated by sea rush with smaller areas of oioi-saltmarsh ribbonwood shrub-rushland. There are examples of *Samolus repens* herbfield and glasswort herbfield within the sea rush tussockland. On the eastern (i.e. landward) side of the site there is a freshwater wetland which is dominated by manuka and grey willow. No rare or uncommon plant species have been recorded.

Indigenous Fauna

The sandspit at the southern end of the site is a nesting area of northern New Zealand dotterel (Threatened-Nationally Vulnerable) (J. Heaphy, Department of Conservation, pers. comm. 2006). North Island fernbird (At Risk-Declining) and variable oystercatcher (At Risk-Recovering) were recorded in the saltmarsh in 1992 (Owen 1993), and in 2006 a banded rail (At Risk-Naturally Uncommon) was recorded in the neighbouring site (Rangiwāea Island Foreshore) close to the boundary with this site (Wildland Consultants 2006g). It is therefore likely that banded rail are present at this site.

Condition/Pressures

Gorse, wilding pine, woolly nightshade and grey willow infestations are present in and around the margins of the freshwater wetland, which is surrounded by a pine plantation reaching harvest age. Vehicle tracks and rubbish dumping have been identified as pressures in the past (Owen 1993), and appear to be ongoing.

Key Site Features

Motutangaroa Isle Foreshore is a site of moderate size that contains examples of estuarine and sandspit vegetation typical of Tauranga Ecological District. The sandspit currently provides breeding habitat for the Threatened northern New Zealand dotterel, and is an important site for the regional population of this species. Two At Risk marshbird species are likely to use this site. This site provides a protective buffer to a nationally significant area of the Tauranga Harbour, but vehicle use and weeds adversely affect the quality of the site.

[1] Identified as SVHZ-91 in Wildland Consultants 2006g.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Northern New Zealand dotterel (Threatened-Nationally Vulnerable) North Island fernbird (At Risk-Declining) Variable oystercatcher (At Risk-Recovering) (1992)
ii	✓	New Zealand dotterel (Endangered)
iii		
iv		
v		Regionally Significant
vi		
11(b)		
i	✓	Sea rush tussockland, oioi rushland, sandspit vegetation, manuka-grey willow wetland.
ii	✓	Breeding site of northern New Zealand dotterel
iii	✓	Sea rush tussockland, oioi rushland, and sandspit vegetation,
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Motutangaroa Isle Foreshore is consistent with Policy 11(b) because it includes indigenous vegetation types that are confined to the coastal environment, and is a breeding site for northern New Zealand dotterel (Threatened-Nationally Vulnerable). However, it is not a particularly high quality example of its type because parts of the site are affected by weeds and vehicles.

Notes Identified as a Category 2 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

References Beadel 1992a; Owen 1993; Wildland Consultants 2006g; Wildland Consultants 2008a.

RANGIWĀEA ISLAND ESTUARY

Site Number [1] 072
Grid Reference (NZMG) E2784836 N6392147
Local Authority Western Bay of Plenty District Council
Ecological District Tauranga
Protection Status Protected (WBOPDC reserve) and unprotected parts
Site Area 23.1 ha
Altitudinal Range 0-9 m asl
Geology-Landform Type Estuarine, Sand

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Sea rush tussockland and oioi rushland.	Intertidal flat
Palustrine/Terrestrial	Manuka-(mamaku) scrub.	Wetland, beach sands
Palustrine	Grey willow-(ti kouka) forest and raupo reedland.	Wetland
Terrestrial	Sandspit vegetation.	Sandspit
	(Beadel 1992a and Wildland Consultants 2006g)	

Vegetation and Indigenous Flora

This site includes saline and freshwater wetlands in an inlet which is almost fully enclosed by Rangiwāea Island. The dominant species are sea rush, oioi, and manuka, with areas of grey willow forest and raupo reedland on the inland parts of the site. Other species include *Carex sinclairii* and ti kouka. Pingao (At Risk-Relict) occurs on the sandspit at the western end of the site (Beadel 1994a).

Indigenous Fauna

The sandspit is a nesting area for northern New Zealand dotterel (Threatened-Nationally Vulnerable) (J. Heaphy, Department of Conservation, pers. comm. 2006). North Island fernbird (At Risk-Declining) were recorded in 1992 (Owen 1993).

Condition/Pressures

Grey willow is common in the palustrine wetland. Part of the site is bounded by exotic plantation forestry so is vulnerable to disturbance associated with forest management. Other parts of the site are adjacent to grazed pasture and it is not known if the entire site is fenced to exclude stock. Owen (1993) noted rubbish dumping, stock access, vehicle access, and a range of weed species.

Key Site Features

This site contains a good quality example of manuka scrub contiguous with saline wetland types which are characteristic of Tauranga Ecological District (Beadel 1994a). It is regionally significant because it provides good quality habitat for one At Risk bird species, and includes a small nesting area for the Threatened northern New Zealand dotterel. One At Risk plant species occurs at this site. This site provides a protective buffer to a part of Tauranga Harbour which is of national significance.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	H

[1] Identified as SVHZ-92 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** Pingao (At risk-Relict) **Avifauna:** Northern New Zealand dotterel (Threatened-Nationally Vulnerable) North Island fernbird (At Risk-Declining) (1992)
ii	✓	New Zealand dotterel (Endangered)
iii		
iv		
v		Regionally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a WBOPDC reserve.
11(b)		
i	✓	Sea rush tussockland, oioi rushland, manuka scrub, grey willow forest with an indigenous understorey, and sandspit vegetation.
ii	✓	Breeding site of northern New Zealand dotterel.
iii	✓	Sea rush tussockland, oioi rushland, and sandspit vegetation.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Rangiwāea Island Estuary is consistent with Policy 11(b) because it is an estuarine wetland, a habitat type that is confined to the coastal environment. It is also a breeding site for northern New Zealand dotterel.

Notes

Identified as a Category 2 natural area in the Tauranga Ecological District (Wildland Consultants 2008a) and classed as a high quality habitat for marshbirds in Owen (1993).

Part of this site is in the Motungaio Key Ecological Zone (Wildland Consultants 2006g).

References

Owen 1993; Beadel 1992a; Beadel 1994a; Wildland Consultants 2006g; Wildland Consultants 2008a.

RANGIWĀEA ISLAND EAST

Site Number [1]	073
Grid Reference (NZMG)	E2785420 N6392852
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (WBOPDC reserve) and unprotected parts
Site Area	16.9 ha
Altitudinal Range	0 m asl
Geology-Landform Type	Estuarine, Sand

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Sea rush tussockland.	Intertidal flat
Estuarine	*Machaerina juncea*-saltmarsh ribbonwood-oioi sedgeland.	Intertidal flat
Estuarine	Oioi rushland.	Intertidal flat
Estuarine	Mangrove shrubland.	Intertidal flat
Palustrine	Manuka shrubland.	Wetland
	(Beadel 1992a and Wildland Consultants 2006g)	

Vegetation and Indigenous Flora

This site comprises estuarine wetland and a very small palustrine wetland on the eastern shore of Rangiwāea Island. Species in the estuarine wetlands include sea rush, oioi, *Machaerina juncea*, and mangrove. Manuka is the dominant species in the palustrine wetland. No rare or uncommon plant species have been recorded at this site.

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon) sign, North Island fernbird (At Risk-Declining) were recorded in 1992 (Owen 1993). It may support one of the most northern populations of the At Risk speckled skink, though recent information on this species at this site is lacking (J. Heaphy pers. comm. 2012).

Condition/Pressures

The site is bordered by a narrow fringe of mixed exotic scrub. Old vehicle tracks were noted in 1992 (Owen 1993), but they were no longer apparent in 2006 (Wildland Consultants 2006g). Mangrove shrubland appears to have developed along the outer edge of the saltmarsh since the early 1990s.

Key Site Features

This site comprises an extensive area of high quality estuarine vegetation on the eastern side of Rangiwāea Island, where pressures on natural character of the site appear to be low. It provides reasonably good quality habitat for Threatened marshbird species.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	H
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M

[1] Identified as SVHZ-93 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Naturalness	3.8	H
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** North Island fernbird (At Risk-Declining) (1992) Banded rail (At Risk-Naturally Uncommon) (1992)
ii		
iii		
iv		
v		Regionally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a WBOPDC reserve.
11(b)		
i	✓	Sea rush tussockland, oioi rushland, mangrove shrubland, manuka shrubland.
ii		
iii	✓	Sea rush tussockland, oioi rushland, mangrove shrubland.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Rangiwāea Island East is consistent with Policy 11(b) because it is a good quality example of coastal habitat. In addition, two At Risk bird species were recorded at the site in 1992.

Notes

Owen (1993) ranked this site as high quality habitat for marshbird species.

Identified as a Category 2 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

References

Beadel 1992a; Owen 1993; Wildland Consultants 2006g; Wildland Consultants 2008a.

RANGIWĀEA ISLAND SANDSPIT

Site Number	074
Grid Reference (NZMG)	E2785832 N6391297
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	5.9 ha
Altitudinal Range	0 m asl
Geology-Landform Type	Estuarine

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Estuarine vegetation.	Intertidal flat
Terrestrial	Sandspit vegetation. (Based on RDAM 2007 aerial photography)	Sandspit

Vegetation and Indigenous Flora No information

Indigenous Fauna Shorebirds including variable oystercatcher (At Risk-Recovering), New Zealand pied oystercatcher, pied stilt, white fronted tern (all At Risk-Declining) and Caspian tern (Threatened-Nationally Vulnerable) roost here (Owen *et al.* 2006). Red-billed gull (Threatened-Nationally Vulnerable) and little black shag (At Risk-Naturally Uncommon) have also been recorded here (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures No information.

Key Site Features This bird roosting site comprises beach and a small sand spit at the southern end of Rangiwāea Island, close to the jetty. Two Threatened and five At Risk bird species utilise this site. A site visit is required to determine vegetation composition.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	L
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	L
Diversity and Pattern	3.7	L
Naturalness	3.8	L
Ecological Context	3.9	M
	3.10	M
Viability and Sustainability	3.11	L
	3.12	L
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Caspian tern (Threatened-Nationally Vulnerable) Red-billed gull (Threatened-Nationally Vulnerable) New Zealand pied oystercatcher (At Risk-Declining) Pied stilt (At Risk-Declining) White fronted tern (At Risk-Declining) Little black shag (At Risk-Naturally Uncommon) Variable oystercatcher (At Risk-Recovering)
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Sandspit and intertidal flats.
ii		
iii	✓	Sandspit and intertidal flats.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Rangiwāea Island Sandspit is a largely unvegetated area of sandspit and intertidal flats that is used as a high tide roost by a suite of avifauna, including Threatened and At Risk species.

References Owen *et al.* 2006; W. Shaw pers. comm. 2010.

SOUTHEASTERN MATAKANA WETLANDS

Site Number [1] 078
Grid Reference (NZMG) E2787233 N6392206
Local Authority Western Bay of Plenty District Council
Ecological District Tauranga
Protection Status Unprotected
Site Area 23.1 ha
Altitudinal Range 0 m asl
Geology-Landform Type Sand

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Grey willow-radiata pine/rushes-sedges forest.	Wetland
Palustrine	Grey willow-ti kouka/pampas shrubland.	Wetland
Palustrine	Grey willow-(ti kouka)/pampas-bracken forest.	Wetland
Palustrine	Raupo reedland.	Wetland
	(Wildland Consultants 2008a)	

Vegetation and Indigenous Flora These wetlands are dominated by a canopy of grey willow and ti kouka above pampas, *Machaerina juncea*, harakeke, karamu, kohuhu, mingimingi, and koromiko. In the centre of the site there is an area of raupo reedland. Other species include *Machaerina articulata*, *Carex virgata*, and *Carex secta*. No rare or uncommon plant species have been recorded at this site.

Indigenous Fauna There is no fauna information available for this site.

Condition/Pressures There are large infestations of grey willow and pampas and the site is vulnerable to disturbance associated with surrounding plantation forestry operations. A small population of Italian evergreen buckthorn (*Rhamnus alaternus*) was noted at this site.

Key Features This site is locally significant because it includes examples of modified indigenous freshwater wetland. Wetland habitat has been greatly reduced in extent in Tauranga Ecological District.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	L
	3.3	M
	3.4	M
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	L
Ecological Context	3.9	M
	3.10	L

[1] Identified as Site Number 107 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	L
	3.12	L
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Palustrine wetlands with a canopy dominated by grey willow and ti kouka above areas of indigenous understorey.
ii		
iii		
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Southeastern Matakana Wetlands comprises multiple areas of modified palustrine wetlands that are heavily infested with grey willow and pampas. However, palustrine wetlands have been greatly reduced in both extent and quality in Tauranga Ecological District and the Bay of Plenty coastal environment, and the centre of the site retains an indigenous understorey. Therefore, Southeastern Matakana Wetlands is consistent with Policy 11(b). The site has a high potential for restoration.

Notes Identified as a Category 3 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

References Wildland Consultants 2008a.

MAUAO 1

Site Number [1] 088
Grid Reference (NZMG) E2790028 N6392034
Local Authority Tauranga City Council
Ecological District Tauranga
Protection Status Protected (TCC reserve - Mauao) and unprotected parts
Site Area 40.9 ha
Altitudinal Range 0-111 m asl
Geology-Landform Type Volcanic hard coast

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa forest.	Very steep hill
Terrestrial	(Pohutukawa)-(rewarewa)/mamaku-mahoe treefernland.	Very steep hill
Terrestrial	Mamaku-brush wattle-(Taiwan cherry)-(mahoe)-(hawthorn) treefernland.	Very steep hill
Terrestrial	Pohutukawa treeland.	Very steep hill
Terrestrial	Pohutukawa-rewarewa/akepiro (*Olearia furfuracea*)-mingimingi-hangehange-manuka-karamu-mamaku treeland.	Very steep hill
Terrestrial	(Pohutukawa)-(kanuka)-(rewarewa)-(totara)/mahoe-whauwhaupaku-manuka-karamu-hawthorn-mingimingi scrub.	Very steep hill
Terrestrial	Gorse-manuka-Spanish heath-pampas scrub.	Very steep hill
Terrestrial	Gorse-Spanish heath-pampas-bracken-smilax scrub.	Very steep hill
Terrestrial	Mahoe-karamu-mamaku-hangehange scrub.	Very steep hill
Terrestrial	Manuka-kanuka-mingimingi-(pohutukawa) scrub.	Very steep hill
Terrestrial	Mapou-mingimingi-mahoe-karamu scrub.	Very steep hill
Terrestrial	Ngaio scrub.	Very steep hill
Terrestrial	Pohutukawa/gorse-pampas scrub.	Very steep hill
Terrestrial	Pohutukawa/mingimingi-akepiro-hangehange scrub.	Very steep hill
Terrestrial	Totara-mahoe-hawthorn scrub.	Very steep hill
Terrestrial	Akeake-manuka-tarata-kohuhu-ti kouka-ngaio-koromiko-harakeke scrub.	Very steep hill
Terrestrial	Gorse-pampas tussock-shrubland.	Very steep hill
Terrestrial	Manuka-(pohutukawa)-(akeake)-(mingimingi) shrubland.	Very steep hill
Terrestrial	Whau-karamu-ngaio-(tarata)-(manuka)-(pohutukawa)-(taupata)/kikuyu grass-cocksfoot shrubland.	Very steep hill
Terrestrial	Pohutukawa/mahoe-mingimingi-hawthorn-kawakawa-gorse shrubland.	Very steep hill
Terrestrial	Pampas/gorse-Spanish heath-manuka-harakeke/exotic grasses shrubland rockland	Very steep hill
Terrestrial	Manuka-harakeke-ngaio-pohutukawa/exotic grasses shrubland.	Very steep hill
Terrestrial	Dead pohutukawa/dead small trees/bracken-gorse-hangehange-pampas-woolly nightshade shrubland	Very steep hill
Terrestrial	Pohutukawa/bracken fernland.	Very steep hill

[1] Identified as SVHZ-95 in Wildland Consultants 2006g.

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	(Manuka)/cocksfoot-paspalum (*Paspalum dilatatum*)-bidibid grassland. (Wildland Consultants 2005j; Wildland Consultants 2009b)	Very steep hill

Vegetation and Indigenous Flora

Mauao 1 includes most of the non-pasture vegetation on Mauao (the remainder is within site Mauao 2). The lower slopes of this site include pohutukawa forest and treeland, and there are smaller examples of these vegetation types on the upper slopes of the site. The remainder of the site comprises predominantly secondary indigenous vegetation, some of which has a relatively high component of exotic species. This is especially true of the north-facing slopes where pampas, gorse, and Spanish heath are common. Also on the northern slopes, there are areas of planted indigenous scrub, some of which has been established in the wake of fires.

One Threatened species is present on Mauao - *Pimelea tomentosa* Threatened-Nationally Vulnerable). Several regionally uncommon plant species present include *Schoenus apogon*, *Psilotum nudum*, *Lepidosperma laterale*, *Trisetum arduanum*, *Astelia banksii*, *Tetraria capillaris*, *Zoysia pauciflora*, and *Oxalis rubens.*

Other species with a limited distribution in Tauranga Ecological District are present on Mauao. Of special note is mangemange (*Lygodium articulatum*) (Beadel 2004).

Other Threatened or local species which have been recorded from Mauao, or near Mauao, in the past are Cook's scurvy grass (nau; *Lepidium oleraceum*), *Atriplex hollowayi*, *Vittadinia australis*, *Paspalum orbiculare*, and *Wahlenbergia littoricola* subsp. *vericosa*. Reintroduction of these species could be considered in the future if suitable habitat can be created/maintained.

Indigenous Fauna

Northern little blue penguins (At Risk-Declining) breed in good numbers on the Mauao coast (OSNZ 2006). Shore skinks (not threatened) are present but at low abundance (J. Heaphy, Department of Conservation, pers. comm. 2006). New Zealand fur seal haul out around Mauao (BOPRC 2012).

There is a mainland grey-faced petrel (*Pterodroma macroptera*) breeding colony of about 200 pairs on Mauao which is monitored by members of OSNZ since 1989 with Department of Conservation assistance. From a high point of around 36 chicks fledging per season in 1999-2002, there has been a dramatic decline due to pest impacts, with no fledged chicks in the 2005-2006 breeding season (Cuming 2006) but has since recovered to produce further chicks in 2012 (K. Owen, Department of Conservation, pers. comm. 2012).

The land snail *Succinea archeyi* (Chronically Threatened-Serious Decline) is a rare inhabitant of these foreshore dunes (Powell 1933).

Condition/Pressures

The following weed species are present within the site: boneseed, mignonette (Madeira vine), climbing asparagus, smilax, Italian evergreen buckthorn, wild ginger, *Pinus* spp., tree privet, Japanese honeysuckle, woolly nightshade, brush wattle, gorse, pampas (Wildland Consultants 2005j), and Kermadec Island pohutukawa (Sarah Beadel pers. obs. 2012).

Tauranga City Council is restoring and monitoring the vegetation on Mauao (Wildland Consultants 2004a and Wildland Consultants 2005j). Since 2000 weed control has reduced the distribution and/or abundance of wild ginger, pampas, gorse, and boneseed. Pampas and gorse remain widespread but are

less dominant than they were in 2000. Other invasive species that have not been controlled include climbing asparagus, Japanese honeysuckle, smilax, wild ginger, Italian evergreen buckthorn, mignonette vine, blue morning glory (*Ipomoea indica*), Spanish heath, and loquat (*Eriobotrya japonica*) (Wildland Consultants 2005j).

Adverse effects also result from recreation (e.g. trampling of vegetation along informal tracks), erosion associated with severe weather events, fire, animal pests, and blasting to remove rocks.

The Rena oil spill resulted in deaths of northern little blue penguins and grey-faced petrel and oil washed up on the beaches and rocks around Mauao.

Key Site Features

This site encompasses a large portion of the eroded Mauao (Mt Maunganui) rhyolite dome, which is a nationally important geological feature (Kenny and Hayward 1996), and includes good quality examples of remnant pohutukawa forest and secondary mixed forest on volcanic hard coast. Pohutukawa forest was once common in Tauranga Ecological District, but has now been greatly reduced in extent and only small areas remain (for example Mauao, Kauri Point, Ngakautuakina Point, Matakana Point, Tanners Point, Bowentown Heads, Motuhoa Island). The significant pressures exerted by weeds and fire are being actively managed. In addition, the site provides habitat for an At Risk bird species, and is notable for being one of a few mainland breeding sites of grey-faced petrel in the Bay of Plenty Region. One Threatened and eight regionally uncommon plant species occur at this site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	M
	3.5	M
	3.6	H
Diversity and Pattern	3.7	H
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

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** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** *Pimelea tomentosa* (Threatened-Nationally Vulnerable). **Avifauna:** Northern little blue penguins (At Risk-Declining)
ii		
iii	✓	High quality example of pohutukawa forest and secondary, indigenous scrub and shrublands.
iv	✓	*Lepidosperma laterale* is at, or close to, its known southern limit of distribution.
v	✓	Nationally Significant
vi		Biodiversity values at the site are not formally protected.
Policy Met:		11(a)
Justification:		Mauao 1 is consistent with Policy 11(a) because it includes a high quality example of pohutukawa forest, a vegetation type which has been greatly reduced in extent in Tauranga Ecological District and the Bay of Plenty Region. It provides habitat for one Threatened plant species, one At Risk fauna species, and one plant species (*Lepidosperma laterale*) at its known southern limit of distribution. In addition, a suite of regionally uncommon plant species are present, and there is a breeding colony of grey-faced petrel.

Notes

This site is ranked as a Category 1 Special Ecological Area in Tauranga City (Wildland Consultants 2009b) and was identified as a Category 1 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

Mauao has high historic, archaeological, and heritage values.

References

Kenny and Hayward 1996; Wildland Consultants 2005j; OSNZ 2006; Beadel 1994a; Beadel 2004; Bibby *et al.* 1999; Cuming 2006; Powell 1993; Wildland Consultants 2004a; Wildland Consultants 2006g; Wildland Consultants 2008a; Wildland Consultants 2009b; BOPRC 2012.

MAUAO 2

Site Number [1]	089
Grid Reference (NZMG)	E2790247 N6391703
Local Authority	Tauranga City Council
Ecological District	Tauranga
Protection Status	Protected (TCC reserves - Mauao, Mauao Recreation Reserve) and unprotected parts
Site Area	4.2 ha
Altitudinal Range	0-54 m asl
Geology-Landform Type	Volcanic hard coast

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Macrocarpa/karaka-pohutukawa treeland.	Hillslope
Terrestrial	Pohutukawa treeland.	Hillslope
Terrestrial	Radiata pine-eucalyptus-(sycamore (*Acer pseudoplatanus*))/pohutukawa-poplar (*Populus* spp.) treeland.	Hillslope
Terrestrial	Sycamore-karaka-radiata pine treeland.	Hillslope
Terrestrial	Kawakawa-whau-mamaku scrub.	Hillslope
Terrestrial	Ngaio scrub.	Hillslope
Terrestrial	Akeake-manuka-tarata-kohuhu-ti kouka-ngaio-koromiko-harakeke scrub.	Hillslope
Terrestrial	Kawakawa-pohuehue/pohuehue-blackberry shrubland.	Hillslope
Terrestrial	Pohutukawa-taupata/*Ficinia nodosa* tree-tussockland.	Hillslope
Terrestrial	Spinifex-pingao/shore bindweed grassland. (Wildland Consultants 2005j; Wildland Consultants 2009b)	Incipient foredune

Vegetation and Indigenous Flora

Mauao 2 encompasses predominantly indigenous vegetation on the eastern-facing, lower slopes of Mauao. It includes pohutukawa treeland and coastal scrub, some of which has been planted as part of a Council-managed restoration project. *Schoenus apogon, Zoysia pauciflora*, and *Oxalis rubens* are present (all regionally uncommon species).

Indigenous Fauna

Northern little blue penguins (At Risk-Declining) breed on the Mauao coast in good numbers (OSNZ 2006). Shore skinks are present but at low abundance (J. Heaphy, Department of Conservation, pers. comm. 2006). The land snail *Succinea archeyi* (Chronically Threatened-Serious Decline) is a rare inhabitant of the foreshore dunes (Powell 1933). New Zealand fur seal haul out around Mauao (BOPRC 2012).

Condition/Pressures

Fire, erosion, and invasive weeds such as sycamore, maple, pampas and other exotic grasses such as kikuyu grass, cocksfoot, and ratstail (*Sporobolus africanus*) (Wildland Consultants 2004a). This site includes areas that are being revegetated following fire (Wildland Consultants 2005j).

The Rena oil spill resulted in deaths of northern little blue penguins and grey-faced petrel and oil washed up on the beaches and rocks around Mauao.

Key Site Features

This site contains a mix of extensively modified indigenous vegetation and

[1] Identified as SVHZ-96 in Wildland Consultants 2006g.

adventive vegetation, and includes areas that have had some indigenous revegetation planting. However, it provides a partial protective buffer to the nationally ranked 'Mauao 1' site, is a breeding area for an At Risk bird species, and forms part of the nationally significant eroded rhyolite dome of Mauao (Kenny and Hayward 1996). Three regionally uncommon plant species occur at this site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	H
Diversity and Pattern	3.7	M
Naturalness	3.8	L
Ecological Context	3.9	M
	3.10	M
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Northern little blue penguins (At Risk-Declining)
ii		
iii		
iv		
v		Regionally Significant
vi		Biodiversity values at the site are not formally protected.
11(b)		
i	✓	Modified, secondary, and planted pohutukawa treeland and coastal scrub.
ii	✓	Nesting site of northern little blue penguins (At Risk-Declining).
iii		
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Mauao 2 is consistent with Policy 11(b) because it comprises predominantly indigenous vegetation and is a breeding site for northern little blue penguins (At Risk-Declining). The site is not consistent with Policy 11(a) because there are higher quality examples of pohutukawa forest in Tauranga Ecological District (e.g. Mauao 1). Parts of the site comprise revegetation plantings up to approximately five years old.

Notes

This site is ranked as a Category 2 Special Ecological Area in Tauranga City (Wildland Consultants 2005j) and has been identified as a Category 3 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

A survey for rare land snails is recommended.

Mauao has high historic, archaeological, and heritage values.

References

Kenny and Hayward 1996; Wildland Consultants 2004a; Wildland Consultants 2005j; OSNZ 2006; Powell 1933; Wildland Consultants 2005j; Wildland Consultants 2006g; Wildland Consultants 2007c; Wildland Consultants 2007b; Wildland Consultants 2008a Wildland Consultants 2009b; BOPRC 2012.

HOPUKIORE

Site Number [1]	092
Grid Reference (NZMG)	E2791117 N6391434
Local Authority	Tauranga City Council
Ecological District	Tauranga
Protection Status	Protected (TCC reserve - Hopukiore Reserve) and unprotected parts
Site Area	1.7 ha
Altitudinal Range	11-20 m asl
Geology-Landform Type	Volcanic hard coast

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa treeland. (Wildland Consultants 2005j; Wildland Consultants 2009b)	Hills

Vegetation and Indigenous Flora

Hopukiore (otherwise known as Mount Drury) comprises pohutukawa treeland within a public reserve. Photographs from the early 1900s show that indigenous vegetation had been virtually removed from the site at that time. The current vegetation is derived mainly from plantings and natural regeneration (Beadel 1995d). No rare or uncommon plant species have been recorded here.

Indigenous Fauna

No notable species have been recorded.

Condition/Pressures

Hopukiore is subject to pressures arising from recreational impacts (for example pedestrian tracks) and invasive weeds such as tradescantia, arum lily, climbing asparagus, phoenix palm (*Phoenix canariensis*), cotoneaster, agapanthus, and Japanese honeysuckle (Wildland Consultants 2006g).

Key Site Features

Hopukiore is locally significant because it includes a small example of pohutukawa forest - a vegetation type which has been greatly reduced in extent in the Tauranga Ecological District. The vegetation present reflects a high degree of modification and weed invasion typical of natural areas within urban areas.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	L
	3.3	L
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	L
Ecological Context	3.9	L
	3.10	L

[1] Identified as SVHZ-97 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Locally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a Tauranga City Council reserve.
11(b)		
i	✓	Modified pohutukawa forest and scrub.
ii		
iii		
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Hopukiore comprises a small area of modified, secondary pohutukawa forest and scrub that is consistent with Policy 11(b).

Notes

This site is ranked as a Category 2 Special Ecological Area in Tauranga City (Wildland Consultants 2009b) and has been identified as a Category 4 natural area in the Tauranga Ecological District (Wildland Consultants 2008a). .

Hopukiore has historic and archaeological values.

References

Beadel 1995d; Wildland Consultants 1995; Wildland Consultants 2005j; Wildland Consultants 2006g; Wildland Consultants 2008a; Wildland Consultants 2009b.

MOTURIKI ISLAND

Site Number [1]	093
Grid Reference (NZMG)	E2791311 N6391880
Local Authority	Tauranga City Council
Ecological District	Tauranga
Protection Status	Protected (TCC reserve - Moturiki)
Site Area	2.9 ha
Altitudinal Range	0-13 m asl
Geology-Landform Type	Volcanic hard coast

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa-karo-taupata-coastal mahoe-ngaio scrub.	Marine island
Terrestrial	(Ngaio)-(harakeke)-(pohutukawa)/introduced iceplant (*Carpobrotus edulis*)-Indian doab-kikuyu grass grassland.	Marine island
Terrestrial	*Ficinia nodosa*-pohuehue/ratstail-cocksfoot-*Poa anceps* agg. grassland.	Marine island
Terrestrial	(Taupata)-(pohutukawa)/(oioi)/(glasswort)-(*Senecio lautu*s) rockland. (Wildland Consultants 2005j)	Marine island

Vegetation and Indigenous Flora

Moturiki is a small island which is connected to Mount Maunganui Beach by a rock causeway. The vegetation is dominated by pohutukawa, karo, ngaio, taupata and coastal mahoe (regionally uncommon) in the Bay of Plenty. Coastal mahoe occurs predominantly on islands (for example Matakana, Rūrima), and this population of coastal mahoe may have originated from plantings on Moturiki during 1972-75 (Beadel 1995d).

Indigenous Fauna

This is a nesting site for northern little blue penguin (At Risk-Declining) (J. Heaphy, Department of Conservation, pers. comm. 2006).

Condition/Pressures

Moturiki was quarried in the past and was then used as a marine theme park. Recreational pressures are still present and there are invasive weeds such as iceplant, Norfolk Island hibiscus, dimorphotheca, Italian evergreen buckthorn, boxthorn, and pampas (Wildland Consultants 2006g). Australian ngaio (*Myoporum insulare*) has been planted on the island (Beadel 1995e).

The Rena oil spill resulted in deaths of northern little blue penguins and oil washed up on the rocks around Moturiki.

Key Site Features

Moturiki includes small remnants of coastal forest which were once widespread throughout Tauranga Ecological District. However, they have been heavily modified by disturbance and ongoing weed infestations. The island provides breeding habitat for an At Risk bird species. One regionally uncommon plant species is present.

[1] Identified as SVHZ-98 in Wildland Consultants 2006g.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	H
Diversity and Pattern	3.7	M
Naturalness	3.8	L
Ecological Context	3.9	L
	3.10	M
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Northern little blue penguin (At Risk-Declining)
ii		
iii		
iv		
v		Locally Significant
vi		Biodiversity values at the site are not formally protected, but the site is a Tauranga City Council reserve.
11(b)		
i	✓	Secondary and planted indigenous coastal scrub.
ii	✓	Nesting site of northern little blue penguins (At Risk-Declining).
iii		
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Moturiki Island is consistent with Policy 11(b) because it is a small example of indigenous coastal scrub and rocky shoreline that it is a nesting site of northern little blue penguins (At Risk-Declining).

Notes

This site is ranked as a Category 2 Special Ecological Area in Tauranga City (Wildland Consultants 2009b) and has been identified as a Category 3 natural area in the Tauranga Ecological District (Wildland Consultants 2008a). .

The site forms part of the Smartgrowth 'Coastal strip' corridor, ranked as being highest priority (Wildland Consultants 2007b, 2007c).

References

Wildland Consultants 1995; Wildland Consultants 2005j; Wildland Consultants 2006g; Wildland Consultants 2007b; Wildland Consultants 2007c; Wildland Consultants 2008a; Wildland Consultants 2009b.

MOTUOTAU (RABBIT ISLAND)

Site Number [1]	095
Grid Reference (NZMG)	E2792091 N6391833
Local Authority	Tauranga City Council
Ecological District	Tauranga
Protection Status	Protected (Department of Conservation Motuotau Island Scenic Reserve)and unprotected parts
Site Area	2.3 ha
Altitudinal Range	0-34 m asl
Geology-Landform Type	Volcanic hard coast

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa forest. (Wildland Consultants 2005j)	Marine island

Vegetation and Indigenous Flora

Motuotau is located approximately 800 m offshore of Mount Maunganui beach. The canopy is dense pohutukawa. Coastal mahoe, which is regionally uncommon in the Bay of Plenty, is present on Motuotau (Wildland Consultants 2000a). Two other regionally uncommon species are also present - *Asplenium haurakiense* (NZFRI 19141; collected by Bruce Clarkson in 1990) and *Einadia trigonos* subsp. *trigonos*. A small population of parapara was planted in the early 1990s using seed sourced from nearby Karewa Island is present and regenerating on the island.

Indigenous Fauna

Northern little blue penguin (At Risk-Declining) breed on the island (J. Heaphy, Department of Conservation, pers. comm. 2012). Reef herons (*Egretta sacra*) (Threatened-Nationally Vulnerable) are known to feed around this island and also nest here. The outlying rocks are nesting sites for red-billed gulls (Threatened-Nationally Vulnerable). Northern diving petrel (At Risk-Relict) and New Zealand white-faced storm petrel (At Risk-Relict) are also present (K. Owen, Department of Conservation, pers. comm. 2012), and there are grey-faced petrel and common diving petrel nesting colonies here (J. Heaphy, Department of Conservation, pers. comm. 2012, K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Infestations of ivy, banana passionfruit, *Asparagus* sp., woolly nightshade, and wild ginger were recorded in 1992. Small infestations of boxthorn are present. These, and a range of other weed species, are currently either eradicated or subject to ongoing control by Department of Conservation.

The Rena oil spill resulted in deaths of northern little blue penguins and other sea birds, and oil washed up on the rocks around Motuotau.

Key Site Features

Motuotau comprises a representative example of pohutukawa forest, a forest type which has been greatly reduced in extent throughout its natural range, and which typifies a major component of the ecological character of the Bay of Plenty coastal environment. A range of pest plant species with the potential to alter the natural character of the site are present, and are being controlled. Motuotau is habitat of three regionally uncommon plant species, and breeding habitat for two Threatened and one At Risk bird species.

[1] Identified as SVHZ-99 in Wildland Consultants 2006g.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	L
Diversity and Pattern	3.7	L
Naturalness	3.8	H
Ecological Context	3.9	L
	3.10	H
Viability and Sustainability	3.11	H
	3.12	H
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Red-billed gulls (Threatened-Nationally Vulnerable) Reef heron (Threatened-Nationally Vulnerable) Northern little blue penguin (At Risk-Declining) New Zealand white-faced storm petrel (At Risk-Relict) Northern diving petrel (At Risk-Relict)
ii		
iii	✓	High quality pohutukawa forest.
iv		
v	✓	Nationally Significant
vi	✓	Motuotau Island Scenic Reserve (Department of Conservation)
Policy Met:		11(a)
Justification:		Motuotau Island is consistent with Policy 11(a) because it is a high quality example of pohutukawa forest, a vegetation type which was once widespread in the coastal environment but has now been greatly reduced in extent. It is a nationally significant site that is protected as a reserve and administered by Department of Conservation, and it is a feeding and nesting site for two Threatened avifauna and a breeding site of Northern little blue penguin (At Risk-Declining).

Notes

This site is ranked as a Category 1 Special Ecological Area in Tauranga City (Wildland Consultants 2009b) and has been identified as a Category 1 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

The site forms part of the Smartgrowth 'Coastal strip' corridor, ranked as being highest priority (Wildland Consultants 2007b, 2007c).

References

Wildland Consultants 2005j; Wildland Consultants 2000a; Wildland Consultants 2006g; Wildland Consultants 2007b; Wildland Consultants 2007c; Wildland Consultants 2008a; Wildland Consultants 2009b.

SHARK ALLEY TO KAITUNA SPIT SAND DUNES

Site Number [1]	098
Grid Reference (NZMG)	E2796105 N6387363
Local Authority	Tauranga City Council
Ecological District	Tauranga
Protection Status	Protected (TCC reserve) and unprotected parts
Site Area	59.9 ha
Altitudinal Range	0-5 m asl
Geology-Landform Type	Sand

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohuehue-*Ficinia nodosa* vineland.	Duneland
Terrestrial	Cape ivy vineland.	Duneland
Terrestrial	Lupin/spinifex shrubland.	Duneland
Terrestrial	Bracken-pohuehue fernland.	Duneland
Terrestrial	Spinifex-pingao/shore bindweed grassland.	Duneland
Terrestrial	Marram grassland.	Duneland
Terrestrial	Buffalo grass-pohuehue grassland.	Duneland
Terrestrial	Kikuyu grass grassland.	Duneland
Terrestrial	Pingao sedgeland.	Duneland
Terrestrial	*Carex testacea*-pohuehue-*Ficinia nodosa* sedgeland.	Duneland
Terrestrial	Canna lily herbfield.	Duneland
Terrestrial	(*Ficinia nodosa*)-(pohutukawa)-(*Coprosma acerosa* x *C. repens*) rockland. (Beadel 1995b, Wildland Consultants 2005j, Wildland Consultants 2008b; Wildland Consultants 2009b)	Duneland

Vegetation and Indigenous Flora

This site is a narrow strip of dune vegetation comprising incipient and established foredunes. Some small areas of unmodified transgressive dunefield are present. There are natural and planted occurrences of pingao (At Risk-Relict) in this site, and sand tussock (At Risk-Declining) and New Zealand shore spurge (At Risk-Declining) have been planted in this site. Native celery (*Apium prostratum*), which is uncommon in Tauranga Ecological District, occurs on a rock off the Shark Alley sand dunes. There are also small natural populations of akeake, houpara, and karo, which are now all locally uncommon on sand dunes in the Bay of Plenty. *Oxalis rubens* (a regionally uncommon plant species) is also present on dunes.

Coastal mahoe is present in the dunes locally and is spreading slowly. It is not known whether these populations have derived from plantings or from natural occurrence. This species occurs at a small number of inshore sites (Matakana Island, Moturiki, and Thornton) in coastal Bay of Plenty.

Coprosma acerosa x *C. repens* occurs on the rocks near Shark Alley sand dunes. This is one of only two known naturally occurring populations for this hybrid in the Bay of Plenty (Beadel 1995b).

Indigenous Fauna

Northern New Zealand dotterel and banded dotterel (both Threatened-Nationally Vulnerable) are present. White-fronted tern (At Risk-Declining) are present in large numbers. The beach is at times used as a roosting area

[1] Identified as SVHZ-100 in Wildland Consultants 2006g.

for a range of migrant species (OSNZ 2006).

Katipo spider (Chronically Threatened-Serious Decline) is present (B. Christensen pers. comm. 2010).

The land snail *Succinea archeyi* (Chronically Threatened-Serious Decline) may still be present in the dunes, although surveys in the early 2000s failed to find it (K. Owen, Department of Conservation, pers. comm. 2012). Native butterflies and lizards are likely to be inhabiting dunes.

The fauna described for this site does not constitute an exhaustive account. A wide variety of indigenous invertebrates will be present in microsites with indigenous habitats, including, but not limited to, Crustaceans, Myriopods, Arachnids, and Hexapods including Diplurans, Proturans, Collembolids, and Insecta. Of indigenous vertebrates, only shore skink is likely to occur.

Condition/Pressures

Garden escapes and weed species are widespread on dunes within this site, and include cape ivy, *Acacia sophorae, Aeonium haworthii,* pig's ear, blue morning glory, *Sedum praealtum,* montbretia, lupin, ice plant, Italian buckthorn, agapanthus, *Asparagus densiflorus,* climbing dock (*Rumex sagittatus*), dimorphotheca, watsonia, *Crassula ovata, Crassula sarmentosa,* smilax, arctotis, tradescantia, and nasturtium (*Tropaeolum majus*). Many of these weeds are currently associated with dumped organic waste or, given their present distribution, have originated from this source.

Buffalo grass, couch, and kikuyu grass are invading dune vegetation from adjacent residential lawns, carparks, roadends, and roadsides. Vehicles are causing damage to the site, particularly at Pāpāmoa East.

Detailed weed distribution maps were produced for this site in summer 2002, and formed the basis for a Tauranga City Council 10 year environmental weed management plan (Wildland Consultants 2002b).

Oil from the Rena washed up on the beach in late 2011 and early 2012.

Key Site Features

This narrow site contains examples of indigenous sand dune vegetation that links Mauao with dune systems further east. The dune vegetation is extensively modified by heavy human use and adjacent residential activity, with ongoing and incipient weed invasion in some areas. One At Risk and two regionally uncommon plant species occur at this site. A range of New Zealand and migratory wader species, several of which are Threatened or At Risk, are occasionally recorded here. Katipo spider (Chronically Threatened-Serious Decline) is present and *Succinea archeyi* (a Threatened land snail species) may still be present, although a field survey is required to determine this.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	H
	3.5	M
	3.6	H
Diversity and Pattern	3.7	M

Criterion*	RPS Number*	Ranking**
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	H
	3.12	M
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** Pingao (At Risk-Relict) Sand tussock (At Risk-Declining) <u>Planted</u> New Zealand shore spurge (At Risk-Declining) **Avifauna:** Northern New Zealand dotterel (Threatened-Nationally Vulnerable) Banded dotterel (Threatened-Nationally Vulnerable) White-fronted tern (At Risk Declining) **Other Fauna:** Katipo spider (Chronically Threatened-Serious Decline)
ii	✓	New Zealand dotterel (Endangered)
iii		
iv		
v		Regionally Significant
vi		Biodiversity values at the site are not formally protected, but parts are a Tauranga City Council reserve.
11(b)		
i	✓	Indigenous sand dune vegetation.
ii		
iii	✓	Indigenous sand dune vegetation.
iv	N/A	
v		
vi	✓	Connects Mauao, Ōtira Sand Dunes, Pāpāmoa Sand Dunes, and Kaituna Sand Dunes and Wetland.
Policy Met:		11(b)
Justification:		Shark Alley to Kaituna Spit Sand Dunes is a good example of a threatened ecosystem type and the values of this site are consistent with Policy 11(b). It provides habitat for a suite of Threatened and At Risk species, and is part of a dune system that extends along the coast from Mauao in the west to the mouth of the Kaituna River in the east.

Notes Shark Alley beach has the largest ongoing sand renourishment programme in

New Zealand. It is intended to counteract loss of sand due to sand removal from Tauranga Harbour (G. Jenks pers. comm. 2006). As well as landsnails, a survey of native lizards and butterflies is recommended.

This site is ranked as a Category 2 Special Ecological Area in Tauranga City (Wildland Consultants 2009b) and has been identified as a Category 3 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

References

Beadel 1995b; Wildland Consultants 2002b; Wildland Consultants 2005j; OSNZ 2006; Wildland Consultants 2006g; Wildland Consultants 2008a; Wildland Consultants 2009b.

ŌTIRA SAND DUNES

Site Number [1]	104
Grid Reference (NZMG)	E2797846 N6385506
Local Authority	Tauranga City Council
Ecological District	Tauranga
Protection Status	Protected (TCC reserve) and unprotected parts
Site Area	62.1 ha
Altitudinal Range	0-2 m asl
Geology-Landform Type	Sand
HVES Number	53

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pingao-spinifex sandfield.	Incipient foredune
Terrestrial	Spinifex sandfield.	Incipient foredune
Terrestrial	Spinifex-pingao/shore bindweed grassland.	Incipient and established foredune
Terrestrial	Pohuehue-*Ficinia nodosa* vineland.	Established foredune and transgressing dunefield
Terrestrial	*Carex testacea*-pohuehue-*Ficinia nodosa* sedgeland.	Transgressing dunefield
Terrestrial	Bracken-pohuehue fernland.	Established foredune and transgressing dunefield
Terrestrial	Periwinkle vineland.	Transgressing dunefield
Terrestrial	Kikuyu grass grassland.	Transgressing dunefield
Terrestrial	Knot-root bristle-grass grassland. (Wildland Consultants 2008a)	Transgressing dunefield

Vegetation and Indigenous Flora

Ōtira Sand Dunes includes two large dune complexes linked by foredune vegetation in front of two areas of residential housing. The larger areas contain a sequence of spinifex and pingao (At Risk-Relict) on the foredune, through to *Carex testacea* and then the rear dune is clothed in a dense mat of pohuehue and *Ficinia nodosa*, with bracken increasing in abundance as distance from the shoreline increases.

The dune system is relatively stable, with the exception of several large blowouts, possibly the result of human-induced reduction of vegetative cover associated with unofficial walking tracks, are present.

New Zealand shore spurge (At Risk-Declining) had been planted by Coast Care (Wildland Consultants 2005j) but was not observed in 2008 (Wildland Consultants 2008a). Tauhinu (*Ozothamnus leptophyllus*) also occurs at this locality. Pingao (At Risk-Relict) is widespread as scattered individuals along the incipient foredune. *Oxalis rubens* and *Zoysia pauciflora* (both regionally uncommon plant species) are present.

Indigenous Fauna

Katipo spider (*Latrodectus katipo*) (Chronically Threatened-Serious Decline) is present but in low numbers (J. Heaphy Department of Conservation, pers. comm. 2012).

New Zealand pipit (At Risk-Declining) and variable oystercatcher (At Risk-Recovering) were recorded at this site in 2008 (Wildland Consultants 2008a).

[1] Identified as SVHZ-101 in Wildland Consultants 2006g.

Variable oystercatcher feed along the beach. *Succinea archeyi* (Chronically Threatened-Serious Decline) have been reported at this site in the past, and shore skink are present (J. Heaphy Department of Conservation, pers. comm. 2012).

The fauna described for this site does not constitute an exhaustive account. A wide variety of indigenous invertebrates will be present in microsites with indigenous habitats, including, but not limited to, Crustaceans, Myriopods, Arachnids, and Hexapods including Diplurans, Proturans, Collembolids, and Insecta.

Condition/Pressures

Detailed weed distribution maps were produced for this site in summer 2002, and formed the basis for a Tauranga City Council 10 year environmental weed management plan (Wildland Consultants 2002b).

Weed species present include agapanthus, *Banksia integrifolia*, blackberry, black wattle, brush wattle, Cape ivy, Chinese privet, climbing dock, Italian evergreen buckthorn, gorse, Japanese spindleberry, kikuyu grass, lupin, marram, moth plant, pampas, periwinkle, smilax, iceplant, tradescantia, and ladder fern.

A 2005 study did not detect any change in weed abundance and distribution between 2000 and 2005 (Wildland Consultants 2005j). In part this may be because weeds are scattered throughout the site at relatively low densities, and it would require a more detailed study to detect change. Exotic grasses are present throughout the site but are more common towards its western end. Lupins are scattered on the foredune. This species has a potentially high negative impact because it is a nitrogen-fixer, which alters the nutrient status of the substrate and may create habitat suitable for other adventive species. However its numbers are kept low by a fungal pathogen that has been present in the New Zealand lupin population since the 1980s.

The following activities impacted on the site during the period of 2000-2005: pedestrian and vehicle tracks, and dumping of organic and inorganic waste (Wildland Consultants 2005j).

Parts of the site are bounded by residential housing on the foredune, and the gardens of some of these properties are encroaching into the site, resulting in indigenous vegetation being damaged and/or replaced by exotic species.

Oil from the Rena washed up on the beach in late 2011 and early 2012.

Key Site Features

A relatively good quality, large example of indigenous sand dune vegetation and habitats for indigenous species which is representative of the ecological character of the Bay of Region and which is a nationally uncommon habitat. One At Risk and two regionally uncommon plant species are present at the site. This site is also notable for the existence of scattered populations of the katipo. The Ōtira Sand Dunes site comprises a much wider strip of representative sand dune vegetation type than the adjacent Shark Alley dunes. Accordingly, it has greater resilience and buffering from encroaching human impacts, and this is reflected in the dominance of indigenous vegetation.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	H
	3.5	M
	3.6	H
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	H
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** Pingao (At Risk-Relict) **Avifauna:** New Zealand pipit (At Risk-Declining) Variable oystercatcher (At Risk-Recovering) **Other Fauna:** Katipo spider (Chronically Threatened-Serious Decline)
ii		
iii	✓	Sand dune habitats have been greatly reduced in extent both in Bay of Plenty Region and nationally, and this site is dominated by indigenous vegetation types of relatively high quality.
iv		
v		Regionally Significant
vi		Biodiversity values at the site are not formally protected, but parts are a Tauranga City Council reserve.
Policy Met:		11(a)
Justification:		Ōtira Sand Dunes is consistent with Policy 11(a) because it is a relatively high quality example of a threatened ecosystem type (i.e. sand dunes) and it provides habitat for a suite of Threatened and At Risk species. In addition, the site comprises part of a dune system that extends along the coast from Mauao in the west to the mouth of the Kaituna River in the east.

Notes This site is ranked as a Category 1 Special Ecological Area in Tauranga City (Wildland Consultants 2005j) and has been identified as a Category 1 natural

area in the Tauranga Ecological District (Wildland Consultants 2008a).

A survey for native lizards and butterflies is recommended.

References

Beadel 1995b; Wildland Consultants 2002b; Wildland Consultants 2005j; Wildland Consultants 2006g; Wildland Consultants 2008a; Wildland Consultants 2009b.

PĀPĀMOA SAND DUNES

Site Number [1]	106
Grid Reference (NZMG)	E2801825 N6383295
Local Authority	Tauranga City Council
Ecological District	Tauranga
Protection Status	Protected (TCC reserve - Pāpāmoa Beach Reserve 2)
Site Area	63.7 ha
Altitudinal Range	0-2 m asl
Geology-Landform Type	Sand

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Spinifex-pingao/shore bindweed grassland.	Duneland
Terrestrial	Pohuehue-spinifex vineland ⇔*Carex testacea*-pohuehue-*Ficinia nodosa* sedgeland.	Duneland
Terrestrial	*Ficinia nodosa*-pohuehue sedgeland.	Duneland
Terrestrial	Pohuehue-bracken vineland.	Duneland
Terrestrial	Pohuehue-kikuyu grass vineland.	Duneland
Terrestrial	Cocksfoot grassland.	Duneland
	(Wildland Consultants 2008a; Wildland Consultants 2009b)	

Vegetation and Indigenous Flora

Pāpāmoa sand dunes are a single large dune complex containing a sequence of large stabilised dunes from broad incipient foredunes bearing spinifex and pingao (At Risk-Relict) through leeward face and swale of established foredune bearing *Carex testacea* and onto the well vegetated transgressive dunefield which bears a dense mat of pohuehue and *Ficinia nodosa*, with bracken increasing in abundance as distance from the shoreline increases. The dune system is relatively stable, with the exception of several large blowouts, possibly the result of human-induced reduction of vegetative cover associated with unofficial walking tracks, are present. Pingao, sand tussock, and sand pimelea (all At Risk-Declining) were recorded within the site in 2000, 2002 and 2005 (Wildland Consultants 2005j). In 2008, *Coprosma acerosa* was observed within the site (Wildland Consultants 2008a). The sand pimelea population comprises only two patches, 4 × 4 m, and 1.2 × 0.9 m approximately 3 m apart (Wildland Consultants 2005j). The sand tussock population comprised one plant when seen in 2006, and was not found in 2008. *Oxalis rubens* and *Zoysia pauciflora* (both regionally uncommon plant species) are present on dunes.

Indigenous Fauna

New Zealand pipit (At Risk-Declining) and variable oystercatcher (At Risk-Recovering) are present. Variable oystercatcher feed and roost along the beach. This site has scattered populations of the katipo spider (Chronically Threatened-Serious Decline) (Brendon Christensen pers. comm. 2012).

Succinea archeyi (land snail; Chronically Threatened-Serious Decline) have been reported in the past, and may still be present today. Native lizards and butterflies are likely to be present.

The fauna described for this site does not constitute an exhaustive account. A wide variety of indigenous invertebrates will be present in microsites with indigenous habitats, including, but not limited to, Crustaceans, Myriopods,

[1] Identified as SVHZ-102 in Wildland Consultants 2006g.

Arachnids, and Hexapods including Diplurans, Proturans, Collembolids, and Insecta. Of indigenous vertebrates, only shore skink is likely to occur.

Condition/Pressures

Detailed weed distribution maps were produced for this site in summer 2002, and formed the basis for a Tauranga City Council 10 year environmental weed management plan (Wildland Consultants 2002b).

Weed species present include agapanthus, blackberry, black wattle, Chinese privet, climbing dock, Italian evergreen buckthorn, German ivy (*Senecio mikanioides*), Japanese honeysuckle, Japanese spindleberry, kikuyu grass, lupin, pampas, marram, periwinkle, silver poplar, smilax, iceplant, Taiwan cherry, tradescantia, and ladder fern.

A 2005 study found that the abundance and distribution of pampas and Japanese spindleberry had decreased since 2002, and that climbing dock may have increased in abundance. There is a wide variety of exotic species within the parts of the site that are adjacent to the road, including Norfolk pine (*Araucaria heterophylla*), freesia (*Freesia* sp.), caper spurge and nasturtium (Wildland Consultants 2005j).

The following activities impacted on the site during the period of 2000-2008: Pedestrian and vehicle tracks and dumping of organic waste have had a moderate negative impact; the dumping of inorganic waste has had a minor negative impact and planting has had a minor positive impact on the site (Wildland Consultants 2008a).

Oil from the Rena washed up on the beach in late 2011 and early 2012.

Key Site Features

This site comprises a relatively large, good quality, diverse example of sand dune vegetation of the Bay of Plenty. It is a relatively wide strip and accordingly it has greater resilience and buffering from encroaching human impacts, and this is reflected in the dominance of indigenous vegetation. This is one of only two sites for natural populations of sand tussock and sand pimelea in the western Bay of Plenty and the site is also notable for the existence of one other At Risk and two regionally uncommon plant species, and scattered populations of the katipo (B. Christensen pers. comm. 2012).

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	H
	3.5	M
	3.6	H
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	M

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	H
	3.12	M
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** Pingao (At Risk-Relict) Sand tussock (At Risk-Declining) Sand pimelea (At Risk-Declining) **Avifauna:** New Zealand pipit (At Risk-Declining) Variable oystercatcher (At Risk-Recovering) **Other Fauna:** Katipo (Chronically Threatened-Serious Decline)
ii		
iii	✓	Sand dune habitats have been greatly reduced in extent both in Bay of Plenty Region and nationally, and this site is dominated by indigenous vegetation types of relatively high quality.
iv		
v		Regionally Significant
vi		Biodiversity values at the site are not formally protected, but the site is a Tauranga City Council reserve.
Policy Met:		11(a)
Justification:		Pāpāmoa Sand Dunes comprises a sequence of stabilised dunes and incipient foredunes dominated by indigenous flora and vegetation types. The site is relatively large and of high quality and is, therefore, consistent with Policy 11(a). Threatened and At Risk fauna and flora are present at the site. In addition, it comprises parts of a dune system that extends along the coast from Mauao in the west to the mouth of the Kaituna River in the east.

Notes

This site is ranked as a Category 1 Special Ecological Area in Tauranga City (Wildland Consultants 2005j) and has been identified as a Category 1 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

A survey for native lizards and butterflies is recommended.

References

Beadel 1995b; Wildland Consultants 2002b; Wildland Consultants 2005j; Wildland Consultants 2006g; Wildland Consultants 2008a; Wildland Consultants 2009b.

KAITUNA SAND DUNES AND WETLAND

Site Number [1]	107
Grid Reference (NZMG)	E2807335 N6380219
Local Authority	Tauranga City Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	73.5 ha
Altitudinal Range	0-1 m asl
Geology-Landform Type	Sand
HVES Number	55

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Spinifex/shore bindweed grassland.	Duneland
Terrestrial	Spinifex-pingao/shore bindweed grassland.	Duneland
Terrestrial	Pohuehue-*Ficinia nodosa* vineland.	Duneland
Terrestrial	*Carex testacea*-pohuehue-*Ficinia nodosa* sedgeland.	Duneland
Terrestrial	*Ficinia nodosa*-pohuehue sedgeland.	Duneland
Terrestrial	Spinifex sandfield.	Duneland
Terrestrial	*Carex pumila* sandfield.	Duneland
Terrestrial	Gorse-pohuehue scrub.	Duneland
Terrestrial	Flatweeds herbfield.	Duneland
Terrestrial	Mixed exotics herbfield.	Duneland
Palustrine	Raupo reedland.	Duneland
	(Wildland Consultants 2005j, Beadel 1994a, Wildland Consultants 2008a; Wildland Consultants 2009b)	

Vegetation and Indigenous Flora

This site comprises a dynamic complex of large unstable foredunes and a highly erosional transgressive dunefield containing many blowouts, deflation basins, and other features of active dune systems. The juxtaposed matrix of a diverse array of vegetation types is linked to dune activity. As in other dune systems, spinifex and pingao (At Risk-Relict) dominate incipient foredunes and the stoss face of established dunes. Pohuehue and *Ficinia* occur inland from the lee face of the established foredune and dominate vegetation on stabilised transgressive dunes. In swales behind the established foredune *Carex testacea* dominates vegetation. Sandfields occur throughout the dune complex, those containing *Carex pumila,* and shore bindweed are characteristic of deposition lobes and typically occur within the transgressive dunefield, those containing spinifex and *Lachnagrostis billiardieri* are characteristic of deflation basins in both established and transgressive dunes. Sand tussock (At Risk-Declining) in large deflation basins and incipient foredunes at the eastern end of the site (Sarah Beadel pers. obs.). About 400 plants were present in 1991 (Sarah Beadel pers. obs.), compared with *c.*100 plants in 2011 (Wilaldn Consultants 2011c). is still the largest population within the Bay of Plenty. *Oxalis rubens* and *Zoysia pauciflora* (both regionally uncommon plant species) are also present on dunes.

Small populations of *Cyclosorus interruptus*, *Thelypteris confluens*, and *Myriophyllum robustum* (all At Risk-Declining) and *Ranunculus macropus* (Data Deficient) occur in the wetlands. *M. robusta* is currently not known to

[1] Identified as SVHZ-103 in Wildland Consultants 2006g and 1742.

occur elsewhere in the Region. *Sparganium subglobossum* (regionally uncommon) is also present (P. Cashmore, Department of Conservation, pers. comm. 2006.).

Amphibromus fluitans (Threatened, Nationally Endangered), only known from two other sites in the Region, may also occur in this wetland, although there is no fruiting material on the herbarium specimen and a subsequent visit to the wetland failed to locate any flowering material (P. Cashmore, Department of Conservation, pers. comm. 2008).

Indigenous Fauna

The site provides a roosting area for a range of migrant bird species (OSNZ 2006). Variable oystercatcher (At Risk-Recovering), northern New Zealand dotterel (Owen *et al.* 2006), and banded dotterel (both Threatened-Nationally Vulnerable) utilise the beach. White-fronted tern (At Risk-Declining) are also present in large numbers. The Wairakei Stream and wetlands provide habitat for Australasian bittern (Threatened-Nationally Endangered), black shag (At Risk-Naturally Uncommon), and a variety of other waterbirds (K. Owen, Department of Conservation, pers. comm. 2012).

Two New Zealand dabchick (Threatened-Nationally Vulnerable) and one black shag (At Risk-Naturally Uncommon) were observed at this site in August 2009 (Wildland Consultants 2009b).

Red-billed gull (Threatened-Nationally Vulnerable) are also present (K. Owen, Department of Conservation, pers. comm. 2012).

Katipo (*Latrodectus katipo*) (Chronically Threatened-Serious Decline) are present in good numbers (B. Christensen pers. comm. 2012).

Shore skink (not threatened) were observed within the site during this study.

The fauna described for this site does not constitute an exhaustive account. A wide variety of indigenous invertebrates will be present in microsites with indigenous habitats, including, but not limited to, Crustaceans, Myriopods, Arachnids, and Hexapods including Diplurans, Proturans, Collembolids, and Insecta.

Condition/Pressures

Weed species present include African boxthorn, blackberry, broom, climbing dock, *Gazania linearis*, gorse, kikuyu grass, lupin, dimorphotheca, pampas, sheep's sorrel (*Rumex acetosella*), iceplant, Japanese spindleberry, moth plant, and woolly nightshade. The western end of the site is bounded by residential properties that are a likely source of the weed species that are present only at that end of the site.

Grey willow is present in the wetland. The raupo wetland in the dune slack behind the dunes is within a grazed paddock, and has been grazed and pugged in areas where willows are not dominant. This wetland is in poor condition.

The following activities had a negative impact on the site during the period of 2000-2005: vegetation clearance, dumping of inorganic waste, vehicle tracks, (particularly those generated by quad bikes), dumping of organic garden waste, and trekking or ranging of horses on dunes.

Clearance of gorse from dunes and farmland adjacent dunes within the 8B1 block has had a positive impact. In addition, Ford Holdings are making efforts

to reduce impact of the use of quad bikes on dunes by fencing affected areas.

In 2011, an area of dune vegetation was fenced to exclude stock and vehicles, and an area within it was fenced to exclude rabbits. Weed control and planting of indigenous species are also being undertaken in a joint project between CoastCare and the Māori owners. Vegetation, flora, and fauna within the fences are being monitored (Wildland Consultants 2011c). Most of the sand tussock within the site occurs within the area that has been fenced to exclude stock and vehicles.

Oil from the Rena washed up on the beach in late 2011 and early 2012.

Key Site Features

A good quality example of a nationally uncommon suite of habitats grading from dune wetland to a dynamic coastal beach system. These habitats are all under-represented nationally. The site provides habitat for five At Risk and two regionally threatened plant species, as well as four Threatened and four At Risk bird species.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	H
	3.5	H
	3.6	H
Diversity and Pattern	3.7	H
Naturalness	3.8	H
Ecological Context	3.9	M
	3.10	M
Viability and Sustainability	3.11	H
	3.12	M
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** *Cyclosorus interruptus* (At Risk-Declining) *Myriophyllum robustum* (At Risk-Declining) Sand tussock At Risk-Declining) *Thelypteris confluens* (At Risk-Declining) Pingao (At Risk-Relict) **Avifauna:** Australasian bittern (Threatened-Nationally Endangered) Banded dotterel (Threatened-Nationally Vulnerable) Northern New Zealand dotterel (Threatened-Nationally Vulnerable)

Policy	Criteria Met	Explanation
		Red-billed gull (Threatened-Nationally Vulnerable) White-fronted tern (At Risk-Declining) Black shag (At Risk-Naturally Uncommon) New Zealand dabchick (At Risk-Naturally Uncommon) Variable oystercatcher (At Risk-Recovering) **Other Fauna:** Katipo (Chronically Threatened-Serious Decline) **Possible Record:** *Amphibromus fluitans* (Threatened-Nationally Endangered)
ii	✓	Australasian bittern (Endangered) New Zealand dotterel (Endangered)
iii	✓	Sand dune habitats have been greatly reduced in extent both in Bay of Plenty Region and nationally, and this site is dominated by indigenous vegetation types of relatively high quality.
iv		
v		Regionally Significant
vi		Biodiversity values at the site are not formally protected, but the site is a Tauranga City Council reserve.
Policy Met:		11(a)
Justification:		Kaituna Sand Dunes and Wetland is a high quality complex of sand dune and wetland habitats, both of which are ecosystem types which have been greatly reduced in extent both nationally and regionally. It provides habitat for a suite of Threatened and At Risk avifauna and plant species, and katipo (Chronically Threatened-Gradual Decline).

Notes

The wetland parts of this site are within the bed of the Wairakei Stream, and in places the banks are grazed pasture or pine plantation. Upstream of this site, Wairakei Stream flows through a TCC reserve adjacent to urban properties which has been restored. Black shag (At Risk-Naturally Uncommon) have occasionally been observed in the stream in the eastern parts of the reserve. The stream does not have an outlet - it drains into sand.

A survey for native lizards and butterflies should be undertaken.

Ranked as a Category 1 natural area in the Tauranga Ecological District (Wildland Consultants 2008a) and a Category 1 special ecological area in Tauranga City (Wildland Consultants 2009b).

Part of the site has been fenced to exclude stock, vehicles, and rabbits, and the ecosystem monitoring is in place.

References

Wildland Consultants 2002b; Wildland Consultants 2005j; OSNZ 2006; Wildland Consultants 2006g; Wildland Consultants 2008a; Wildland Consultants 2009b.

ELIZABETH WETLAND

Site Number [1] 108
Grid Reference (NZMG) E2807501 N6379230
Local Authority Tauranga City Council
Ecological District Tauranga
Protection Status Unprotected
Site Area 3.3 ha
Altitudinal Range 0-2 m
Geology-Landform Type Sand

Hydrosystem	Vegetation Type	Landform
Lacustrine	*Eleocharis sphacelata* reedland.	Wetland
Lacustrine	*Machaerina articulata* reedland.	Wetland
Palustrine	*Juncus effusus*/pasture grassland. (Wildland Consultants 2007a)	Wetland

Vegetation and Indigenous Flora The site is a small lake in a dune hollow which is dominated by *Eleocharis sphacelata* with stands of *Machaerina articulata* around the margins. It is surrounded by grazed pasture.

Indigenous Fauna Australasian bittern (Threatened-Nationally Endangered) has been recorded at the site (2006 record C. Staite, Department of Conservation, pers. comm. 2012). A pair of bittern regularly breed at this site (landowner pers. comm. to C. Staite).

Condition/Pressures The site is not fenced and the margins are grazed by domestic stock. However, stock are unlikely to penetrate into the site because of the water depth. There is a small infestation of pampas.

Key Site Features This site is a good example of a dune lake in Tauranga Ecological District and provides habitat for a Threatened bird species. Apart from the lakes on Matakana Island, no other dune lakes remain in Tauranga Ecological District.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	M
	3.6	H
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	L

[1] Identified as SVHZ-215 in Wildland Consultants Contract Report 1742.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	M
	3.12	H
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Australasian bittern (Threatened-Nationally Endangered)
ii	✓	Australasian bittern (Endangered)
iii		
iv		
v		Regionally Significant
vi		Unprotected
11(b)		
i	✓	*Eleocharis sphacelata*-dominated palustrine wetland.
ii	✓	Nesting site of a pair of Australasian bittern.
iii		
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Elizabeth Wetland is consistent with Policy 11(b) because it is a palustrine wetland that is dominated by indigenous vegetation and it is a nesting site for Australaisan bittern (Threatened-Nationally Endangered). The site is ecologically significant but is not large enough or of high enough quality to be consistent with Policy 11(a).

Notes

The site would benefit from fencing and planting of a buffer of suitable, locally sourced, indigenous species (e.g. manuka).

Ranked as a Category 1 special ecological area in Tauranga City (Wildland Consultants 2009b) and a Category 2 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

References

Wildland Consultants 2007a; Wildland Consultants 2009b.

KAITUNA RIVER WETLANDS AND KAITUNA RIVER MOUTH (PART)

Site Number [1]	111
Grid Reference (NZMG)	E2810226 N6377732
Local Authority	Tauranga City Council and Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (WBOPDC reserve) and unprotected parts
Site Area	47.8 ha
Altitudinal Range	0-3 m asl
Geology-Landform Type	Low gradient alluvium
HVES Number	192

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Grey willow forest.	Wetland
Paulustrine	Grey willow/raupo treeland.	Wetland
Paulustrine	(Grey willow)/manuka-harakeke scrub.	Wetland
Terrestrial	Gorse-blackberry scrub.	Wetland
Palustrine/terrestrial	Harakeke-*Coprosma propinqua* subsp. *propinqua*/raupo-*Machaerina articulata* flax-reedland.	Wetland
Palustrine/terrestrial	Tall fescue (*Schedonorus phoenix*)-*Juncus edgariae*/reed sweetgrass-*Eleocharis acuta* rushland.	Wetland
Paulstrine	Ti kouka/*Juncus edgariae*/pasture rushland.	Wetland
Paulstrine	Raupo-*Machaerina articulata* reedland.	Wetland
Paulstrine	Raupo reedland.	Wetland
Paulstrine	Open water.	Wetland
Riverine/estuarine	(Harakeke)/raupo-*Machaerina articulata* reedland.	Wetland
Riverine/estuarine	*Bolboschoenus fluviatilis*-raupo reedland.	Wetland
Terrestrial	Spinifex sandfield.	Beach sands
Terrestrial	Maritime pine/boxthorn-radiata pine/pohuehue treeland.	Established foredune
Terrestrial/estuarine	Spinifex/shore bindweed sandfield.	Beach sands
Terrestrial	Pampas tussockland.	Artificial bund
Riverine	Tall fescue-paspalum-*Bolboshoenus fluviatilis*-searush-(pampas)-(gorse) grassland.	Alluvial flat
Riverine	Raupo/reed sweetgrass-*Shoenoplectus tabernaemontani*-tall fescue reedland. (Wildland Consultants 2007b, Wildland Consultants 2008a; Wildland Consultants 2009b)	Wetland

Vegetation and Indigenous Flora

This site comprises wetlands along both banks of the Kaituna River. It includes tidal and non-tidal, riverine and palustrine wetlands dominated by variable mixtures of raupo, harakeke, and *Machaerina articulata* with other species such as *Schoenoplectus tabernaemontani, Bolboschoenus fluviatilis*, reed sweetgrass, and grey willow. At the river mouth there is an area of beach sand and a hillslope of maritime pine treeland which provides a roosting site for birds. Thirty-seven indigenous plant species were recorded in 2005 (Wildland Consultants 2005p).

Indigenous Fauna

Northern New Zealand dotterel, banded dotterel (both Threatened-Nationally Vulnerable) and variable oystercatcher (At Risk-Recovering)

[1] Identified as SVHZ-104 in Wildland Consultants Contract Reports 1345 and 1742.

have bred there in the past and are present, and white-fronted tern (At Risk-Declining) have been recorded in large numbers. The site is also a roosting area for a range of migrant species (OSNZ 2006). The treeland on the western side of the mouth of the Kaituna River is a roosting/breeding site for black shag (At Risk-Naturally Uncommon) and pied shag (Threatened-Nationally Vulnerable) (K. Owen, pers. comm.).

The Kaituna River is an important habitat and migratory pathway for indigenous species of freshwater fish including six species classified At Risk-Declining (torrentfish, giant kōkopu, kōaro, inanga, lamprey, redfin bully) and common bully, common smelt, giant bully, and banded kōkopu (Wildland Consultants 2005p). Spawning of inanga (*Galaxias maculatus*, At Risk-Declining), a culturally and commercially important species, was recorded in 1988, mainly among tidally-inundated tall fescue, Mercer grass (*Paspalum distichum*), and *Juncus edgariae* (Mitchell 1990).

Condition/Pressures Parts of the site are grazed. Threats to the inanga spawning areas including stock grazing during dry autumns, dying willows collapsing onto sites, and a paper road running through the spawning area (Mitchell 1990). Invasive weeds include grey willow, pampas, crack willow, and reed sweetgrass.

Key Site Features This site comprises one of the last small remnants of the great Kawa Swamp, a once large wetland which covered much of the Maketū Plains (Kirk 1873). Some of the vegetation types present here are not well-represented at other sites in the Tauranga Ecological District (Beadel 1994a). Three Threatened and three At Risk bird species have been recorded at this site. This site is a roosting area for migrant species (OSNZ 2006). The Kaituna River is an important habitat and migratory pathway for indigenous species of freshwater fish including 6 species classified At Risk-Declining. Inanga spawning has been recorded.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	M
	3.5	M
	3.6	M
Diversity and Pattern	3.7	H
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	M
Viability and Sustainability	3.11	M
	3.12	L
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Northern New Zealand dotterel (Threatened-Nationally Vulnerable) Banded dotterel (Threatened-Nationally Vulnerable) Pied shag (Threatened-Nationally Vulnerable) White-fronted tern (At Risk-Declining) Black shag (At Risk-Naturally Uncommon) Variable oystercatcher (At Risk-Recovering) **Fish:** Giant kōkopu (At Risk-Declining) Inanga (At Risk-Declining) Kōaro (At Risk-Declining) Lamprey (At Risk-Declining) Redfin bully (At Risk-Declining) Torrentfish (At Risk-Declining)
ii	✓	New Zealand dotterel (Endangered) Giant kōkopu (Vulnerable)
iii		
iv		
v		Regionally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a WBOPDC reserve.
11(b)		
i	✓	Predominantly indigenous palustrine wetlands and a small area of spinifex sandfield.
ii	✓	Includes a spawning site of inanga.
iii	✓	Spinifex sandfield.
iv	N/A	
v	✓	The Kaituna River is a migratory pathway for indigenous freshwater fish.
vi		
Policy Met:		11(b)
Justification:		Kaituna River Wetlands and Kaituna River Mouth (Part) comprises the river mouth, six areas of predominantly indigenous palustrine wetlands, and areas of exotic vegetation that are roosting and/or breeding sites for avifauna, including Threatened and At Risk species. The river is stopbanked, the river mouth has been diverted, and part of the site is grazed so it is consistent with Policy 11(b).

Notes

Part of this site is ranked as a Category 2 Special Ecological Area in Tauranga City (Wildland Consultants 2009b) and was identified as a Category 2 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

The Kaituna Wetland (a Department of Conservation-administered Reserve) is present on the south side of the river. The site forms part of the Smartgrowth 'Kaituna' corridor, ranked as Second-priority Level 1 (Wildland Consultants 2007c, 2007b).

References

Beadel 1994a; Kirk 1873; Mitchell 1990; OSNZ 2006, Wildland Consultants 2005j; Wildland Consultants 2005p; Wildland Consultants 2006g; Wildland Consultants 2007a; Wildland Consultants 2007b; Wildland Consultants 2007c;Wildland Consultants 2008a; Wildland Consultants 2009b.

LOWER KAITUNA WILDLIFE MANAGEMENT RESERVE

Site Number	109
Grid Reference (NZMG)	E2807753 N6377816
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected
Site Area	196.2 ha
Altitudinal Range	0-3 m asl
Geology-Landform Type	Low gradient alluvium
HVES Number	192

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Open water-raupo reedland-mercer grassland-*Bolboschoenus fluviatilis* reedland.	Wetland
Palustrine	*Carex virgata* tussockland.	Wetland
Palustrine	Willow spp.-ti kouka/*Carex lurida*-tall fescue treeland.	Wetland
Palustrine	Willow spp.-(ti kouka)/*Coprosma propinqua*-(manuka)-(pampas)/*Machaerina rubiginosa* tree-shrubland.	Wetland
Palustrine	Grey willow-(ti kouka)/ *Coprosma propinqua/ Machaerina rubiginosa*-(*Carex lurida*)-(*C. geminata*) forest, scrub, and treeland.	Wetland
Palustrine	Grey willow-(harakeke)-(ti kouka)-(*Coprosma propinqua*)-(pampas)/*Machaerina rubiginosa-Carex virgata* shrubland.	Wetland
Palustrine	Grey willow-manuka scrub.	Wetland
Palustrine	Grey willow-manuka-(*Coprosma propinqua*)-(pampas)/*Machaerina rubiginosa* shrubland.	Wetland
Palustrine	(Ti kouka)/grey willow/Japanese honeysuckle-blackberry-(tall fescue) tree-shrubland.	Wetland
Palustrine	Japanese honeysuckle-(blackberry)-(*Carex virgata*)-(tall fescue) vineland.	Wetland
Palustrine	(Ti kouka)-(*Coprosma propinqua*)-(harakeke)-(manuka)/*Machaerina rubiginosa*-(*Carex virgata*)-(*Carex geminata*) sedgeland.	Wetland
Palustrine	(Ti kouka)/harakeke-pampas (*Coprosma propinqua*)/tall fescue- *Machaerina rubiginosa* tussockland.	Wetland
Palustrine	Ti kouka-grey willow forest.	Wetland
Palustrine	Ti kouka forest.	Wetland
Palustrine	Ti kouka-(mahoe) forest.	Wetland
Palustrine	Ti kouka-(maire tawake) forest.	Wetland
Palustrine	Kahikatea forest. (Cashmore 2002)	Wetland

Vegetation and Indigenous Flora

Maire tawake is a regionally uncommon species and has not been recorded at any other sites within the coastal zone of the Bay of Plenty. *Pterostylis micromega* was recorded in 1983 but was not relocated during a survey in 2002 (Cashmore 2002). However, suitable habitat for this species remains within the site.

Indigenous Fauna

Indigenous svifauna which have been recorded at Lower Kaituna Wildlife Management Reserve are Australasian bittern (Threatened-Nationally

Critical), white heron (Threatened-Nationally Critical), grey duck (Threatened-Nationally Critical), New Zealand dabchick (Threatened-Nationally Vulnerable), red-billed gull (Threatened-Nationally Vulnerable), reef heron (Threatened-Nationally Vulnerable), New Zealand pipit (At Risk-Declining), pied stilt (At Risk-Declining), North Island fernbird (At Risk-Declining), banded rail (At Risk-Naturally Uncommon), black shag (At Risk-Naturally Uncommon), little black shag (At Risk-Naturally Uncommon), royal spoonbill (At Risk-Naturally Uncommon), marsh crake (At Risk-Relict) and spotless crake (At Risk-Relict).

In addition, little egret (Vagrant) and suite of common indigenous birds are present (i.e. grey teal, white-faced heron, New Zealand shoveler duck. paradise shelduck, pukeko, and black backed gull). Introduced waterbirds present within the reserve include mallard duck, Canada goose, and black swan.

Source: Department of Conservation 2003

Condition/Pressures

The site is not grazed and goats have been eradicated. Hydrology of the site is highly modified but water levels in the eastern part of the wetland have been raised during the past 10-15 years and areas of open water have been excavated. Pest plants recorded in 2002 included royal fern, tradescantia, pampas, reed sweetgrass, gorse, woolly nighshade, tree privet, Spanish heath, wattles, buddleia, Japanese walnut (*Juglans ailantifolia*), barberry, coral tree, grey willow, crack willow, Japanese honeysuckle, and blackberry. Weed control work is ongoing.

Key Site Features

This site comprises one of the last and best quality remnants of the great Kawa Swamp, a once large wetland which covered much of the Maketū Plains (Kirk 1873). Some of the vegetation types present here are not well-represented at other sites in the Tauranga Ecological District (Beadel 1994a) and maire tawake, a regionally uncommon species, has not been recorded at any other sites in the Bay of Plenty coastal zone.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	L
	3.5	H
	3.6	M
Diversity and Pattern	3.7	H
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	H
	3.12	M
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Australasian bittern (Threatened-Nationally Critical) White heron (Threatened-Nationally Critical) Grey duck (Threatened-Nationally Critical) New Zealand dabchick (Threatened-Nationally Vulnerable) Red-billed gull (Threatened-Nationally Vulnerable) Reef heron (Threatened-Nationally Vulnerable) New Zealand pipit (At Risk-Declining) North Island fernbird (At Risk-Declining) Pied stilt (At Risk-Declining) Marsh crake (At Risk-Relict) Spotless crake (At Risk-Relict) Banded rail (At Risk-Naturally Uncommon) Black shag (At Risk-Naturally Uncommon) Little black shag (At Risk-Naturally Uncommon) Royal spoonbill (At Risk-Naturally Uncommon) Little egret (Vagrant)
ii	✓	Australasian bittern (Endangered)
iii	✓	Large, high quality example of freshwater wetland, a habitat type that is threatened in the coastal environment.
iv		
v	✓	Nationally Significant
vi	✓	Protected (Lower Kaituna Wildlife Management Reserve)
Policy Met:		11(a)
Justification:		Lower Kaituna Wildlife Management Reserve is one of the last and best quality remnants of the great Kawa Swamp and includes vegetation types that are not well-represented elsewhere in Tauranga Ecological District. It provides habitat for six Threatened species of avifauna and nine At Risk species of avifauna. For these reasons the site is nationally significant and is consistent with Policy 11(a).

Notes

Lower Kaituna Wildlife Management Reserve has been identified as Category 1 natural area in Tauranga Ecological Distrct (Wildland Consultants 2008a).

The site forms part of the Smartgrowth 'Kaituna' corridor, ranked as Second-priority Level 1 (Wildland Consultants 2007c, 2007b).

References

Cashmore 2002; Department of Conservation 2003; Wildland Consultants 2008a.

MAKETŪ ESTUARY- UNVEGETATED AND SPARSELY VEGETATED INTERTIDAL AND SUBTIDAL AREAS

Site Number	114
Grid Reference (NZMG)	E2812970 N6376931
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (WBOPDC reserve) and unprotected parts
Site Area	206.9 ha
Altitudinal Range	0 m
Geology-Landform Type	Unvegetated and sparsely vegetated intertidal and subtidal areas

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Intertidal flats.	Intertidal flat
Marine	Worm field.	Subtidal channel
Marine	Worm field.	Intertidal flat
Marine	Cockle bed.	Intertidal flat
Marine	Pipi bed.	Subtidal channel
Estuarine	Sea rush tussockland.	Intertidal flat
Estuarine	Oioi rushland.	Intertidal flat
Estuarine	*Machaerina juncea* sedgeland.	Intertidal flat
Estuarine	Saltmarsh ribbonwood shrubland. (Stephen Park, Environment BOP, pers. comm. 2006; Ray Bushell pers. comm. 2006; Wildland Consultants 2006g)	Intertidal flat

Indigenous Flora

The site is largely unvegetated intertidal flats. There is one sizeable example of saltmarsh remaining in Maketū Estuary, and it is mapped as a separate site. An estimated 95% of indigenous saltmarsh at Maketū Estuary has been lost since the Kaituna River diversion (Bergin 1991).

Indigenous Fauna

Maketū Estuary supports the highest diversity of wading bird species in the Bay of Plenty, including both internal and transequatorial migrants and Threatened and At Risk species. Threatened and At Risk species of avifauna that have been recorded include black stilt (Threatened-Nationally Critical), white heron (Threatened-Nationally Critical), Australasian bittern (Threatened-Nationally Endangered), reef heron (Threatened-Nationally Vulnerable), Caspian tern (Threatened-Nationally Vulnerable), red-billed gull (Threatened-Nationally Vulnerable), wrybill (Threatened-Nationally Vulnerable), banded dotterel (Threatened-Nationally Vulnerable), variable oystercatcher (At Risk-Recovering), northern New Zealand dotterel (Threatened-Nationally Vulnerable), northern little blue penguin (At Risk-Declining), New Zealand pied oystercatcher (At Risk-Declining), pied stilt (At Risk-Declining), little shag (At Risk-Naturally Uncommon), black shag (At Risk-Naturally Uncommon), royal spoonbill (At Risk-Naturally Uncommon), and white-fronted tern (At Risk-Naturally Uncommon) (OSNZ 2006, Dowding and Moore 2006, Owen *et al*. 2006, BOPRC 2012).

In addition to marine and estuarine fish species such as grey mullet, yellow-eyed mullet and kahawai, the harbour also provides habitat for a suite of migratory species of freshwater fish, including Threatened and At Risk species.

Invertebrates are present in the water column and sediment. Pipi and cockles are harvested from the estuary.

Condition/Pressures Maketū Estuary is surrounded by intensively managed agricultural land (mainly dairy farms) which results in nutrient inputs to the estuary. It has also been modified by hydrological changes associated with stopbanking, diversion of the Kaituna River, and creation of artificial channels to reduce the risk of flooding of surrounding agricultural land. These changes are associated with the threat of infilling (Kenny and Hayward 1996). The extent of spartina in Maketū was surveyed in 1998 (Shaw *et al.* 1998) and Environment BOP has subsequently implemented a control programme. However, spartina is still present in parts of the estuary and is spreading.

Key Site Features Maketū Estuary supports the highest diversity of wading bird species in the Bay of Plenty and is regularly used by Threatened and At Risk species, as well as international and New Zealand wader species. It is a large example of an estuarine habitat that is characteristic of the Region. However, the estuary has undergone extensive modification caused by the diversion of the Kaituna River, including large reductions in the extent of saltmarsh habitats. The site has been recommended for RAMSAR status (Owen *et al.* 2006).

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	H
Naturalness	3.8	L
Ecological Context	3.9	M
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** New Zealand fairy tern (Threatened-Nationally Critical) Black stilt (Threatened-Nationally Critical) White heron (Threatened-Nationally Critical) Australasian bittern (Threatened-Nationally Endangered) Banded dotterel (Threatened-Nationally Vulnerable) Caspian tern (Threatened-Nationally Vulnerable) Northern New Zealand dotterel (Threatened-Nationally Vulnerable) Red-billed gull (Threatened-Nationally Vulnerable)

Policy	Criteria Met	Explanation
		Reef heron (Threatened-Nationally Vulnerable) Wrybill (Threatened-Nationally Vulnerable) New Zealand pied oystercatcher (At Risk-Declining) Northern little blue penguin (At Risk-Declining) Pied stilt (At Risk-Declining) Black shag (At Risk-Naturally Uncommon) Little shag (At Risk-Naturally Uncommon) White-fronted tern (At Risk-Naturally Uncommon) Variable oystercatcher (At Risk-Recovering) **Fish:** A suite of freshwater fish, including Threatened and At Risk species use Maketū Estuary as a migratory route and/or for parts of their life cycle
ii	✓	Black stilt (Critically Endangered) Australasian bittern (Endangered) New Zealand dotterel (Endangered) Fairy tern (Vulnerable) Wrybill (Vulnerable)
iii	✓	Maketū Estuary has high ecological values and is among the highest quality examples in the Region, particularly as avifauna habitat.
iv		
v		Regionally Significant
vi		
Policy Met:		11(a)
Justification:		Maketū Estuary supports the highest diversity of wading bird species in the Bay of Plenty, including both internal and transequatorial migrants and Threatened and At Risk species. It is also habitat for indigenous freshwater fish, marine fish, and other marine organisms. It is a nationally significant site that has been recommended for Ramsar status. For these reasons it is consistent with Policy 11(a). The margins of the estuary include small examples of estuarine wetlands, and the site is bounded by Maketū Spit, which is a nationally significant site.

Notes A well-defined example of a meso-tidal lagoon, with hot springs located on southern side of estuary. Regionally important, of scientific value, moderately vulnerable to human modification (Kenny and Hayward 1996).

References Bergin 1991; Shaw *et al*. 1998; Kenny and Hayward 1996; OSNZ 2006; Dowding and Moore 2006; Owen *et al.* 2006; Wildland Consultants 2006g; BOPRC 2012.

MAKETŪ ESTUARY SALTMARSH

Site Number	116
Grid Reference (NZMG)	E2812791 N6377016
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (WBOPDC reserve) and unprotected parts
Site Area	12.4 ha
Altitudinal Range	<20 m asl
Geology-Landform Type	Estuarine

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Sea rush tussockland, and saltmarsh ribbonwood-sea rush shrubland. (Wildland Consultants 2006g)	Intertidal flat

Vegetation and Indigenous Flora

Maketū Estuary Saltmarsh comprises a sizeable example of sea rush tussockland at the southern end of Maketū Estuary.

Indigneous Fauna

Banded rail (At Risk-Naturally Uncommon) are present (Sarah Beadel pers. comm. 2012). Maketū Estuary (see previous site) has the highest diversity of wading bird species in the Bay of Plenty, including both internal and transequatorial migrants. The estuary provides habitat and migratory pathway for freshwater fish species.

Condition/Pressures

Spartina is present in the estuary, despite a control programme in the 1990s. The site is next to the road and received stormwater runoff from the road. A large drain which origninates in intensively grazed dairy land also discharges into the site.

Key Site Features

This site comprises a representative example of the remaining saltmarsh vegetation in Maketū Estuary. Saltmarsh in the estuary has been greatly reduced in extent. This area is an important protective buffer to the estuary which provides habitat for a wide range of bird species, including Threatened and At Risk shorebirds and waders. One At Risk bird species occurs at this site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	L
	3.3	H
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	L
Ecological Context	3.9	M
	3.10	L
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Banded rail (At Risk-Naturally Uncommon)
ii		
iii		
iv		
v		Regionally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a WBOPDC reserve.
11(b)		
i	✓	Sea rush-dominated estuarine wetland.
ii		
iii	✓	Sea rush-dominated estuarine wetland.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Maketū Estuary Saltmarsh is consistent with Policy 11(b) because it comprises a sizeable example of sea rush tussockland in Maketū Estuary. One At Risk bird species occurs at this site. The estuary supports a high diversity of wading bird species, some of which may utilise the saltmarsh. The estuary provides habitat and a migratory pathway for indigenous freshwater fish species.

Notes

The site forms part of the Smartgrowth 'Coastal strip' corridor, ranked as being highest priority, and is also part of the Smartgrowth Corridor 'Kaituna', ranked as being Second-Priority Level 1 (Wildland Consultants 2007c, Wildland Consultants 2007b).

The Maketū Estuary is a well-defined example of a meso-tidal lagoon, with hot springs located on southern side of estuary (though not within the site). Regionally important, of scientific value, moderately vulnerable to human modification (Kenny and Hayward 1996).

The whole Maketū Estuary was recommended for RAMSAR status as a Wetland of International Importance (Owen *et al.* 2006).

This site was identified as a Category 2 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

References

Bergin 1991; Shaw *et al*. 1998; Kenny and Hayward 1996; OSNZ 2006; Dowding and Moore 2006; Owen *et al.* 2006; Wildland Consultants 2006g; Wildland Consultants 2008a.

KAITUNA RIVER

Site Number [1]	110
Grid Reference (NZMG)	E2807967 N6366005
Local Authority	Western Bay of Plenty District Council, Tauranga City Council.
Ecological District	Tauranga
Protection Status	Minor parts of adjacent land protected (Kaituna River Marginal Strip), mostly unprotected.
Site Area	50.9 ha
Altitudinal Range	<20 m asl
Geology-Landform Type	Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Riverine	Open water.	River
Estuarine	Open water.	Estuarine river channel

Location and Setting

The Kaituna River is one of the largest rivers within Tauranga Ecological District. Its source is Lake Rotoiti, in the Rotorua Lakes Ecological District, from which it flows north through Ōtānewainuku Ecological District in a long gorge, before emerging into easier terrain in Tauranga Ecological District. Riparian margins in the lower reaches have been fenced to exclude stock and some have been planted with indigenous species. The river is contained within stopbanks as it flows across alluvial plains for several kilometres before flowing past several associated freshwater wetlands (Kaituna River wetlands and Kaituna River Mouth). It then discharges either directly into the sea through "the cut" or via the Maketū Estuary which now receives only a small part of this outflow.

Fauna

In total, fifteen indigenous freshwater fish species have been recorded in the catchment of the Kaituna River (Wildland Consultants 2007a, based on data from the New Zealand Freshwater Fish Database (see NIWA 2008) and Boubée and Baker (2005)). They are all migraotery species, so the site represents a migratory pathway. The recorded species are longfin eel, giant kōkopu, lamprey, torrentfish, kōaro, inanga, redfin bully (all At Risk-Declining), yelloweyed mullet (a marine wanderer), kahawai (a marine wanderer), banded kōkopu, common bully, giant bully, shortfin eel, common smelt, and black flounder (*ibid*.). Introduced fish recorded from the Kaituna River include goldfish, mosquito fish, rainbow trout, and brown trout (*ibid*). Northern koura (Chronically Threatened-Gradual Decline) have also been recorded (NIWA 2008).

The Kaituna River is an important recreational whitebait fishery, and the lower Kaituna River includes spawning sites of whitebait species (Mitchell 1990, Young and Ellery 2002).

Various bird species utilise habitats along the lower river, including white-fronted tern (At Risk-Declining), variable oystercatcher (At Risk-Recovering), pied shag (Threatened-Nationally Vulnerable), mallard, white-faced heron, welcome swallow, and pukeko (Wildland Consultants 2000e). Some of these species will utilise this site.

[1] Identified as Site Number 045 in Wildland Consultants 2008a.

Condition/Pressures The lower reaches of the Kaituna River have been heavily modified by channelisation and stopbanking, and most of its catchment is untensively managed for exotic plantation forestry, horticulture, and dairy farming. The river outlet has been altered significantly through the construction of the Kaituna Cut.

Key Site Features Thi site provides an important ecological linkage from extensive areas of indigenous forest and lakes in the Rotorua Lakes area to estuarine and marine areas along the coast. It is a habitat and/or migratory pathway seven At Risk fish species and one Threatened invertebrate (koura). At least one Threatened bird species and two At Risk bird species utilise the river habitat at the site. Parts of the river upstream from the site provide habitat for two Threatened bird species. The Kaituna River has high cultural, recreation, biological, and landscape values.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	H
	3.6	H
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	H
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Pied shag (Threatened-Nationally Vulnerable) White-fronted tern (At Risk-Declining) Variable Oystercatcher (At Risk-Recovering) **Fish:** Northern koura (Chronically Threatened-Gradual Decline) Giant kōkopu (At Risk-Declining) Inanga (At Risk-Declining) Kōaro (At Risk-Declining) Lamprey (At Risk-Declining) Longfin eel (At Risk-Declining) Redfin bully (At Risk-Declining) Torrentfish (At Risk-Declining)
ii	✓	Giant kōkopu (Vulnerable)

Policy	Criteria Met	Explanation
iii		
iv		
v		Regionally Significant
vi		Unprotected
11(b)		
i	✓	Open water
ii	✓	Includes whitebait (inanga) spawning sites
iii		
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		This site comprises the mouth and lower reaches of the Kaituna River. A suite of threatened bird and fish species have been recorded at the site, but the river mouth has been modified by channelisation and stopbanking. The values of this site are consistent with Policy 11(b).

Notes

The importance of the Kaituna River as a key ecological linkage has been recognised by its inclusion in the 'Kaituna Corridor' (Wildland Consultants 2007b). This corridor traces the course of the Kaituna River from Lake Rotoiti to Maketū Estuary, and was identified as a Second-Priority Level 1 corridor within the Smartgrowth study area (Wildland Consultants 2007b). Upstream of Tauranga Ecological District the Kaituna River connects several RAPs within Ōtānewainuku Ecological District (Category 2 RAPs 44 'Kaituna River' and 31 'Te Iringa', and Category 3 RAP 55 'Upper Kaituna' (Beadel 2006)).

Areas alongside the Kaituna River should be considered a priority for future revegetation efforts.

References

Beadel 2006; Boubee and Baker 2005; Mitchell 1990; NIWA 2008; Wildland Consultants 2000e; Wildland Consultants 2007b; Wildland Consultants 2007c; Wildland Consultants 2007b; Wildland Consultants 2008a; Young and Ellery 2002.

MAKETŪ SPIT AND WILDLIFE MANAGEMENT RESERVE

Site Number [1]	115
Grid Reference (NZMG)	E2812837 N6377550
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (Department of Conservation Maketū Wildlife Management Reserve, WBOPDC reserve) and unprotected parts
Site Area	44.7 ha
Altitudinal Range	0-3 m asl
Geology-Landform Type	Sand

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Spinifex-sea rocket sandfield.	Berm
Terrestrial	Spinifex-pingao-sand tussock/*Lachnagrostis billiardieri*-*Carex pumila*/shore bindweed grassland.	Berm
Terrestrial	Spinifex-(pingao)/shore bindweed grassland.	Incipient foredune
Terrestrial	Spinifex-(*Ficinia nodosa*)/shore bindweed-flatweeds grassland.	Incipient and established foredune
Terrestrial	Marram/pohuehue-shore bindweed vineland.	Established foredune
Terrestrial	*Ficinia nodosa*-spinifex/pohuehue-shore bindweed vineland.	Transgressive dunefield
Terrestrial	*Ficinia nodosa*/pohuehue-shore bindweed sedgeland.	Transgressive dunefield
Terrestrial	*Ficinia nodosa*/pohuehue-shore bindweed vineland.	Transgressive dunefield
Terrestrial	Pampas/tall fescue-kikuyu grass grassland.	Transgressive dunefield
Estuarine	Sea rush tussockland.	Pond/lagoon
Estuarine	Impounded open water.	Pond/lagoon
Terrestrial	Sandfield. (Wildland Consultants 2007a, Wildland Consultants 2008a)	Beach sand

Vegetation and Indigenous Flora

The vegetation on the spit is dominated by indigenous species such as spinifex, pingao (At Risk-Relict), and pohuehue with occasional ti kouka and pohutukawa. Sand tussock (At Risk-Declining) has been recorded on the berm at the end of the spit in 1991 (and subsequent years) but has not been seen in recent years (Sarah Beadel pers. obs.). *Oxalis rubens* and *Zoysia pauciflora* (both regionally uncommon plant species) are present on dunes.

There is a lagoon (Department of Conservation reserve) at the southwest end of the spit which has been created by causeways which impound part of the estuary. Sea rush tussockland on the edges of the lagoon includes saltmarsh ribbonwood, oioi, and *Machaerina juncea.*

Indigenous Fauna

Maketū has the highest wading bird species diversity in the Bay of Plenty, including both internal and transequatorial migrants. This is the most important winter roost for New Zealand fairy tern (Threatened-Nationally Critical) in the Bay of Plenty, with 4-6 birds present each winter (J. Heaphy, Department of Conservation, pers. comm. 2006). The end of Maketū Spit, the

[1] Identified as SVHZ-105 in Wildland Consultants 1345 and 1742.

opposite side of the estuary mouth, and the paddocks near the Kaituna River are nesting areas for northern New Zealand dotterel (Threatened-Nationally Vulnerable) and variable oystercatcher (At Risk-Recovering) (not all of these are included in this site). North Island fernbird (At Risk-Declining) are present in the Wildlife Management Reserve and along the back of the dunes (J. Heaphy, Department of Conservation, pers. comm. 2006). Caspian tern, reef heron, banded dotterel and wrybill (all Threatened-Nationally Vulnerable); breeding banded rail (At Risk-Naturally Uncommon); and a range of migratory species have been recorded since 2003 (OSNZ 2006). In 2007, an Australasian bittern (Threatened-Nationally Endangered) was observed in the band of sea rush tussockland between the lagoon and Papahikawai Island (Wildland Consultants 2007a). A flight of eight royal spoonbills (At Risk-Naturally Uncommon) was observed flying over the spit (Wildland Consultants 2008a). Waders roost on sandspits on either side of estuary mouth (Owen *et al.* 2006). The poorly drained paddocks (outside of this site) are used by waders, waterbirds and coastal birds for feeding, roosting, and breeding. They are notable for banded dotterel and a range of uncommon wader species (24 species recorded in adjacent estuary), many from the northern hemisphere (Owen *et al.* 2006).

Shore skinks (not threatened) are common along the spit (J. Heaphy, Department of Conservation, pers. comm. 2006).

Condition/Pressures

Domestic cat release, hedgehogs and mustelids are the main pest problems at this location (J. Heaphy, Department of Conservation, pers. comm. 2006). Radiata pines and pampas are scattered along the southern face of the spit. Pampas is common on the edges of the lagoon. Kikuyu grass is spreading in to the indigenous dune vegetation from the vehicle track along the estuary edge. The surface of the lagoon is often covered in a dense algal bloom, probably as a result of lack of water movement.

Kermadec Island pohutukawa have been planted on the Spit and should be removed.

A community group is undertaking work on the spit to control predators and weeds and regularly undertakes 'beach cleanups'.

Oil from the Rena washed up on the beach in late 2011 and early 2012.

Key Site Features

Maketū Spit and Wildlife Management Reserve is located adjacent to Maketū Harbour and contains sand dune vegetation that is of regional significance. It provides habitat for two At Risk and two regionally uncommon plant species. Seven Threatened and four At Risk bird species have been recorded at this site. Shore skinks (not threatened) are common along the spit.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	M
	3.5	M
	3.6	H
Diversity and Pattern	3.7	H

Criterion*	RPS Number*	Ranking**
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	H
Viability and Sustainability	3.11	H
	3.12	M
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** Pingao (At Risk-Relict) Sand tussock (At Risk-Declining) (not recorded recently) **Avifauna:** New Zealand fairy tern (Threatened-Nationally Critical) Australasian bittern (Threatened-Nationally Endangered) Banded dotterel (Threatened-Nationally Vulnerable) Caspian tern (Threatened-Nationally Vulnerable) Northern New Zealand dotterel (Threatened-Nationally Vulnerable) Reef heron (Threatened-Nationally Vulnerable) Wrybill (Threatened-Nationally Vulnerable) North Island fernbird (At Risk-Declining) Banded rail (At Risk-Naturally Uncommon) Variable oystercatcher (At Risk-Recovering) **Other fauna:** Katipo spider (Chronically Threatened-Serious Decline)
ii	✓	Australasian bittern (Endangered) New Zealand dotterel (Endangered) Fairy tern (Vulnerable) Wrybill (Vulnerable)
iii	✓	High quality example of indigenous dune vegetation on a relatively unmodified sandspit.
iv		
v		Regionally Significant
vi		Partially protected (Maketū Wildlife Management Reserve, Department of Conservation)
Policy Met:		11(a)
Justification:		Maketū Spit and Wildlife Management Reserve is consistent with Policy 11(a) because it is a high quality example of dune vegetation (a vegetation and ecosystem type that is both threatened and originally rare), and it provides habitat to a suite of Threatened and At Risk plant and fauna species, including one species (katipo) which is at the southern limit of its distribution. Approximately 20% of the site is legally protected as a Wildlife Management Reserve and the remainder comprises WBOPDC reserve and unprotected areas.

Notes	The lagoon (Maketū Wildlife Management Reserve) is impounded by causeways and culverts, but has a high potential for restoration. Identified as a Category 1 natural area in the Tauranga Ecological District (Wildland Consultants 2008a). A community group (Maketū Ongatoroa Wetlands Group) aims to restore the spit and the lagoon.
References	Beadel 1994a, OSNZ 2006; Owen *et al.* 2006; Wildland Consultants 2006g; Wildland Consultants 2008a.

ARAWA WETLAND

Site Number [1]	118
Grid Reference (NZMG)	E2813769 N6375925
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	21.1 ha
Altitudinal Range	1-11 m asl
Geology-Landform Type	Low gradient alluvium
HVES Number	183

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Harakeke-*Coprosma propinqua-Machaerina juncea-Cyclosorus interruptus* flaxland.	Wetland
Palustrine	Saltmarsh ribbonwood-pampas shrubland.	Wetland
Palustrine	Raupo reedland.	Wetland
Palustrine	*Carex geminata-Machaerina articulata*-tall fescue grass-sedgeland.	Wetland
Terrestrial	Grey willow forest, treeland and shrubland.	Wetland
Terrestrial	Grey willow-harakeke-*Coprosma propinqua-Machaerina juncea-Cyclosorus interruptus* forest and shrubland.	Wetland
Terrestrial	Grey willow forest.	Wetland
Terrestrial	Mixed pampas-gorse-*Machaerina rubiginosa*-Japanese honeysuckle-blackberry-grey willow shrubland.	Wetland
Terrestrial	Pampas-raupo tussockland.	Wetland
Terrestrial	Tall fescue-raupo-Japanese honeysuckle grassland.	Wetland
Terrestrial	Robinia forest.	Hillslope
Terrestrial	Yorkshire fog (*Holcus lanatus*)-swamp millet-*Machaerina articulata*-tall fescue grassland.	Wetland
Terrestrial	Gorse shrubland. (Wildland Consultants 2010a	Hillsope

Vegetation and Indigenous Flora

Four Threatened species (as per de Lange 2009) are present in this wetland - two wetland ferns, *Cyclosorus interruptus* and *Thelypteris confluens* (both At Risk-Declining), two orchids *Pterostylis micromega* (Threatened-Nationally Critical) and *Pterostylis* aff. *graminea* (Naturally Uncommon) were recorded in 2010 (Wildland Consultants 2010a). This is the only currently known population of *P. micromega* in the Bay of Plenty, and the other three species have been recorded in only two or three other sites within Tauranga Ecological District.

Other species present include swamp coprosma, swamp kiokio, swamp millet, and *Nertera scapanioides* (Wildland Consultants 2010a).

Indigenous Fauna

Inanga (At-Risk-Declining) are present at this site (Wildland Consultants 2010a).

Condition/Pressures

The hydrology of Arawa Wetland has been drastically altered in the past by the construction of a causeway separating it from the estuary, and a system of drains and canals. Grey willow dominates large areas within the wetland

[1] Identified as SVHZ-107 In Wildland Consultants 2006g.

while pampas forms a dense fringe along the road edge. Robinia and gorse dominate a small area of higher ground to the south-east side of the wetland, an edge which is otherwise bounded by pastoral farms (cattle). Several weed species including agapanthus, brush wattle, barberry, wild ginger, blackberry, tradescantia and arum lily occur in the wetland (Wildland Consultants 2010a).

Key Site Features

Whilst Arawa Wetland is heavily modified by pest plants in some areas, this moderately-sized site contains one of the few remaining examples of the formerly large Kawa swamp located west of Maketū (Kirk 1873). It forms part of an ecological sequence which includes Maketū Estuary, another regionally significant site. The site includes one of only a few populations in the Tauranga Ecological District of two Threatened and two At Risk plant species. The populations of two of these species (*Cyclosorus interruptus* and *Thelypteris confluens*) are some of the larger populations of these species in the Region.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	M
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** *Pterostylis micromega* (Threatened-Nationally Critical) *Cyclosorus interruptus* (At Risk-Declining) *Thelypteris confluens* (At Risk-Declining) *Pterostylis* aff. *graminea* "sphagnum" (At Risk-Naturally Uncommon) **Fish:** Inanga (At Risk-Declining)
ii		
iii	✓	Parts are highly degraded but there is a very small, very high quality area that is an important habitat for threatened plant species.
iv		
v		Regionally Significant

Policy	Criteria Met	Explanation
vi		Unprotected
Policy Met:		11(a)
Justification:		Parts of Arawa Wetland are very degraded but the small, central part of the site is a very high quality example of palustrine wetland. It includes the only currently known population of *Pterostylis micromega* (Threatened-Nationally Critical) in the Bay of Plenty, and the other three species have been recorded in only two or three other sites within Tauranga Ecological District. For these reasons, Arawa Wetland is consistent with Policy 11(a) because it provides habitat for a suite of Threatened and At Risk flora and one At Risk fish species, but weeds such as grey willow and pampas are common and the hydrology of the wetland has been dramatically altered.

Notes

This site has been identified as a Category 2 natural area in the Tauranga Ecological District (Wildland Consultants 2008a). The site forms part of the Smartgrowth 'Coastal strip' corridor, ranked as being highest priority, and is also part of the Smartgrowth Corridor 'Kaituna', ranked as being Second-Priority Level 1 (Wildland Consultants 2007a, 2007b). Restoration options for this site have been identified and are currently being considered.

References

Beadel 1989b; Beadel 1994a; Kirk 1873; Wildland Consultants 2006g; Wildland Consultants 2007c; Wildland Consultants 2007b; Wildland Consultants 2008a; Wildland Consultants 2010a.

ŌKUREI POINT

Site Number [1]	121
Grid Reference (NZMG)	E2815781 N6378126
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	16.7 ha
Altitudinal Range	0-52 m
Geology-Landform Type	Sedimentary (volcanic) unconsolidated

Hydrosystem	Vegetation / Habitat Type	Landform
Terrestrial	Pohutukawa treeland.	Cliff, steep hillslope
Terrestrial	Mahoe forest and mamaku treefernland	Hillslope
Terrestrial	Spinifex grassland.	Established foredune
Terrestrial	Pohuehue-buffalo grass vineland.	Incipient and established foredune
	(Wildland Consultants 2007a, Wildland Consultants 2008a)	

Vegetation and Indigenous Flora

There are scattered areas of pohutukawa treeland on the cliffs around Ōkurei Point. Taupata and a suite of exotic species are present in the understorey. At the base of the cliff there is a rock and boulderfield and, on the east side of the point is Newdick's Beach. At the southern end of the beach there is a narrow strip of spinifex grassland and pohuehue-buffalo grass vineland. There are occasional patches of pingao (At Risk-Relict) within the spinifex grassland. To the south of the site, adjacent to the road which leads to Waihī, secondary forest is present on the hillslope.

Indigenous Fauna

Ōkurei Point is a nesting site of northern little blue penguin (A Risk-Declining) (K. Owen, Department of Conservation, pers. comm. 2012). The small stream at the northern end of Newdick's Beach is habitat for giant kōkopu (At Risk-Declining) (Wildland Consultants 2006g) and inanga (At Risk-Declining) (NZFFD record).

Condition/Pressures

Weed species present within the pohutukawa treeland include barberry, boneseed, brush wattle, gorse, maritime pine, moth plant, pampas, radiata pine, and exotic pasture grasses. Buffalo grass is present on the dunes. The dunes are also effected by horse trekking and vehicles.

Northern little blue penguins and other seabirds were casualities of the Rena oil Spill (2011), and oil washed up on the rocks around Ōkurei Point.

Key Site Features

Ōkurei Point is a breeding site for northern little blue penguin. Coastal pohutukawa forest and indigenous sand dune vegetation are present. These habitats have been greatly reduced in extent in the Tauranga Ecological District, but larger and better quality examples of the types remain (e.g. pohutukawa forest at Mauao, Bowentown Heads, and sand dunes at Pāpāmoa and Maketū).

[1] Identified as SVHZ-216 in Wildland Consultants Contract Report 1742.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	L
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	M
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** Pingao (At Risk-Relict) **Fauna:** Giant kōkopu (At Risk-Declining) Inanga (At Risk-Declining) Northern little blue penguin (At Risk-Declining)
ii	✓	Giant kōkopu (Vulnerable)
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Pohutukawa treeland, mahoe forest, mamaku treefernland, spinifex grassland, and pohuehue vineland.
ii	✓	Nesting site for northern little blue penguin (At Risk-Declining)
iii	✓	Pohutukawa treeland, spinifex grassland, and pohuehue vineland.
iv	N/A	
v	✓	The stream mouth at the northern end of Newdick's Beach is a migratory pathway and habitat of giant kōkopu (At Risk-Declining).
vi		
Policy Met:		11(b)
Justification:		The values of Ōkurei Point are consistent with Policy 11(b) because the site comprises modified examples of indigenous vegetation types, including types that are confined to the coastal environment (i.e. pohutukawa treeland on cliffs, and spinifex and pohuehue dominated duneland). Northern little blue penguin (At Risk-Declining) nest at the tip of the point, and the stream mouth at the northern end of Newdick's Beach is a habitat and migratory pathway for giant kōkopu, inanga, and other native fish species.

Notes	The local coast care group planted pingao and spinifex (500) in 2005 (with help from an EEF grant). Identified as a Category 3 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).
References	Beadel 1994a; OSNZ 2006, Wildland Consultants 2003n, Wildland Consultants 2006g; Wildland Consultants 2007a; Wildland Consultants 2008a.

WAIHĪ ESTUARY - UNVEGETATED AND SPARSELY VEGETATED INTERTIDAL AND SUBTIDAL AREAS

Site Number	124
Grid Reference (NZMG)	E2816924 N6375649
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (WBOPDC reserve) and unprotected parts
Site Area	302.9 ha
Altitudinal Range	0 m
Geology-Landform Type	Unvegetated and sparsely vegetated intertidal and subtidal area

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Brush wattle scrub.	Sand dune
Terrestrial	Manuka scrub.	Sand dune
Estuarine	(Saltmarsh ribbonwood)/sea rush-(oioi)-(*Machaerina juncea*) tussockland.	Intertidal flat
Estuarine	(Saltmarsh ribbonwood)-(*Olearia solandri*)-(taupata)-(harakeke)-(karo)/tall fescue-*Ficinia nodosa*-sea couch (*Elytrigia pycnantha*) grassland.	Intertidal flat
Estuarine	Open water.	Estuary
Marine	Worm field.	Subtidal channel
Marine	Worm field.	Intertidal flat
Marine	Cockle bed.	Intertidal flat
Marine	Pipi bed.	Subtidal channel
	(Beadel and Wallace 1989; Stephen Park, Environment BOP, pers. comm. 2006; Ray Bushell pers. comm. 2006; Wildland Consultants 2006g).	

Indigenous Flora

No significant species recorded.

Indigenous Fauna

Seven species which are classified as Threatened or At Risk have been recorded at Waihī Estuary: white heron (Threatened-Nationally Critical), Australasian bittern (Threatehed-Nationally Endangered), northern New Zealand dotterel, wrybill, Caspian tern, banded dotterel (all of which are Threatened-Nationally Vulnerable) and North Island fernbird (At Risk-Declining) (OSNZ 2006, BOPRC 2012). The estuary is also a wintering site for variable oystercatcher (At Risk-Recovering) and pied stilt (At Risk-Declining) (Dowding and Moore 2006), and various migrant species have been recorded since 2003 (OSNZ 2006). Several sandbanks and low-lying islands in the estuary are shorebird roosts (Owen *et al.* 2006).

The estuary provides habitat for estuarine fish, and habitat and migratory pathways for a suite in indigenous freshwater fish.

Condition/Pressures

Waihī Estuary is surrounded by intensively managed agricultural land (mainly dairy farms) which results in nutrient inputs to the estuary. Leaking septic tanks at Little Waihī and Pukehina may also affect the estuary. It has been modified by hydrological changes associated with stopbanking, and canalisation of waterways to reduce the risk of flooding of surrounding agricultural land. Pampas and brush wattle are widespread on the harbour margins and islands.

Key Site Features A relatively large estuary system containing regionally representative vegetation and habitat types. Pest plant pressure is impacting on parts of the site. Threatened and At Risk shorebird species are present, in addition to various migratory wader species which utilise the estuary regularly. Therefore, it is a regionally important bird habitat.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	M
	3.6	M
Diversity and Pattern	3.7	H
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	H
	3.12	M
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** White heron (Threatened-Nationally Critical) Australasian bittern (Threatened-Nationally Endangered) Banded dotterel (Threatened-Nationally Vulnerable) Caspian tern (Threatened-Nationally Vulnerable) Northern New Zealand dotterel (Threatened-Nationally Vulnerable) Wrybill (Threatened-Nationally Vulnerable) North Island fernbid (At Risk-Declining) Pied stilt (At Risk-Declining) Variable oystercatcher (At Risk-Recovering)
ii	✓	Australasian bittern (Endangered) New Zealand dotterel (Endangered) Wrybill (Vulnerable)
iii		
iv		Regionally significant
v		
vi		
11(b)		
i	✓	Sparsely vegetated intertidal flats and subtidal channels and flats.
ii		

Policy	Criteria Met	Explanation
iii	✓	The site is of an ecosystem type that is confined to the coastal environment.
iv	N/A	
v	✓	The estuary is a migratory pathway for freshwater fish and is habitat for migratory birds.
vi		
Policy Met:		11(b)
Justification:		Waihī Estuary provides habitat for a suite of Threatened and At Risk species of avifauna and is a migratory pathway for Threatened and At Risk species of freshwater fish. However, it has been heavily modified by flood prevention works and surrounding land uses. Therefore, it is not amongst the best examples of estuarine ecosystems in the Region and is consistent with Policy 11(b).

Notes Recommended for RAMSAR status in Owen *et al*. 2006. Identified as a Category 1 natural heritage area in the Tauranga Ecological District (Beadel and Shaw 2000b).

References Beadel and Wallace 1989; Beadel and Shaw 2000b; Dowding and Moore 2006; OSNZ 2006; Owen *et al.* 2006; Wildland Consultants 2006g, BOPRC 2012.

WAEWAETUTUKI (PART)[1]

Site Number [2]	120
Grid Reference (NZMG)	E2815944 N6374702
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Unprotected
Site Area	77.8 ha
Altitudinal Range	0-18 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Ti kouka/grey willow forest.	Wetland
Palustrine	Raupo reedland.	Wetland
Palustrine	*Azolla filiculoides*-duckweed herbfield.	Wetland
Palustrine	*Azolla filiculoides*-Mercer grass fernland.	Wetland
Palustrine	Ti kouka/raupo-*Baumea articulata*-*Coprosma propinqua* shrub-reedland.	Wetland
Palustrine	Ti kouka/*Coprosma propinqua*-*Muehlenbeckia complexa*/raupo reedland.	Wetland
Palustrine	*Carex sinclairii* sedgeland.	Wetland
Palustrine	*Schoenoplectus tabernaemontani* reedland.	Wetland
Palustrine	*Baumea articulata* reedland.	Wetland
Palustrine	*Azolla filiculoides*-bachelor's button herbfield.	Wetland
Palustrine	*Mimulus repens*-bachelor's button-arrow grass-creeping bent-*Isolepis cernua* herbfield.	Wetland
Palustrine	Grey willow-(ti kouka) forest with local raupo.	Wetland
Palustrine	Grey willow-ti kouka/raupo-(pampas) treeland.	Wetland
Palustrine	Ti kouka/*Coprosma propinqua* subsp. *propinqua*-harakeke-(pampas) shrubland.	Wetland
Estuarine	Sea rush-oioi tussockland with occasional mangrove and saltmarsh ribbonwood.	Intertidal flat
Palustrine	Open water.	Pond
Estuarine	Mangrove scrub.	Intertidal flat
	(Beadel 2012, Wildland Consultants 2008a)	

Vegetation and Indigenous Flora

The flora of the wetland is very diverse, with some very special features. Four threatened or uncommon species occur in the wetland: *Pterostylis micromega* (Nationally Critical), *Mimulus repens* (At Risk-Naturally Uncommon), *Cyclosorus interruptus* (At Risk-Declining), and *Ranunculus macropus* (Data Deficient). This site contains the largest known population (over 250 plants) of *P. micromega* in the Bay of Plenty, and one of the largest populations known to exist. This is the only record of *M. repens* in the Bay of Plenty since the mid-1990s.

Other species present include *Carex fascicularis, Pterostylis* aff. *Banksii* "Summer", and *Spergularia tasmanica. Carex fascicularis* is not common in the Bay of Plenty, being known from only a few sites. *Pterostylis* aff. *Banksii* "Summer" has been recorded from only two other wetlands in the Bay of Plenty. *Spergularia tasmanica* has only previously been recorded from one or two sites elsewhere in the Bay of Plenty.

[1] Part of Waewaetutuki occurs outside the 'coastal environment' study area (i.e. further than 1 km inland of MHWS).

[2] Identified as SVHZ-109 in Wildland Consultants 2006g.

Mangrove are scattered along small channels within the intertidal flats in the estuary.

Indigenous Fauna

Australasian bittern (Threatened-Nationally Endangered), banded rail (At Risk-Naturally Uncommon), North Island fernbird (At Risk-Declining), and pied stilt (At Risk-Declining) are present (Beadel 2012 and S.M. Beadel pers. comm.). Welcome swallow, pukeko, North Island fantail, Australasian harrier, mallard, goldfinch, skylark, Australian magpie and starling were observed at this site (Wildland Consultants 2008a). Giant kōkopu (At Risk-Declining) are present in the Mangatoetoe Stream. The adjacent Kaikokopu Canal is an inanga spawning site (1988) and a migratory pathway for native fish species, including inanga (At Risk-Declining), redfin bully (At Risk-Declining), and longfin eel (At Risk-Declining) (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Four royal fern plants were present. Two of these were pulled out, but two were too large to remove - *c.*1 m tall × 1 m wide. A full survey of the wetland should be undertaken to determine the extent of this species, followed by control. Two small clumps of ginger were found and these were also removed. Arum lily was scattered beneath the area of grey willow that had been aerially sprayed, and one plant was seen in the grey willow forest further to the north. Pampas and Japanese honeysuckle were present locally, and a few plants of *Carex lurida*, reed sweet grass, and Chinese privet are also present. Blackberry is common along the edges and locally present beneath the canopy. Waewaetutuki is grazed by cattle and the site is damaged by trampling and browsing. The wetland is dissected by drains. At least two small areas have been previously excavated to create an open water area in the northern end of the wetland, and one area in the southern end. The wetlands are used for duck shooting, and two maimai were seen. (Beadel 2012.)

Future management of the wetland needs careful consideration. Issues include pest plant management, grazing, and drainage. One area of willow has been aerially sprayed and this area appears to no longer provide habitat suitable for *Pterostylis micromega*. However, conditions currently elsewhere at Waewaetutuki are suitable for *P. micromega*, and it would be advisable to continue current levels of grazing to maintain habitat suitable for this species. This is consistent with observations of *P. micromega* at other sites (de Lange *et al*. 2010). Control of royal fern in the wetland is also important. (Beadel 2012.)

M. repens also requires low open habitat. Without some level of grazing it is likely that the site where it currently occurs would be invaded with taller-growing species which would displace the *M. repens*. (Beadel 2012.)

Key Site Features

This wetland is of very high ecological value. It contains a large and highly significant population of a nationally critical plant species, along with three other threatened plant species, and more may be discovered in the future. It is part of one of the last substantial examples of freshwater wetland vegetation on the Pongakawa Plains. Prior to drainage, the plains were largely wetland. This site is large and compact in shape and includes a sequence from saltwater to freshwater wetland. The estuarine vegetation is representative of the remaining saltmarsh in Waihī Estuary.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	M
	3.5	M
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Australasian bittern (Threatened-Nationally Endangered) Banded rail (At Risk-Naturally Uncommon) North Island fernbird (At Risk-Declining) Pied stilt (At Risk-Declining) **Fish:** Giant kōkopu (At Risk-Declining) Inanga (At Risk-Declining) Longfin eel (At Risk-Declining) Redfin bully (At Risk-Declining) **Flora:** *Pterostylis micromega* (Nationally Critical) *Mimulus repens* (At Risk-Naturally Uncommon) *Cyclosorus interruptus* (At Risk-Declining) *Ranunculus macropus* (Data Deficient)
ii	✓	Australasian bittern (Endangered) Giant kōkopu (Vulnerable)
iii	✓	Largest wetland on the Pongakawa Plains, contiguous with Waihī Estuary.
iv		
v		Nationally Significant
vi		Unprotected
11(b)		
i	✓	Sea rush-oioi tussockland, mangrove scrub, and grey willow forest with indigenous species in the understorey.
ii		
iii	✓	Sea rush-oioi tussockland and mangrove scrub.

Policy	Criteria Met	Explanation
iv	N/A	
v		
vi	✓	Part of an ecological corridor that extends inland from Waihī Estuary.
Policy Met:		11(a)
Justification:		Waewaetutuki is a large example of freshwater wetland on the Pongakawa Plains. It is contiguous with Waihī Estuary, and contains smaller areas of estuarine vegetation. Several Threatened and At Risk plant and bird species are present, including one of the best populations of a Nationally Critical plant species. For these reasons, it is consistent with Policy 11(a). Freshwater wetlands have been greatly reduced in extent and quality in the ecological district and this site is affected by weeds, grazing, and drainage.

Notes Identified as a Category 1 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

References Beadel 2012; Beadel and Wallace 1989; Beadel 1989e; Beadel 1994a; Wildland Consultants 2006g; Wildland Consultants 2008a.

WHARERE ROAD WETLAND

Site Number [1]	122
Grid Reference (NZMG)	E2816450 N6374538
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (Department of Conservation, unnamed Wildlife Management Reserve)
Site Area	3.7 ha
Altitudinal Range	3-7 m asl
Geology-Landform Type	Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Open water.	Pond
Palustrine	(Ti kouka)/raupo-(pampas)-(*Coprosma propinqua* subsp. *propinqua*) reedland. (Wildland Consultants 2008a)	Wetland

Vegetation and Indigenous Flora

Mamaku, mahoe and ponga grow on the stopbanks along the eastern edge of the wetland. Other indigenous species which were noted at this site are pohuehue, taupata, and harakeke.

Indigenous Fauna

Australasian bittern (Threatened-Nationally Endangered), grey duck (Threatened-Nationally Critical) and pied stilt (At Risk-Declining) recorded (Wildland Consultants 2006g). North Island fernbird (At Risk-Declining) and banded rail (At Risk-Naturally Uncommon) are present in the adjacent wildlife management reserve (Rasch 1989a) and likely to be present here. Other bird species which were observed at this site include pukeko, Australasian harrier, pied shag (Threatened-Nationally Vulnerable), welcome swallow, goldfinch, starling, and large numbers of ducks (Wildland Consultants 2008a). A range of waterbird species is present.

Condition/Pressures

Stopbanks completely surround the wetland and are infested with pampas. Silver wattle and grey willow are also present on the stopbanks in low numbers. The stopbanks are grazed by cattle, but the wetland is probably too wet for cattle to enter it. Eastern Region Fish and Game Council is working to restore this wetland by improving water quality flows, removing pampas, and creating open water for waterbirds. There appears to be more open water here than at comparable nearby sites. Fish and Game would like to control raupo to maintain this extent.

Key Site Features

This is a small site containing freshwater vegetation and habitat. It is regionally significant because it forms part of an ecological sequence that includes a regionally significant site (Waihī Estuary, SVHZ-112). Three Threatened and one At Risk bird species use this area. It provides habitat for large numbers of waterbirds. Stop-banking has altered water flows, and created dryland habitat into which pampas has invaded.

[1] Identified as SVHZ-110 in Wildland Consultants 2006g.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	L
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Grey duck (Threatened-Nationally Critical) Australasian bittern (Threatened-Nationally Endangered) Pied shag (Threatened-Nationally Vulnerable) Pied stilt (At Risk-Declining)
ii	✓	Australasian bittern (Endangered)
iii		
iv		
v		Regionally Significant
vi	✓	Protected (Wildlife Management Reserve, Department of Conservation)
11(b)		
i	✓	Open water and raupo-dominated reedland.
ii		
iii		
iv	N/A	
v		
vi	✓	Part of an ecological corridor that extends inland from Waihī Estuary and includes the site 'Waewaetutuki'.
Policy Met:		11(b)
Justification:		Wharere Road Wetland is legally protected, and Threatened and At Risk avifauna species have been recorded at the site, but it is a relatively small example of palustrine wetland that has been modified by weeds, stopbanks, and grazing. Therefore values are consistent with Policy 11(b).

Notes

The site forms part of the Smartgrowth 'Coastal strip' corridor, ranked as being highest priority, and is also part of the Smartgrowth Corridor 'Rotoiti

Hills to Waihī Estuary', ranked as being longer-term priority (Wildland Consultants 2007c, Wildland Consultants 2007b).

Identified as a Category 3 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

References

Mitchell 1990; Wildland Consultants 2007a; Wildland Consultants 2007b; Wildland Consultants 2006g; Wildland Consultants 2008a.

WAIHĪ ESTUARY SOUTHERN MARGIN

Site Number [1]	125
Grid Reference (NZMG)	E2817331 N6374683
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (Department of Conservation, Government Purpose Reserve - Waihī Estuary, Estuary Wildlife Management Reserve and Pukehina Beach Marginal Strip) and unprotected parts
Site Area	46.5 ha
Altitudinal Range	0-3 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Pampas/tall fescue-*Juncus* sp./Mercer grass tussockland with areas of open water, *Machaerina articulata,* sea rush and occasional *Cyperus ustulatus*.	Wetland
Palustrine	Sea rush tussockland with local bachelor's button herbfield.	Wetland
Estuarine	Sea rush-oioi tussockland.	Intertidal flat
Estuarine	Saltmarsh ribbonwood/sea couch-sea rush-(*Machaerina juncea*)-(oioi) shrubland with occasional harakeke, pampas and *Coprosma propinqua* subsp. *propinqua*.	Intertidal flat
Estuarine	Sea couch-sea rush-oioi grassland.	Intertidal flat
Palustrine	Raupo reedland.	Wetland
Estuarine	Pampas-saltmarsh ribbonwood/sea rush-oioi shrubland.	Intertidal flat
Palustrine	Open water.	Pond
Estuarine	*Olearia solandri*/saltmarsh ribbonwood/sea rush-oioi shrubland.	Intertidal flat
Estuarine	Oioi-sea rush tussockland.	Intertidal flat
Palustrine/Estuarine	Raupo-*Bolboschoenus fluviatilis* reedland.	Wetland
Estuarine	*Schoenoplectus pungens* sedgeland. (Beadel 1991b and Wildland Consultants 2008a)	Intertidal flat

Vegetation and Indigenous Flora

The southern part of the site between Wharere Canal and Pongakawa Canal, was grazed pasture until 2005, when it was re-flooded. This area now includes indigenous species such as sea rush and *Machaerina articulata* but pampas is widespread and areas of rank pasture remain. Herbfield dominated by bachelor's button, with *Mimulus repens* (native musk) (At Risk-Naturally Uncommon), *Spergularia* sp., buck's-horn plantain (*Plantago coronopus*), arrow grass, *Selliera radicans*, *Isolepis cernua* and *Samolus repens* was recorded in 1991 (Beadel 1991b). This habitat may have since been modified through the invasion of pampas or other exotic species or it may have been flooded and it is uncertain whether it is still present at this site. *Bolboschoenus caldwellii* (regionally uncommon) was also recorded at this site in 1991 (Beadel 1991b), as was *Olearia solandri* and maru (both regionally uncommon).

Raupo and *Bolboschoenus fluviatilis* reedland and an area of *Schoenoplectus*

[1] Identified as SVHZ-111 and Site Name 049 in Wildland Consultants Ltd 2006g and 2008a.

pungens sedgeland have been invaded along the edges of stopbanks by pampas.

Fauna

Wrybill (Threatened-Nationally Vulnerable), Caspian tern (Threatened-Nationally Vulnerable), northern New Zealand dotterel, banded dotterel (both Threatened-Nationally Vulnerable); and various migratory species have been recorded since 2003 (OSNZ 2006). It is a wintering site for variable oystercatcher (At Risk-Recovering) and pied stilt (At Risk-Declining) (Dowding and Moore 2006).

Australasian bittern (Threatened-Nationally Endangered), and banded rail (At Risk-Naturally Uncommon) and North Island fernbird (At Risk-Declining) inhabit this wetland (K. Owen, Department of Conservation, pers. comm. 2006.).

More than 50 pukeko and 100 mallard were observed at this site in 2008 (Wildland Consultants 2008a). This site is likely to provide habitat for grey duck (Threatened-Nationally Critical). New Zealand kingfisher, North Island fantail, pied shag (Threatened-Nationally Vulnerable) and black shag (At Risk-Naturally Uncommon) were also observed at this site (Wildland Consultants 2008a).

The Pongakawa Canal is a migratory pathway for indigenous species, including longfin eel and inanga (both At Risk-Declining) (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Drainage has reduced the extent of wetlands around Waihī Estuary, and existing land uses (predominantly dairy farming) continue to put pressure on the site, the adjacent waterways, and Waihī Estuary. Invasive weeds include pampas, grey willow, and sea couch. Sea couch is a problem because it reduces the area of habitat for estuarine birds (Owen 1993, 1994a). Pampas is particularly common in the Department of Conservation reserve, which was re-flooded in 2005. In addition to thick pampas, grey willow, gorse, brush wattle, and silver wattle are present along the stopbanks.

Key Site Features

This site is a relatively large and intact representative example of saltmarsh vegetation in Waihī Estuary, where this habitat type has been greatly reduced in extent (Beadel 1994a). The site provides habitat for an At Risk (*Mimulus repens*) and three regionally uncommon plant species. Six Threatened and five At Risk bird species, and various migratory wader species, have recently been recorded here, and it is a regionally important bird habitat.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M

Criterion*	RPS Number*	Ranking**
Ecological Context	3.9	H
	3.10	L
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** *Mimulus repens* (At Risk-Naturally Uncommon) (1991) **Avifauna:** Australasian bittern (Threatened-Nationally Endangered) Banded dotterel (Threatened-Nationally Vulnerable) Caspian tern (Threatened-Nationally Vulnerable) Northern New Zealand dotterel (Threatened-Nationally Vulnerable) Pied shag (Threatened-Nationally Vulnerable) Wrybill (Threatened-Nationally Vulnerable) Pied stilt (At Risk-Declining) North Island fernbird (At Risk-Declining) Banded rail (At Risk-Naturally Uncommon) Black shag (At Risk-Naturally Uncommon) Variable Oystercatcher (At Risk-Recovering) **Fish:** Inanga (At Risk-Declining) Longfin eel (At Risk-Declining)
ii	✓	Australasian bittern (Endangered) New Zealand dotterel (Endangered) Wrybill (Vulnerable)
iii	✓	Estuarine wetland that is relatively large (in relation to the size of Waihī Estuary.
iv		
v		Regionally Significant
vi	✓	Partially protected (Wildlife Management Reserve, Department of Conservation)
Policy Met:		11(a)
Justification:		Waihī Estuary Southern Margin is consistent with Policy 11(a) because it provides habitat for a suite of Threatened and At Risk bird species, most of the site is protected, and in the context of Waihī Estuary it is a relatively large example of estuarine wetland.

Notes Identified as a Category 1 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

The site forms part of the Smartgrowth 'Coastal strip' corridor, ranked as being highest priority, and is also part of the Smartgrowth Corridor 'Rotoiti Hills to Waihī Estuary', ranked as being longer-term priority (Wildland Consultants 2007c, 2007b).

References

Beadel 1991b; Beadel 1994a; Owen 1993; Wildland Consultants 2007c; Wildland Consultants 2007b; Dowding and Moore 2006; OSNZ 2006; Wildland Consultants 2008a.

PUKEHINA SPIT

Site Number [1]	123
rid Reference (NZMG)	E2817036 N6376633
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (Department of Conservation, Pukehina Beach Marginal Strip, WBOPDC reserve) and unprotected parts
Site Area	4.8 ha
Altitudinal Range	0 m asl
Geology-Landform Type	Sand

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Spinifex-(pingao)-(sand tussock)/shore bindweed grassland.	Berm
Terrestrial	Spinifex-dimorphotheca-iceplant grassland.	Incipient foredune
Terrestrial	Norfolk Island pine-pohutukawa/*Ficinia nodosa*/pohuehue-ice plant sedge-vineland. (Wildland Consultants 2008a)	Established foredune

Vegetation and Indigenous Flora

Pukehina Spit comprises a heavily wave cut and eroded berm with incipient and well vegetated established foredunes behind the berm at the base of the spit. The berm has been reduced in area by wave erosion (Wildland Consultants 2008a). Pingao (At Risk-Relict) is present on the front face of the fore dune, particularly in front of the surf club where it may have been planted. Sand tussock (At Risk-Declining) is present on the remaining area of berm at the eastern end of the spit and may also have been planted here. *Oxalis rubens,* a regionally uncommon species, also occurs at this site.

Indigenous Fauna

A spring high tide roost for waders (Owen *et al.* 2006), especially wintering variable oystercatcher (At Risk-Recovering) and pied stilt (At Risk-Declining) (Dowding and Moore 2006).

This is a nesting site for northern New Zealand dotterel (Threatened-Nationally Vulnerable) and variable oystercatcher (J. Heaphy, Department of Conservation, pers. comm. 2006).

Northern New Zealand dotterel, wrybill, banded dotterel, Caspian tern (all Threatened-Nationally Vulnerable); various migrant species recorded since 2003 (OSNZ 2006).

The fauna described for this site does not constitute an exhaustive account. A wide variety of indigenous invertebrates will be present in microsites with indigenous habitats, including, but not limited to, Crustaceans, Myriopods, Arachnids, and Hexapods including Diplurans, Proturans, Collembolids, and Insecta. Of indigenous vertebrates, only shore skink (not threatened) is likely to occur.

Condition/Pressures

The site to adjacent to a residential area and is used for recreation. Humans and domestic cats and dogs, therefore, disturb nesting dotterel. Rabbit browse was observed on sand tussock (Wildland Consultants 2008a). There

[1] Identified as SVHZ-113 in Wildland Consultants 2006g.

are occasional small specimens of Norfolk pine, Sydney golden wattle, and maritime pine. Iceplant is aggressively invading sedge-vineland, and arctotis and dimorphotheca are colonising spinifex grassland. Kikuyu grass and couch are invading vineland adjacent to the carpark beside surf club.

Key Site Features

This relatively small site contains good examples of sand dune vegetation. Two At Risk and one regionally uncommon dune plant species are present. Four Threatened and two At Risk bird species, and various migratory wader species utilise this area regularly, making it regionally important bird habitat. Pressures on habitat and indigenous fauna come mainly from activity associated with adjacent residential areas.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	H
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** Pingao (At Risk-Relict) (planted and natural) Sand tussock (At Risk-Declining) (planted?) **Avifauna:** Banded dotterel (Threatened-Nationally Vulnerable) Caspian tern (Threatened-Nationally Vulnerable) Northern New Zealand dotterel (Threatened-Nationally Vulnerable) Wrybill (Threatened-Nationally Vulnerable) Pied stilt (At Risk-Declining) Variable oystercatcher (At Risk-Recovering)
ii	✓	New Zealand dotterel (Endangered) Wrybill (Vulnerable)
iii		
iv		

Policy	Criteria Met	Explanation
v		Regionally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a WBOPDC reserve.
11(b)		
i	✓	Spinifex dominated grassland and dominated sedgeland and vineland dominated by *Ficinia nodosa* and pohuehue.
ii	✓	Nesting site of northern New Zealand dotterel (Threatened-Nationally Vulnerable)
iii	✓	Spinifex dominated grassland and sedgeland and vineland dominated by *Ficinia nodosa* and pohuehue.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Pukehina Spit comprises sand dune vegetation and is a spring high tide roost for wading birds, including Threatened and At Risk species. Populations of one At Risk plant species, and another which was probably planted occur at this site. Northern New Zealand dotterel (Threatened-Nationally Vulnerable) nest on the spit. The site is consistent with Policy 11(b).

Notes Identified as a Category 3 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

References Wildland Consultants 2005d; Dowding and Moore 2006; OSNZ 2006; Owen *et al.* 2006; Wildland Consultants 2006g; Wildland Consultants 2008a.

PUKEHINA

Site Number [1]	126
Grid Reference (NZMG)	E2822269 N6372036
Local Authority	Western Bay of Plenty District Council
Ecological District	Tauranga
Protection Status	Protected (WBOPDC reserve) and unprotected parts
Site Area	16.8
Altitudinal Range	1-20 m asl
Geology-Landform Type	Sand, Volcanic soft rock

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Sea rocket-*Chenopodium album* sandfield.	Berm
Terrestrial	Spinifex sandfield.	Incipient foredune
Terrestrial	Spinifex-marram-ice plant/shore bindweed grassland.	Incipient foredune
Terrestrial	Marram/ice plant-pohuehue/shore bindweed grassland.	Incipient foredune
Terrestrial	*Ficinia nodosa*/pohuehue-bracken-(*Cyperus ustulatus*) vineland.	Established foredune
Terrestrial	*Ficinia nodosa*-pohuehue sedgeland.	Established foredune
Terrestrial	Pampas/*Ficinia nodosa*/pohuehue sedgeland.	Established foredune
Terrestrial	Ti kouka-taupata/blackberry-exotic grasses shrubland.	Established foredune
Terrestrial	(Ti kouka)/pampas/gorse scrub.	Established foredune
Terrestrial	Pohutukawa-taupata-boxthorn shrubland.	Cliffland
Terrestrial	Pohutukawa treeland and forest with taupata and *Einadia trigonos*.	Cliffland
Terrestrial	Sandfield. (Wildland Consultants 2008a)	Beach sand

Vegetation and Indigenous Flora

Pukehina comprises a narrow strip of coastline containing both hard and soft coast. Dunes alternate with coastal cliffs some of which comprise pyroclastic ash fall and pumice that probably originated from within the Okataina volcanic centre. Coastal cliffs vegetation is generally sparse; however several stands of mature pohutukawa are present. Dune vegetation within the site is dominated by spinifex and pingao (At Risk-Relict) and pohuehue on established foredunes. Pingao has been planted here, though wild established plants are also present. Three plants of sand tussock (At Risk-Declining) are also present at the southern end of the site. These are likely to have naturally established in this site. *Einadia trigonos*, *Oxalis rubens*, and *Zoysia pauciflora* (all regionally uncommon plant species) are present.

Indigenous Fauna

Caspian tern (Threatened-Nationally Vulnerable) and white-fronted tern (At Risk-Declining) have been recorded roosting since 2003 (OSNZ 2006). Variable oystercatcher (At Risk-Recovering) were recorded in 2008 (Wildland Consultants 2008a).

The fauna described for this site does not constitute an exhaustive account. A wide variety of indigenous invertebrates will be present in microsites with indigenous habitats, including, but not limited to, Crustaceans, Myriopods, Arachnids, and Hexapods including Diplurans, Proturans, Collembolids, and Insecta. Of indigenous vertebrates, only shore skink (not threatened) is likely

[1] Identified as SVHZ-114 in Wildland Consultants 2006g.

to occur.

Condition/Pressures Weed species present include African boxthorn, Japanese honeysuckle, lupin, marram, pampas, smilax, and iceplant. These weeds are scattered throughout the site, with dense infestations in some areas, particularly near residential properties. African boxthorn forms extensive shrublands and scrub on and behind established foredunes in the southern half of the site. Weeds are establishing from garden waste at the road end near Pukehina Redoubt.

Key Site Features This site is relatively narrow and comprises a small example of indigenous vegetation characteristic of the Tauranga Ecological District coastline. The coastal cliffs at the northern end of this site, which are covered with taupata/ pohuehue-Ficinia nodosa shrubland, are representative of this type of habitat in the Tauranga Ecological District (Beadel 1994a). Pingao has been planted and is regenerating in situ. Sand tussock is also present, and is likely to be of natural occurrence. Three regionally uncommon plant species also occur at this site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	L
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** Sand tussock (At Risk-Declining) Pingao (At Risk-Relict) (planted) **Avifauna:** Caspian tern (Threatened-Nationally Vulnerable) White-fronted term (At Risk-Declining) Variable oystercatcher (At Risk-Recovering)
ii		
iii		
iv		

Policy	Criteria Met	Explanation
v		Locally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a WBOPDC reserve.
11(b)		
i	✓	Spinifex sandfield and grassland, pohuehue vineland, *Ficinia nodosa* sedgeland, and pohutukawa treeland and shrubland.
ii		
iii	✓	Spinifex sandfield and grassland, pohuehue vineland, *Ficinia nodosa* sedgeland, and pohutukawa treeland and shrubland.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Pukehina is consistent with Policy 11(b) because it comprises dunes and cliffs dominated by indigenous vegetation. This site contains the best example of indigenous vegetation on volcanic soft rock coast line in the ecological district. However, the site is not particularly large or high quality. It supports populations of two At Risk plant species and various avifauna species roost in the site.

Notes

The local coast care group planted pingao and spinifex (500) in 2005 (with help from an EEF grant). A survey of native lizards, butterflies, and spiders is recommended.

Identified as a Category 3 natural area in the Tauranga Ecological District (Wildland Consultants 2008a).

References

Beadel 1994a; OSNZ 2006; Wildland Consultants 2005x; Wildland Consultants 2006g; Wildland Consultants 2008a.

7.3 Mōtītī Ecological District

Mōtītī Ecological District comprises several islands. The largest of these is Mōtītī (*c.*685 ha), which is plateau-like and low-lying, reaching only 57 m asl, with low coastal cliffs. Karewa Island (*c.*4.8 ha) is rugged, rising steeply from the rocky coastline to 93 m asl, with the south and west falling away more gently to the coast. Motunau (Plate Island) is also rugged. Other islands in the ecological district are Motuhaku Island (Schooner Rocks) which is a stack, and the several small islands around Mōtītī (i.e. Taumaihi, Motuputa, Motupatiki and Motukahakaha).

Mōtītī would once have been covered in pohutukawa forest and mixed coastal forest with canopy dominants including pohutukawa, puriri, karaka, kohekohe, tawa and rewarewa. However, it has a long history of Māori occupation and has also been farmed for the past 100 years. The remaining indigenous vegetation is restricted to the cliffs around the island margin and is predominantly pohutukawa forest and treeland. There are minor remnants in gullies.

The vegetation on Karewa Island has also been modified and today only a small area of karaka forest remains. However there is coastal scrub and shrubland present, with taupata and coastal mahoe common. These species are also common on Motunau and Mōtītī Islands, and the coastal rocks and faces on these islands have mats of New Zealand iceplant and glasswort.

Karewa Island is the present day southern limit of distribution for parapara (At Risk-Relict). Natural populations of New Zealand shore spurge (At Risk-Declining) and Cook's scurvy grass (Threatened-Nationally Vulnerable) also occur in this ecological district.

The indigenous fauna of Mōtītī Ecological District has been reduced in diversity, principally through human modification of Mōtītī, the largest island, and the presence of kiore, mice, and feral cats. However, the pest-free status of several small islets helps to maintain populations of grey-faced petrel and flesh-footed shearwater, and a significant proportion of the tuatara population of the Bay of Plenty.

Table 8: Threatened and notable species in Mōtītī Ecological District.

Scientific Name	Common Name	Threat Classification/ Significance[1]
BIRDS		
Threatened		
Egreta sacra sacra	reef heron	Nationally Vulnerable
Larus novaehollandiae scopulinus	red-billed gull	Nationally Vulnerable
Nestor meridionalis septentrionalis	North Island kākā	Nationally Vulnerable
Phalacrocorax varius varius	pied shag	Nationally Vulnerable
Sterna caspia	Caspian tern	Nationally Vulnerable
At Risk		
Eudyptula minor iredalei	northern little blue penguin	Declining
Puffinus carneipes[2]	flesh-footed shearwater	Declining
Sterna striata striata	white-fronted tern	Declining
Pelecanoides urinatrix urinatrix	northern diving petrel	Relict
Pelagodroma marina maoriana	New Zealand white-faced storm petrel	Relict
Puffinus gavial	fluttering shearwater	Relict
Haematopus unicolor	variable oystercatcher	Recovering

Scientific Name	Common Name	Threat Classification/ Significance[1]
REPTILES		
At Risk		
Hoplodactylus duvaucelii	Duvaucel's gecko	Relict
Hoplodactylus pacificus	pacific gecko	Relict
Oligosoma moco	moko skink	Relict
Sphenodon punctatus	northern tuatara	Relict
VASCULAR PLANTS		
Threatened		
Lepidium oleraceum	Cook's scurvy grass	Nationally Vulnerable
At Risk		
Euphorbia glauca	New Zealand shore spurge	Declining
Pisonia brunoniana	parapara	Relict
Streblus banksii	turepo	Relict
Hypolepis dicksonioides		Naturally Uncommon
Tetragonia tetragonioides	New Zealand spinach, kokihi	Naturally Uncommon
Regionally Uncommon		
Einadia trigonos		Regionally Uncommon
Planchonella costata	tawapou	Regionally Uncommon
Sparganium subglobosum	maru; burr reed	Regionally Uncommon

Notes

[1] Threat classifications and regionally significant evaluations follow de Lange *et al.* 2009, Miskelly *et al.* 2008; Beadel 2009.

[2] Karewa Island is the only Bay of Plenty breeding colony of this species.

KAREWA ISLAND

Site Number [1]	077
Grid Reference (NZMG)	E2786969 N6403205
Local Authority	
Ecological District	Mōtītī
Protection Status	Protected (Department of Conservation, Karewa Island Wildlife Sanctuary) and unprotected parts
Site Area	4.6 ha
Altitudinal Range	0-39 m asl
Geology-Landform Type	Volcanic hard coast

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Karaka-parapara forest.	Volcanic hard coast
Terrestrial	Taupata-coastal mahoe forest.	Volcanic hard coast
Terrestrial	Pohuehue-akeake shrub-vineland.	Volcanic hard coast
Terrestrial	Horokaka-glasswort herbfield. (Beadel 1994a)	Volcanic hard coast

Vegetation and Indigenous Flora

Cook's scurvy grass (Threatened-Nationally Vulnerable) occurs on the island, but is not thriving (Heaphy 1999). Parapara (At Risk-Relict) reaches its southern limit of distribution on the Island, although planted examples are present further south on Moutohorā (Whale Island). Also, it may have occurred naturally further south of Karewa, prior to human settlement of New Zealand. *Streblus banksii* (At Risk-Relict) is present (Paul Cashmore, Department of Conservation, pers. comm. 2012). Some planting of parapara and tawapou (*Planchonella costata*), a regionally uncommon species, has occurred in the past (Garrick 1996).

Indigenous Fauna

Karewa is the only Bay of Plenty island with a breeding colony of flesh-footed shearwater (At Risk-Declining), and in 1994/1995 was one of the top five breeding sites nationally (McClellan 1996). It continues to be a very important breeding site for this species (J. Heaphy, Department of Conservation, pers. comm. 2012).

Other species present include little blue penguin (At Risk-Declining), northern diving petrel (At Risk-Relict), fluttering shearwater (At Risk-Relict), New Zealand white-faced storm petrel (At Risk-Relict) (K. Owen, Department of Conservation, pers. comm. 2012).

This is one of only four remaining natural populations of northern tuatara in the Bay of Plenty. Pacific gecko (At Risk-Relict), moko skink (At Risk-Relict), common gecko, and copper skink have been observed on the island in the past (J. Heaphy, Department of Conservation, pers. comm. 2012).

Condition/Pressures

No introduced mammals occur on the island and permanent bait stations were installed by Department of Conservation in 1999. A large boxthorn infestation was discovered in 1999, as well as two pampas plants, possibly dispersed from Matakana Island (Heaphy 1999).

A limited amount of oil and debris from the wrecked cargo vessel 'Rena' washed up on the shores of Karewa in 2011 (J. Heaphy, Department of

[1] Identified as SVHZ-204 in Wildland Consultants 2006g.

Conservation, pers. comm. 2012).

Key Site Features

Karewa Island contains a good quality, representative example of the vegetation of Mōtītī Ecological District. The island is free of mammalian pests, and there is a limited range and low density of pest plants present. One Threatened, two At Risk, and one regionally uncommon plant species (planted) are present. It provides critical breeding habitat for an At Risk bird species and habitat for three At Risk reptile species.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	H
	3.5	L
	3.6	N/A
Diversity and Pattern	3.7	M
Naturalness	3.8	H
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	H
	3.12	H
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** Cook's scurvy grass (Threatened-Nationally Vulnerable) Parapara (At Risk-Relict) *Strebus banksii* (At Risk-Relict) **Avifauna:** Flesh-footed shearwater (At Risk-Declining) Northern little blue penguin (At Risk-Declining) Fluttering shearwater (At Risk-Relict) New Zealand white-faced storm petrel (At Risk-Relict) Northern diving petrel (At Risk-Relict) **Herpetofauna:** Tuatara (At Risk-Relict) Pacific gecko (At Risk-Relict) Moko skink (At Risk-Relict)
ii		
iii	✓	High quality example of indigenous forest on a pest-free offshore island.
iv	✓	Parapara (At Risk-Relict) is at the southern limit of its distribution (excluding

Policy	Criteria Met	Explanation
		Moutohorā (Whale Island), where it has been planted).
v	✓	Nationally Significant
vi	✓	Protected (Karewa Island Wildlife Sanctuary, Department of Conservation)
Policy Met:		11(a)
Justification:		Karewa Island is consistent with Policy 11(a) because it is a high quality example of a virtually pest-free island ecosystem. It provides habitat for Threatened and At Risk plant, avifauna, and herpetofauna species, including one species which is at its southern limit of distribution. It is a nationally significant site that is protected as a Wildlife Sanctuary.

References Sladden 1924; Beadel 1994a & 2009; McClellan 1996; Garrick 1996; Heaphy 1999; Heaphy 2003b; Wildland Consultants 2006g.

TAUMAIHI ISLAND

Site Number [1]	112
Grid Reference (NZMG)	E2810764 N6388636
Local Authority	
Ecological District	Mōtītī
Protection Status	Unprotected
Site Area	2.5 ha
Altitudinal Range	0-14 m asl
Geology-Landform Type	Volcanic hard coast

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa forest.	Cliff, hillslope
Terrestrial	Pohutukawa/whararikī flaxland.	Cliff, hillslope
Terrestrial	Bracken fernland.	Hillslope
Terrestrial	*Apium prostratum*-glasswort-horokaka herbfield.	Cliff, hillslope
Terrestrial	shore bindweed boulderfield.	Boulder spit/beach
Terrestrial	Glasswort-*Apium prostratum*-horokaka herbfield.	Cliff, hillslope
Terrestrial	(Spinifex)-oioi sandfield. (Beadel 1994a)	Dune and beach sands

Vegetation and Indigenous Flora

A small population of New Zealand shore spurge (At Risk-Declining) grows at the southern end of the island.

Indigenous Fauna

Approximately six pairs of grey-faced petrel have been recorded nesting but human harvesting and kiore mean breeding was not successful (J. Heaphy, Department of Conservation, pers. comm. 2012). Grey-faced petrels used to be more common here than they are currently, and have been a focus of titi harvest by local Māori in the past. Fluttering shearwaters and common diving petrel are also present (ibid.). There are large populations of black-backed gulls and starlings on the island (V. Wills, landowner, pers. comm. 2006). Little blue penguin (At Risk-Declining) are present (K. Owen, Department of Conservation, pers. comm. 2012).

Prior to the Rena oil spill incident, the boulder beach supported the largest known population of shore skink in the Bay of Plenty (J. Heaphy, Department of Conservation, pers. comm. 2012). The current status of the population is unknown.

Condition/Pressures

Taumaihi is accessible from Mōtītī Island across a boulder spit at low tide, and there are kiore present on the island. Cattle used to be present on the island occasionally but the adjoining land on Mōtītī is no longer grazed so it is very unlikely that they continue to be present. Boxthorn, inkweed and convolvulus were noted in 1996 (Garrick 1996). The effect of the Rena oil spill on the population of shore skink is not known.

Key Site Features

Taumaihi Island is regionally significant as it comprises representative examples of the vegetation characteristic of the Mōtītī Ecological District. It provides habitat for an At Risk plant species. Ecological values are threatened by stock, weeds, and kiore. Taumaihi is of very high cultural value to Iwi.

[1] Identified as SVHZ-206 in Wildland Consultants 2006g.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	M
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	H
Viability and Sustainability	3.11	M
	3.12	H
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** New Zealand shore spurge (At Risk-Declining) **Avifauna:** Northern little blue penguin (At Risk-Declining)
ii		
iii		
iv		
v		Regionally Significant
vi		Unprotected
11(b)		
i	✓	Pohutukawa forest, flaxland, bracken fernland, and coastal herbfields.
ii		
iii	✓	Pohutukawa forest and coastal herbfields.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Taumahi Island is consistent with Policy 11(b) because it is a small island that is dominated by indigenous vegetation. The island supports a small population of New Zealand shore spurge (At Risk-Declining).

References Shaw and Clarkson 1991; Beadel 1994a; Garrick 1996, Vernon Wills (landowner); Wildland Consultants 2006g.

MOTĪTĪ ISLAND

Site Number [1]	113
Grid Reference (NZMG)	E2812255 N6391867
Local Authority	N/A
Ecological District	Mōtītī
Protection Status	Unprotected
Site Area	72.4 ha
Altitudinal Range	0-40 m asl
Geology-Landform Type	Volcanic hard coast

Hydrosystem	Vegetation/Habitat Type	Landform
Marine/Terrestrial	Sandfield.	Beach sands
Terrestrial	Pohutukawa/karo-taupata-houpara-(hangehange) forest.	Cliff, steep hillslope
Terrestrial	Pohutukawa treeland.	Cliff, steep hillslope
Terrestrial	Coastal cliff vegetation (rengarenga (*Arthropodium cirratum*), harakeke, *Astelia banksii*, coastal mahoe, exotic herbs and grasses).	Cliff
Palustrine	Grey willow/raupo-*Machaerina arthrophylla-Schoenoplectus tabernaemontani-* (harakeke)/swamp millet-Yorkshire fog forest.	Wetland
Palustrine	Open water with *Myriophyllum propinquum, Juncus articulatus*, swamp millet, Mercer grass and water purslane.	Wetland
Palustrine	Raupo-*Schoenoplectus tabernaemontani* reedland.	Wetland
Palustrine	(Grey willow)/raupo-(*Schoenoplectus tabernaemontani*)/swamp millet-(arum lily) reedland.	Wetland
Palustrine	Open water with *Polygonum hydropiper* and *Callitriche stagnalis*.	Wtland
Palustrine	Brush wattle-(mamaku)-(ponga)-(ti kouka)-(*Muehlenbeckia australis*) forest.	Wetland
Terrestrial	Grey willow-*Muehlenbeckia australis* forest.	Wetland
Terrestrial	(Pohutukawa)/karo-brush wattle-(*Muehlenbeckia australis*)-(mamaku)-(taupata) forest.	Wetland margins
Terrestrial	*Muehlenbeckia australis* vineland. (Wildland Consultants 2006g)	Sand dunes

Vegetation and Indigenous Flora

Lepidium oleraceum (Threatened-Nationally Vulnerable) is present (Paul Cashmore, Department of Conservation, pers. comm. 2012). New Zealand spinach (At Risk-Naturally Uncommon) is also present. A yellow-flowered pohutukawa variety occurs on Mōtītī Island (Matheson 1979). This has been propagated on the mainland and is being reintroduced to other areas of the island (V. Wills, landowner, pers. comm. 2006). *Sparganium subglobosum* (regionally uncommon) present.

Indigenous Fauna

North Island kākā, red-billed gull, pied shag, (all Threatened-Nationally Vulnerable), White-fronted tern (At Risk-Declining), northern diving petrel (At Risk-Relict), grey-faced petrel, Australasian gannet, Australasian harrier,

[1] Identified as SVHZ-207 in Wildland Consultants 2006g.

pukeko, spur-winged plover, black-backed gull, welcome swallow, grey warbler, North Island fantail, tui, silvereye and a skua species (*Stercorarius* sp.) were all confirmed as present on and around Mōtītī Island by the Department of Conservation in 2004 (Owen 2004). In addition, Caspian tern (Threatened-Nationally Vulnerable), variable oystercatcher (At Risk-Recovering), bellbird, kingfisher and a single kereru are regularly seen by residents (V. Wills, landowner, pers. comm. 2006).

Copper skink and shore skink (not threatened) may be present (Owen 2004). There are also probably common geckos on the island (J. Heaphy, Department of Conservation, pers. comm. 2006).

Condition/Pressures

The island has a long history of Māori and European occupation, with all flat, arable land having been cleared for horticulture and agriculture, therefore indigenous vegetation is limited to sea cliffs and scattered freshwater wetlands leading down to the coast.

Pohutukawa forest around the margins of the island is still in very good condition, despite small, scattered infestations of boxthorn, wild ginger, brush wattle, pampas and other weed species. There is prolific regeneration of karo, taupata and houpara under most of this forest, which is in contrast to similar mainland sites, and could be attributed to the lack of possums, goats, rabbits or other wild browsing mammals on the island. Domestic cattle sometimes gain access and destroy parts of the understorey. Pines have been planted in small parts of the pohutukawa forest, and also in new shelterbelts. A very large avocado plantation has been established in the southern part of the island (15,500 trees).

The freshwater wetlands are highly modified, ranging from dense brush wattle and grey willow forest (sometimes with a relatively intact indigenous understorey comprising *Machaerina arthrophylla,* swamp millet, raupo, and *Schoenoplectus tabernaemontani*) to raupo reedland or open water with many aquatic weeds and occasional indigenous sedges, including *Carex secta*, *C. virgata*, *Bolboschoenus fluviatilis* and *Eleocharis acuta*. Despite modification through digging, contouring and drainage, there are still natural wetlands on the island, which have high restoration potential, and some of are currently being restored by landowners (e.g. through willow removal and planting of margins).

Kiore is probably the only rat species present on the island, though this has not been confirmed. Grey-faced petrel nesting has declined all around the island, probably as a result of increased rat numbers. Feral cats and mice are definitely present (Owen 2004).

Oil, shipping containers, and other debris from the Rena oil spill (2011) washed up on Mōtītī.

Key Site Features

This site contains the largest remaining examples of indigenous vegetation in the Mōtītī Ecological District. The wetlands are degraded but have high restoration potential. A limited range of pest mammals are present and the island provides habitat for three Threatened and two At Risk bird species. One Threatened, one At Risk, and one regionally uncommon plant species are present.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	M
	3.5	H
	3.6	H
Diversity and Pattern	3.7	H
Naturalness	3.8	M
Ecological Context	3.9	L
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** *Lepidium oleraceum* (Threatened-Nationally Vulnerable) New Zealand spinach (At Risk-Naturally Uncommon) **Avifauna:** Caspian tern (Threatened-Nationally Vulnerable) North Island kākā (Threatened-Nationally Vulnerable) Pied shag (Threatened-Nationally Vulnerable) Red-billed gull (Threatened-Nationally Vulnerable) White-fronted tern (At Risk-Declining) Northern diving petrel (At Risk-Relict) Variable oystercatcher (At Risk-Recovering)
ii	✓	Kākā (Endangered)
iii	✓	Pohutukawa forest and treeland, coastal cliffs, and sandfields.
iv		
v		Regionally Significant
vi		Unprotected
Policy Met:		11(a)
Justification:		This site comprises a relatively narrow strip around the margins of Mōtītī Island and some areas in gullies that extend to the coast. The site is consistent with Policy 11(a) because it includes the highest quality examples of pohutukawa forest in Mōtītī Ecological District. A suite of Threatened and At Risk avifauna has been recorded on and around Mōtītī Island and the island is free of possums. One Threatened plant species is present.

Notes Pieces of obsidian (volcanic glass) are present in the soil profile on the island.

References Matheson 1979; Spring-Rice 1991; Beadel 1994a; Owen 2004; Wildland Consultants 2006g.

MOTĪTĪ ISLETS

Site Number [1] 117
Grid Reference (NZMG) E2813345 N6391075
Local Authority
Ecological District Mōtītī
Protection Status Unprotected
Site Area 1.9 ha
Altitudinal Range 0-5 m asl
Geology-Landform Type Volcanic hard coast

Hydrosystem	Vegetation/Habitat Type	Landform
	Motukahakaha Island	
Terrestrial	Horokaka-glasswort herbfield.	Rocky islet
Terrestrial	Taupata/*Poa anceps* agg.-rengarenga herbfield.	Rocky islet
	Motupatiki Island	
	Pohutukawa-karo treeland.	
Terrestrial	Glasswort-horokaka rockland.	Rocky islet
Terrestrial		Rocky islet
	Turitea Island	
	(Pohutukawa)-(taupata) rockland.	
Terrestrial	(Beadel 1994a)	Rocky islet

Vegetation and Indigenous Flora No significant species recorded.

Indigenous Fauna Northern diving petrel or storm petrel (*Fregeta* sp.) burrows were noted on Motupatiki in 1996 (Garrick 1996). Moko skink (At Risk-Relict) is present on Motukahakaha (Owen 2004). Duvaucel's gecko (At Risk-Relict) is also present (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures No introduced mammals have been recorded on these islets (Beadel 1994a). There is limited growth of boxthorn on Motukahakaha (Garrick 1996). A moderate amount of oil and debris from the wrecked cargo vessel Rena washed ashore in 2011 (J. Heaphy, Department of Conservation, pers. comm. 2012).

Key Site Features These small islets together contain good quality, small examples of coastal vegetation characteristic of the Mōtītī Ecological District (Beadel 1994a). They provide habitat for At Risk fauna species, are thought to be free of pest mammals, and weed impacts appear to be low.

[1] Identified as SVHZ-208 in Wildland Consultants 2006g.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	M
	3.3	H
	3.4	M
	3.5	L
	3.6	N/A
Diversity and Pattern	3.7	M
Naturalness	3.8	H
Ecological Context	3.9	M
	3.10	H
Viability and Sustainability	3.11	L
	3.12	H
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Herpetofauna:** Duvaucel's gecko (At Risk-Relict) Moko skink (At Risk-Relict)
ii		
iii		
iv		
v		Regionally Significant
vi		Unprotected
11(b)		
i	✓	Coastal herbfields, pohutukawa-karo treeland, and coastal rockland.
ii		
iii	✓	Coastal herbfields, pohutukawa-karo treeland, and coastal rockland.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Mōtītī Islets comprises very small islets close to Mōtītī Island. They are consistent with Policy 11(b) because they include small, good quality examples of indigenous vegetation that is typical of the coastal environment and Mōtītī Ecological District. Another site, Motuputa, is the highest quality rock stack in Mōtītī Ecological District.

Notes The vegetation of the Mōtītī Islets was previously ranked as being of District significance in Beadel (1994a).

References Beadel 1994a; Garrick 1996; Owen 2004; Wildland Consultants 2006g.

MOTUPUTA ISLAND

Site Number [1] 119
Grid Reference (NZMG) E2814611 N6392322
Local Authority
Ecological District Mōtītī
Protection Status Unprotected
Site Area 0.2 ha
Altitudinal Range 0-9 m asl
Geology-Landform Type Volcanic hard coast

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Taupata-coastal mahoe forest.	Rocky islet
Terrestrial	Horokaka-glasswort herbfield. (Beadel 1994a)	Rocky islet

Vegetation and Indigenous Flora A small population of Cook's scurvy grass (nau, Threatened-Nationally Vulnerable) was present in the early 1990s (Beadel 1994a). Its continued presence has not been confirmed.

Indigenous Fauna Common gecko (but no other lizard species) recorded (Owen 2004).

Key Site Features This pest-free offshore islet is of regional significance because it has a near natural vegetation cover, and may support a Threatened-Nationally Vulnerable plant species.

Condition/Pressures No introduced mammals are known from the island (J. Heaphy, Department of Conservation, pers. comm. 2012). A small amount of oil and debris from the wrecked cargo vessel Rena washed ashore in 2011, but the very steep shoreline mean the impact is probably minimal (ibid.).

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	M
	3.5	L
	3.6	N/A
Diversity and Pattern	3.7	L
Naturalness	3.8	H
Ecological Context	3.9	M
	3.10	L
Viability and Sustainability	3.11	H
	3.12	Hz
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

[1] Identified as SVHZ-209 in Wildland Consultants 2006g.

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** Cook's scurvy grass (Threatened-Nationally Vulnerable) (1994)
ii		
iii	✓	Highest quality offshore rock stack in Mōtītī Ecological District.
iv		
v		Regionally Significant
vi		Unprotected
11(b)		
i	✓	Taupata-coastal mahoe forest and coastal herbfield.
ii		
iii	✓	Taupata-coastal mahoe forest and coastal herbfield.
iv	N/A	
v		
vi		
Policy Met:		11(a)
Justification:		Motuputa Island is consistent with Policy 11(a) because it is the best coastal rock stack in Mōtītī Ecological District. It includes vegetation types that are confined in the Bay of Plenty to islands in the coastal environment, and Cook's scurvy grass (Threatened-Nationally Vulnerable) was recorded in the early 1990s.

Notes The vegetation of Motuputa Island was previously ranked as being of District significance in Beadel (1994a).

References Beadel 1994a; Owen 2004; Wildland Consultants 2006g.

MOTUNAU (PLATE ISLAND)

Site Number [1]	127
Grid Reference (NZMG)	E2824259 N6387159
Local Authority	
Ecological District	Mōtītī
Protection Status	Protected (Plate Island Wildlife Sanctuary, managed by Department of Conservation on behalf of the owners, Ngāti Whakahemo)
Site Area	4.6 ha
Altitudinal Range	0-34 m asl
Geology-Landform Type	Volcanic hard coast

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Karo forest.	Rocky island
Terrestrial	Pohutukawa forest.	Rocky island
Terrestrial	Taupata forest.	Rocky island
Terrestrial	Karo-taupata forest.	Rocky island
Terrestrial	Pohutukawa/taupata-karo scrub.	Rocky island
Terrestrial	Taupata scrub.	Rocky island
Terrestrial	Taupata-(karo) scrub.	Rocky island
Terrestrial	Karo-taupata shrubland.	Rocky island
Terrestrial	*Poa anceps* agg.-horokaka-oioi herb-grassland.	Rocky island
Terrestrial	Horokaka herbfield.	Rocky island
Terrestrial	Horokaka-glasswort herbfield.	Rocky island
Terrestrial	Horokaka-glasswort-taupata-*Poa anceps* agg. herbfield.	Rocky island
Terrestrial	(Taupata)-(karo)/horokaka-glasswort herbfield. (Beadel 1994a)	Rocky island

Vegetation and Indigenous Flora

Coastal mahoe and *Eindaia trigonos* (both regionally uncommon) are present on this island.

Indigenous Fauna

Pacific gecko (At Risk-Relict) and shore skink (not threatened) are present on North Motunau. Common gecko and tuatara (At Risk-Relict) are present on North Motunau and South Motunau (J. Heaphy, Department of Conservation, pers. comm. 2012). These islands support two of the four remaining natural populations of northern tuatara in the Bay of Plenty (Heaphy 2003b).

Reef heron (Threatened-Nationally Vulnerable), silvereye, Australasian harrier and pied shag (Threatened-Nationally Vulnerable) were recorded in 1996 (Garrick 1996). Large numbers of red-billed gulls (Threatened-Nationally Vulnerable) and white-fronted terns (At Risk-Declining) were nesting on North Motunau in 2002 (Heaphy 2002). There are large breeding colonies of grey-faced petrel, common diving shearwater, and fluttering shearwater (J. Heaphy, Department of Conservation, pers. comm. 2012). Other species present include northern diving petrel (At Risk-Relict), fluttering shearwater (At Risk-Relict), New Zealand white-faced storm petrel (At Risk-Relict), and little blue penguin (At Risk-Declining) (K. Owen, Department of Conservation, pers. comm. 2012).

New Zealand fur seals breed on South Motunau. Before the Rena oil spill it was the largest colony in the Bay of Plenty, with more than 250 seals present

[1] Identified as SVHZ-210 in Wildland Consultants 2006g.

in 2011, and they had bred successfully for a number of years. The current status of the colony is not known (J. Heaphy, Department of Conservation, pers. comm. 2012).

Condition/Pressures Introduced mammals have never been present on these islands and the site is virtually unmodified. Bait stations are regularly baited and monitored by Department of Conservation and occasional weed control is undertaken as required (J. Heaphy, Department of Conservation, pers. comm. 2012). Potential introduction of pests by human visitors is a continual threat even though landing is prohibited.

Key Site Features This site includes the northern and southern sections of Motunau (which are linked by a short, narrow isthmus) and three smaller islets. These islands contain good quality representative examples of vegetation types which are characteristic of Mōtītī Ecological District. The islands are thought to be free of plant and animal pests, and are therefore high quality habitat for three Threatened and five At Risk bird species, and two regionally uncommon plant species. They provide critical habitats for red-billed gull and white-fronted tern, as well as being a key habitat for northern tuatara in the Bay of Plenty.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	M
	3.5	M
	3.6	L
Diversity and Pattern	3.7	M
Naturalness	3.8	H
Ecological Context	3.9	L
	3.10	H
Viability and Sustainability	3.11	H
	3.12	H
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Reef heron (Threatened-Nationally Vulnerable) Pied shag (Threatened-Nationally Vulnerable) Red-billed gulls (Threatened-Nationally Vulnerable) Northern little blue penguin (At Risk-Declining) White-fronted tern (At Risk-Declining) Fluttering shearwater (At Risk-Relict) New Zealand white-faced storm petrel (At Risk-Relict)

Policy	Criteria Met	Explanation
		Northern diving petrel (At Risk-Relict) **Herpetofauna:** Pacific gecko (At Risk-Relict) Northern tuatara (At Risk-Relict)
ii		
iii	✓	High quality examples of indigenous vegetation on an offshore island.
iv		
v	✓	Nationally Significant
vi	✓	Protected (Plate Island Wildlife Sanctuary, Department of Conservation)
Policy Met:		11(a)
Justification:		Motunau (Plate Island) is consistent with Policy 11(a) because it is a high quality example of coastal ecosystems on an offshore island that is free of introduced browsing mammals and is a habitat of Threatened and At Risk species of fauna. It is a nationally significant site and is legally protected as a Wildlife Sanctuary.

Notes Young grey-faced petrels (titi) are occasionally harvested by iwi (Heaphy 2002).

References Taylor 1991; Beadel 1994a; Garrick 1996; Heaphy 2002; Heaphy 2003b; Wildland Consultants 2006g.

7.4 Ōtānewainuku Ecological District

Much of Ōtānewainuku Ecological District comprises a dissected ignimbrite plateau, but it descends to the coast between Ōtamarākau and Matatā where a long, sandy beach is backed by steep ignimbrite cliffs. The original coastal vegetation has been substantially modified in most places, and a railway line and state highway have been constructed on the sand dunes in front of the ignimbrite cliffs at the eastern end of the district. Sand dune vegetation has been heavily modified by the establishment of adventive species (e.g. marram, pampas, and eucalyptus) and fires. Near the western boundary of the ecological district, a sand mining operation operates on the foreshore and dunes.

Pohuehue and spinifex are still common on the dunes but two other species which would once have been common are now At Risk, i.e. pingao (At Risk-Relict) and sand tussock (At Risk-Declining). Raupo dominates the wetlands immediately landward of the dunes, in association with *Machaerina articulata* and *Bolboschoenus fluviatilis.*

Pohutukawa forest and treeland line the ignimbrite cliffs in many places. However, the western end of the ecological district has been cleared for agriculture. Pohutukawa, tawa, rewarewa, pukatea and kohekohe would have dominated the forests here with small wetlands in the valley floors dominated by raupo, ti kouka, manuka and possibly kahikatea. Pohutukawa and hard beech would have been dominant at the south-eastern end of the district.

The only remaining areas of forest in the coastal environment of the Ōtānewainuku Ecological District occur at the south-eastern end of the district. Dominants include pohutukawa and hard beech, as well as tawa, rewarewa, pukatea, and kohekohe. There are also areas of secondary forest and shrubland dominated by kanuka, mamaku, rewarewa, manuka, mingimingi and prickly mingimingi. Matatā Scenic Reserve contains the largest remaining example of coastal hard beech-pohutukawa forest.

One of the largest known populations of *Pimelea tomentosa* (Threatened-Nationally Vulnerable) occurs in Matatā Scenic Reserve.

Freshwater habitats support giant kōkopu and longfin eel, both At Risk species.

Table 9: Threatened and notable species in the coastal bioclimatic zone of Ōtānewainuku Ecological District.

Scientific Name	Common Name	Threat Classification/ Significance[1]
AVIFAUNA		
Threatened		
Egretta alba modesta	white heron	Nationally Critical
Botaurus poiciloptilus	Australasian bittern	Nationally Endangered
Charadrius obscurus aquilonius	northern New Zealand dotterel	Nationally Vulnerable
At Risk		
Bowdleria punctata vealeae	North Island fernbird	Declining
Porzana tabuensis plumbea	spotless crake	Relict
Gallirallus philippensis assimilis	banded rail	Naturally Uncommon

Scientific Name	Common Name	Threat Classification/ Significance[1]
VASCULAR PLANTS		
Threatened		
Pimelea tomentosa		Nationally Vulnerable
At Risk		
Ficinia spiralis	pingao	Relict
TERRESTRIAL INVERTEBRATES		
Other Notable Species		
Liarea egea[2]	snail	Distributional Limit
Iotula microbrunneus	snail	Not Classified
FRESHWATER FISH		
At Risk		
Anguilla dieffenbachii	longfin eel	Declining
Cheimarrichthys fosteri	torrentfish	Declining
Galaxias argenteus	giant kōkopu	Declining
Galaxias brevipinnis	kōaro	Declining
Galaxias maculatus	inanga	Declining
Galaxias postvectis	shortjaw kōkopu	Declining
Gobiomorphus hubbsi	bluegill bully	Declining
Gobiomorphus huttoni	redfin bully	Declining

Notes

[1] Threat classifications and regionally significant evaluations follow de Lange *et al.* 2009, Miskelly *et al.* 2008; Allibone *et al.* 2010; and Beadel 2009.

[2] Near its southern limit of distribution in this Ecological District (Mayhill 1994).

ŌTAMARĀKAU-MATATĀ-WHAKATĀNE DUNES B[1]

Site Number [2]	130
Grid Reference (NZMG)	E2846534 N6360059
Local Authority	Whakatāne District Council
Ecological District	Ōtānewainuku, Tauranga
Protection Status	Protected (Department of Conservation, Matatā Wildlife Refuge Reserve, Ōtamarākau Marginal Strip and Matatā Marginal Strip) and unprotected parts
Site Area	45.5 ha
Altitudinal Range	0-29 m asl
Geology-Landform Type	Sand

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Raupo reedland.	Wetland
Palustrine	*Ficinia nodosa*/pohuehue vineland.	Dune and beach sands
Terrestrial	Pohuehue vineland.	Dune and beach sands
Terrestrial	(African boxthorn)/pohuehue vineland.	Dune and beach sands
Terrestrial	Spinifex-(pingao) tussockland.	Dune and beach sands
Terrestrial	Spinifex sandfield and tussockland.	Dune and beach sands
Terrestrial	*Carex pumila* sandfield.	Dune and beach sands
Terrestrial	Gorse-pampas-blackberry shrubland.	Dune and beach sands
Terrestrial	Marram grassland.	Dune and beach sands
Terrestrial	(Taupata)/*Ficinia nodosa*/pohuehue vineland.	Dune and beach sands

Vegetation and Indigenous Flora

Pingao (At Risk-Relict), *Oxalis rubens,* and *Zoysia pauciflora* (both regionally uncommon) are present along the dune coastline. Sand tussock (At Risk-Declining) occurred in the northern part of this site in 1992, however this population is no longer present.

Indigenous Fauna

The beach provides habitat for a range of shorebirds, including northern New Zealand dotterel (Threatened-Nationally Vulnerable). Estuarine wetlands at the mouth of the Waitahanui Stream are potential habitat for banded rail (At Risk-Naturally Uncommon), spotless crake (At Risk-Relict), and North Island fernbird (At Risk-Declining) (BOPRC 2012).

Matatā Lagoon is a roosting site for a range of coastal birds and waterbird species. White heron (Threatened-Nationally Critical), Australasian bittern (Threatened-Nationally Endangered), banded rail (At Risk-Naturally Uncommon), North Island fernbird (At Risk-Declining), and spotless crake (At Risk-Relict) have been recorded at the lagoon (BOPRC 2012).

The site includes the mouth of the Waitahanui Stream. It is a habitat and migratory pathway of indigenous species of freshwater fish including five At Risk species (torrentfish, inanga, redfin bully, longfin eel, bluegill bully) and common smelt, giant bully, banded kōkopu (Environment Bay of Plenty 2008).

Condition/Pressures

Large-scale pampas control has been carried out within this site and Ōtamarākau-Matatā-Whakatāne Dunes A, particularly in the western part of the site. However, pampas remains a problem and marram control is also recommended. This site includes popular fishing spots and associated damage

[1] This site extends over two Ecological Districts (Ōtānewainuku and Te Teko).
[2] This site is identifed as part of SVHZ-115 in Wildland Consultants 2006g.

to the dune system is occurring as a result of trampling, four wheel driving, and trail bike riding. Rabbit browsing is also having negative impacts. The lagoon was flooded and infilled with sediment during a major storm event in 2005. It has since been excavated and the margins are being replanted, predominatly with harakeke.

Key Site Features

This site contains a range of vegetation and habitat types and the mouth of the Waitahanui Stream (which is a habitat and migratory pathway of indigenous species of freshwater fish). However, it has been heavily modified by human and natural events (e.g. infilling of the Matatā Lagoon). The sand dunes are good examples of sand dune vegetation, a vegetation type which has been markedly reduced from its previous extent. The sand dunes within this site form part of an ecological corridor that extends along the coast and includes the less modified, nationally significant, Ōtamarākau-Matatā-Whakatāne Dunes A site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	M
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	H
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** Pingao (At Risk-Relict) **Avifauna** White heron (Threatened-Nationally Critical) Australasian bittern (Threatened-Nationally Endangered) Northern New Zealand dotterel (Threatened-Nationally Vulnerable) North Island fernbird (At Risk-Declining) Spotless crake (At Risk-Relict) Banded rail (At Risk-Naturally Uncommon)

Policy	Criteria Met	Explanation
		Fish: Bluegill bully (At Risk-Declining) Inanga (At Risk-Declining) Longfin eel (At Risk-Declining) Redfin bully (At Risk-Declining) Torrentfish (At Risk-Declining)
ii	✓	Australasian bittern (Endangered) New Zealand dotterel (Endangered)
iii		
iv		
v		Regionally Significant
vi		Partially protected (Matatā Wildlife Refuge, Department of Conservation)
11(b)		
i	✓	Indigenous dune vegetation and raupo reedland.
ii		
iii	✓	Indigenous dune vegetation
iv		N/A
v	✓	Waitahanui Stream is a migratory pathway for indigenous freshwater fish.
vi	✓	Provides a link between portions of Ōtamarākau-Matatā-Whakatāne Dunes A.
Policy Met:		11(b)
Justification:		Ōtamarākau-Matatā-Whakatāne Dunes B is large site with a range of vegetation and habitat types, but it has been heavily modified by human and natural events. Threatened and At Risk avifauna have been recorded at Matatā lagoon, which was severely affected by flooding and sedimentation in 2005 and is being remediated. It includes good examples of indigenous dune vegetation and includes a stream mouth that is a migratory pathway for indigenous fish, so is consistent with Policy 11(b).

References Beadel 1994a; Beadel *et al.* 1996a; Environment Bay of Plenty 2008; Gosling and Beadel 2000a; Beadel 2006; BOPRC 2012.

OHINEKOAO (PART)[1]

Site Number [2]	128
Grid Reference (NZMG)	E2836766 N6362752
Local Authority	Whakatāne District Council
Ecological District	Ōtānewainuku
Protection Status	Protected (Department of Conservation, Ohinekoao Scenic Reserve and Ohinekoao Recreation Reserve, and QEII covenants) and unprotected parts
Site Area	219.9 ha
Altitudinal Range	14-220 m asl
Geology-Landform Type	Volcanic soft coast

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa-kanuka forest.	Escarpment
Terrestrial	Rewarewa/kanuka forest.	Ridge, face
Terrestrial	Rewarewa/kamahi-kanuka forest.	Ridge, face
Terrestrial	Manuka scrub.	Face
Terrestrial	Northern rata (*Metrosideros robusta*)/tawa-pukatea-rewarewa-mangeao forest.	Gully, face
Terrestrial	Rewarewa forest.	Ridge, gully
Terrestrial	Rewarewa-mamaku treefernland.	Ridge, gully
Terrestrial	Tawa forest.	Ridge, gully
Terrestrial	Manuka-mingimingi-prickly mingimingi scrub and shrubland.	Ridge, face
Palustrine	Raupo reedland.	Gully
Palustrine	Manuka shrubland.	Gully
Terrestrial	Pohutukawa forest and treeland.	Cliff
Terrestrial	Tawa-mangeao-rewarewa forest (with local pukatea, a few puriri and dead mangeao).	Hillslope
Terrestrial	Rewarewa/kanuka-mamaku forest (kamahi and mangeao locally common, scattered pohutukawa).	Hillslope
Terrestrial	(Rewarewa)/manuka-mingimingi scrub ⇔ (rewarewa)-(pohutukawa)/manuka scrub.	Hillslope
Terrestrial	Bluff vegetation.	Cliff
	(Beadel 1999b; Beadel 2006; and Beadel *et al.* 1996a)	

Vegetation and Indigenous Flora

Pimelea tomentosa (Threatened-Nationally Vulnerable) occurs in Ohinekoao Scenic Reserve, and is likely to occur in other parts of this site (Beadel 1999b).

Indigenous Fauna

Two snail species of interest occur in this area: *Iotula microbrunneus* and *Liarea egea*, which is near its southern limit of distribution at this site (Mayhill 1994). This site protects the Mimiha Stream which contains significant indigenous freshwater fish species (Beadel 2006). Species recorded upstream of this site include inanga, giant kōkopu, longfin eel, redfin bully, torrentfish, bluegill bully (all At Risk-Declining) (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Pleistocene marine sequences are moderately vulnerable to erosion (Kenny

[1] Part of Ohinekoao occurs outside the 'coastal environment' study area (i.e. further than 1 km inland of MHWS).

[2] Identified as SVHZ-116 in Wildland Consultants 2006g.

and Hayward 1996). Road widening may result in vegetation clearance. Domestic stock have access to parts of the site.

Key Site Features

This site contains good quality examples of coastal and semi-coastal indigenous vegetation. It is complementary to Matatā Scenic Reserve and the Ōtamarākau Dunes, providing an almost continuous sequence of wetland and sand dune vegetation contiguous with forest, albeit dissected by the coastal highway. One Threatened plant species is present. This site includes the best exposed sequence of Pleistocene marine sedimentary strata in the northern North Island (Kenny and Hayward 1996).

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	M
	3.5	H
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	H
	3.12	H
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** *Pimelea tomentosa* (Threatened-Nationally Vulnerable) **Fish:** Bluegill bully (At Risk-Declining) Giant kōkopu (At Risk-Declining) Longfin eel (At Risk-Declining) Redfin bully (At Risk-Declining) Torrentfish (At Risk-Declining)
ii	✓	Giant kōkopu (Vulnerable)
iii	✓	High quality examples of pohutukawa forest.
iv		
v		Regionally Significant
vi		Partially protected (Ohinekoao Scenic Reserve, Ohinekoao Recreation Reserve, and QEII covenants)
Policy Met:		11(a)
Justification:		Ohinekoao (Part) is consistent with Policy 11(a) because it includes high

Policy	Criteria Met	Explanation
		quality examples of pohutukawa forest and is a habitat of *Pimelea tomentosa*, a Threatened species . The site is part of an ecological sequence that includes Otamaraku Dunes and Matatā Scenic Reserve, and is bisected by the Mimiha Stream, which is a migratory pathway for indigenous species of freshwater fish. Approximately one third of the site is legally protected.

Notes

The unprotected parts of this site were identified as a Category 2 RAP (Recommended Area for Protection) in the Ōtānewainuku Ecological District PNA (Protected Natural Areas Programme) report (Beadel 2006). Roadside portions of Ohinekoao Reserve contains natural and human-made (rail cutting) exposures of Pleistocene marine sequences and faunas - nationally important (Kenny and Hayward 1996).

References

Kenny and Hayward 1996; Mayhill 1994; Beadel *et al.* 1996a; Beadel 1999b; Beadel 2006; Wildland Consultants 2006g.

MATATĀ SCENIC RESERVE (PART)[1]

Site Number [2]	129
Grid Reference (NZMG)	E2839340 N6361396
Local Authority	Whakatāne District Council
Ecological District	Ōtānewainuku
Protection Status	Protected (Department of Conservation, Matatā Scenic Reserve) and unprotected parts
Site Area	112.5 ha
Altitudinal Range	17-197 m asl
Geology-Landform Type	Volcanic soft coast

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Hard beech-pohutukawa forest.	Hillslope
Terrestrial	Pohutukawa-kanuka forest.	Hillslope
Terrestrial	Kanuka forest.	Hillslope
Terrestrial	Manuka-mingimingi-prickly mingimingi scrub and shrublands.	Hillslope
Terrestrial	Pohutukawa/brush wattle-mahoe forest.	Hillslope
Terrestrial	Japanese honeysuckle vineland. (Beadel 1991a)	Hillslope

Vegetation and Indigenous Flora

One hundred and eighty-nine indigenous taxa have been recorded in the Matatā Scenic Reserve (Beadel 2001c), of which this site is a part. The single Threatened species recorded, *Pimelea tomentosa* (Threatened-Nationally Vulnerable), is known to occur within the coastal part of the reserve (Beadel *et al.* 1996a, Beadel 2000 and 2001c).

Indigenous Fauna

Kereru and common forest birds (Beadel *et al.* 1996a).

Condition/Pressures

Forty-eight adventive taxa have been recorded in Matatā Scenic Reserve (Beadel 2001c) including Japanese honeysuckle.

Key Site Features

Matatā Scenic Reserve is the largest example of coastal forest remaining in the Ōtānewainuku Ecological District and Northern Volcanic Plateau Ecological Region and includes the largest remaining example of coastal hard beech-pohutukawa forest (Beadel *et al.*1996a). Much of it is in relatively good condition and it contains representative examples of the vegetation of both Ōtānewainuku Ecological District and the Bay of Plenty Region (Beadel *et al.* 1996a). There is some pressure from invasive weeds associated with nearby roads and residential areas. One of the largest populations of a nationally vulnerable Threatened plant species occur in the reserve.

[1] Part of the scenic reserve occurs outside the 'coastal environment' study area (i.e. further than 1 km inland of MHWS).

[2] Identified as SVHZ-117 in Wildland Consultants 2006g.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	H
	3.5	H
	3.6	L
Diversity and Pattern	3.7	H
Naturalness	3.8	H
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	H
	3.12	H
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** *Pimelea tomentosa* (Threatened-Nationally Vulnerable)
ii		
iii	✓	Largest example of coastal forest in Ōtānewainuku District, and includes the largest example of hard beech-pohutukawa forest.
iv		
v	✓	Nationally Significant
vi	✓	Protected (Matatā Scenic Reserve, Department of Conservation)
Policy Met:		11(a)
Justification:		Matatā Scenic Reserve (Part) is consistent with Policy 11(a) because it comprises the largest example of coastal forest remaining in the Ōtānewainuku Ecological District and includes the largest example of pohutukawa-hard beech forest. It is a nationally significant site that is legally protected as a scenic reserve.

Notes

Matatā Scenic Reserve was formerly part of a much larger forest tract, extending west to the Pongakawa plains and inland to Lakes Rotoma, Rotoiti, Rotoehu and beyond. The former larger tract has now been reduced to a series of smaller remnants, of which the reserve is the largest example of coastal forest (Beadel 2001c).

References

Nicholls 1968; Nicholls 1976; Beadel 1991a; Beadel *et al.* 1996a; Beadel 2000; Beadel 2001c; Wildland Consultants 2006g.

7.5 White Island Ecological District

White Island Ecological District includes several islands and rock stacks. The largest of these is Whakaari (White Island), a 238 ha active andesite volcano situated *c.*50 km offshore off Whakatāne. The island, which reaches 321 m asl, is the summit of a large, mainly submarine volcano. Moutohorā (Whale Island) is a remnant volcanic cone which has been heavily eroded, leaving two peaks (353 m asl and 189 m asl) which fall away to cliffs at the northern, western, and eastern ends of the island. Three small sandy bays are located on the southern coast. Hydrothermal activity occurs on the south-west flanks of the central cone in Sulphur Valley, with some hot springs at sea level. Rūrima Island, Tokata Island, Moutoki Island, Te Paepae o Aotea and Club Rocks are the other small islands within the ecological district.

Large areas of pohutukawa forest were killed during volcanic activity on Whakaari between 1976 and 1981, reducing the total vegetation cover on the island by more that 50%. Today, only *c.*48 ha of forest and scrub entirely dominated by pohutukawa remains, along with the herbfields and grasslands associated with gannetries, where the dominant species are New Zealand iceplant*, Einadia trigonos* subsp. *trigonos* and a native grass (*Poa anceps* agg.). The island has very low plant species diversity, with only seven species recorded in 1989 (Clarkson *et al.* 1989), although the diversity of flora has increased over recent years.

Pohutukawa forest was probably once the dominant vegetation on Moutohorā with occasional puriri, mangeao, and possible podocarps (Rijkse 1980). However, the vegetation of Moutohorā has been highly modified, beginning with clearing and burning by Māori, followed by European farming and the introduction of goats, sheep, rabbits, and Norway rats. The combined effects of humans and introduced animals devastated the indigenous vegetation. More recently, introduced animals have been eradicated and the vegetation is recovering rapidly, so that today the island is covered by a mosaic of pohutukawa forest, mahoe forest, kanuka shrubland, and bracken. Natural regeneration of canopy species such as pohutukawa, mahoe, and kanuka is occurring in scrub and shrublands.

Pohutukawa forest, scrub dominated by coastal mahoe and taupata, and glasswort and New Zealand iceplant rocklands comprise the main vegetation cover on Moutoki and Rūrima Islands. There is a small example of spinifex-(pingao) sandfield on Rūrima Island.

Moutoki Island is the present-day southern limit of distribution for mawhai (At Risk-Naturally Uncommon). Cook's scurvy grass (Threatened-Nationally Vulnerable) occurs on the Volkner Rocks.

Moutoki and Moutohorā have natural and translocated northern tuatara populations, respectively. Eradication of introduced mammals from Moutohorā in particular means that the Ecological District sustains a healthy and presumably recovering indigenous fauna, including both land and sea bird species, and a range of lizard species.

Table 10: Threatened and notable species in White Island Ecological District, coastal bioclimatic zone.

Scientific Name	Common Name	Threat Classification/ Significance
BIRDS		
Threatened		
Charadrius bicinctus bicinctus	banded dotterel	Nationally Vulnerable
Charadrius obscurus aquilonius	northern New Zealand dotterel	Nationally Vulnerable
Egretta sacra sacra	reef heron	Nationally Vulnerable
Falco novaeseelandiae sensu stricto	bush falcon	Nationally Vulnerable
Larus novaehollandiae scopulinus	red-billed gull	Nationally Vulnerable
Nestor meridionalis septentrionalis[1]	North Island kākā	Nationally Vulnerable
Phalacrocorax varius varius	pied shag	Nationally Vulnerable
Sterna caspia	Caspian tern	Nationally Vulnerable
At Risk		
Eudyptula minor iredalei	northern little blue penguin	Declining
Puffinus carneipes	flesh-footed shearwater	Declining
Sterna striata striata	white-fronted tern	Declining
Pelecanoides urinatrix urinatrix	Northern diving petrel	Relict
Procelsterna cerulea albivitata	Grey ternlet	Naturally Uncommon
Haematopus unicolor	variable oystercatcher	Recovering
Philesturnus rufusater[2]	North Island saddleback, tieke	Recovering
REPTILES		
At Risk		
Oligosoma infrapunctatum	speckled skink	Declining
Sphenodon punctatus	northern tuatara	Relict
VASCULAR PLANTS		
Threatened		
Lepidium oleraceum	nau, Cook's scurvy grass	Nationally Vulnerable
At Risk		
Cyperus insularis		Declining
Nephrolepis flexuosa	native ladder fern	Declining
Paspalum orbiculare	taranui	Declining
Solanum aviculare var. *aviculare*	poroporo	Declining
Ficinia spiralis	pingao	Relict
Blechnum norfolkianum		Naturally Uncommon
Doodia squarrosa		Naturally Uncommon
Doodia squarrosa		Naturally Uncommon
Hypolepis dicksonioides		Naturally Uncommon
Kunzea ericoides var. *microflora*	prostrate kanuka	Naturally Uncommon
Myosotis spathulata		Naturally Uncommon
Schizaea dichotoma	fan fern	Naturally Uncommon
Sicyos mawhai	mawhai, native cucumber	Naturally Uncommon
Tetragonia tetragonioides	kokihi, New Zealand spinach	Naturally Uncommon
Regionally Uncommon		
Asplenium appendiculatum subsp. *maritimum*		Regionally Uncommon
Asplenium haurakiense		Regionally Uncommon
Melicytus novae-zelandiae	coastal mahoe	Regionally Uncommon

Notes
[1] Transient only.
[2] Reintroduced; founding population was translocated to Moutohorā from Cuvier Island in 1999.

References
Beadel 1994a; Department of Conservation 1999; Brunton 2000; Heaphy 2003b; Boyt 2004; Heenan and de Lange 2005; Hitchmough *et al.* 2010; de Lange *et al.* 2009; Miskelly *et al.* 2008.

RŪRIMA, MOUTOKI, AND TOKATA ISLANDS

Site Number [1] 137
Grid Reference (NZMG) E2851245 N6367260
Local Authority
Ecological District White Island
Protection Status Partially protected (Rūrima Islands Wildlife Refuge - Māori owned)
Site Area 21.0 ha
Altitudinal Range 0-14 m asl
Geology-Landform Type Volcanic hard coast

Hydrosystem	Vegetation/Habitat Type	Landform
	Rūrima Island	
Terrestrial	Pohutukawa forest.	Rocky island
Terrestrial	Pohutukawa/taupata-coastal mahoe scrub.	Rocky island
Terrestrial	Spinifex-oioi-ripgut brome (*Bromus diandrus*) grassland.	Rocky island
Terrestrial	Glasswort herbfield.	Rocky island
Terrestrial	Horokaka rockland.	Rocky island
	Moutoki Island	
Terrestrial	Pohutukawa forest.	Rocky island
Terrestrial	Taupata-coastal mahoe scrub.	Rocky island
Terrestrial	Glasswort rockland.	Rocky island
	Tokata Island Not described. (Beadel 1994a)	

Vegetation and Indigenous Flora

Pingao (At Risk-Relict) is present on Rūrima Island; two small groups of this species covering *c.*10 × 10 m were observed in 2004 (Beadel 1994a, Boyt 2004). New Zealand spinach (At Risk-Naturally Uncommon) occurs on Moutoki and Rūrima Islands (Beadel 1994a). Mawhai (At Risk-Naturally Uncommon) reaches its present-day southern limit of distribution on Moutoki Island (Cameron 1992) and there were 21 healthy plants in 2004 (Boyt 2004). Coastal mahoe (regionally uncommon), a species generally confined to islands in the Bay of Plenty, is present on Moutoki and Rūrima Islands, and is not known from elsewhere in the White Island Ecological District (Beadel 1994a).

Indigenous Fauna

A pair of reef heron (Threatened-Nationally Vulnerable) was breeding on Rūrima in 2003 (Heaphy 2003b). Northern little blue penguin (At Risk-Declining), red-billed gull and pied shag (both Threatened-Nationally Vulnerable) and variable oystercatcher (At Risk-Recovering), were recorded in 2004 (Boyt 2004). Northern diving petrel (At Risk-Relict) is also present (K. Owen, Department of Conservation, pers. comm. 2012). Other native bird species present include North Island fantail, Australasian gannet, black-backed gull, kingfisher, grey-faced petrel, sooty shearwater, welcome swallow, and tui (Boyt 2004).

There are common gecko and shore skink (not threatened) populations on Rūrima Island, and northern tuatara (At Risk-Relict) on Moutoki Island (Boyt 2004). This is one of four remaining natural populations of northern tuatara in the Bay of Plenty (Heaphy 2003b).

Condition/Pressures

Kiore were eradicated from Rūrima in 1983 as part of early experimentation in kiore eradication (McFadden and Towns 1991), and no introduced mammals

[1] Identified as SVHZ-211 in Wildland Consultants 2006g.

occur on the islands today. Regular bait station checks on Rūrima were started in 2004 (Boyt 2004). Common garden snails are abundant, preventing the reintroduction of Cook's scurvy grass (Heaphy 2003b). There are regular unauthorised landings by the public, which present a fire and biosecurity risk (Heaphy 2003b).

Key Site Features

These islands contain good quality representative examples of the vegetation of White Island Ecological District. The vegetation types present do not occur on either Moutohorā or Whakaari (Beadel 1994a). The islands are free of introduced pest mammals, but common garden snails are reducing regeneration of some plant species. There are three At Risk and one regionally uncommon plant species present on the islands. Three Threatened and two At Risk bird species, and three reptile species (common gecko, shore skink, and the At Risk tuatara) are also present.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	M
	3.5	L
	3.6	M
Diversity and Pattern	3.7	H
Naturalness	3.8	H
Ecological Context	3.9	L
	3.10	H
Viability and Sustainability	3.11	M
	3.12	H
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** Pingao (At Risk-Relict) New Zealand spinach (At Risk-Naturally Uncommon) Mawhai (At Risk-Naturally Uncommon) **Avifauna:** Pied shag (Threatened-Nationally Vulnerable) Red-billed gull (Threatened-Nationally Vulnerable) Reef heron (Threatened-Nationally Vulnerable) Northern little blue penguin (At Risk-Declining) Northern diving petrel (At Risk-Relict) Variable oystercatcher (At Risk-Recovering) **Other Fauna:**

Policy	Criteria Met	Explanation
		Northern tuatara (At Risk-Relict)
ii		
iii	✓	High quality examples of coastal vegetation and habitats on largely pest-free offshore islands.
iv		
v	✓	Nationally Significant
vi	✓	Protected (Rūrima Islands Wildlife Refuge, Department of Conservation)
Policy Met:		11(a)
Justification:		Rūrima, Moutoki, and Tokata Islands are consistent with Policy 11(a) because they provide habitat for a suite of Threatened and At Risk flora and fauna, are legally protected, and are of national significance because they comprise high quality examples of coastal vegetation and habitats.

Notes The islands are owned by local iwi, but are managed as a Wildlife Refuge in conjunction with the Department of Conservation (see Department of Conservation Bay of Plenty file PAW-04-02-07).

References McFadden and Towns 1991; Cameron 1992; Beadel 1994a; Heaphy 2003b; Boyt 2004; Wildland Consultants 2006g.

MOUTOHORĀ (WHALE ISLAND)

Site Number [1]	140
Grid Reference (NZMG)	E2859550 N6364257
Local Authority	
Ecological District	White Island
Protection Status	Protected (Wildlife Management Reserve managed by a Joint Management Committee comprising Department of Conservation and Iwi representatives) and unprotected parts
Site Area	165.7 ha
Altitudinal Range	0-160 m asl
Geology-Landform Type	Volcanic hard coast

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa forest.	Volcanic hard coast
Terrestrial	Pohutukawa-(ti kouka) forest and scrub⇔ bracken fernland⇔oioi rushland⇔hairy birdsfoot trefoil (*Lotus suaveolens*)-exotic grasses herbfield.	Volcanic hard coast
Terrestrial	Pohutukawa shrubland.	Dune sands
Terrestrial	Mahoe forest.	Volcanic hard coast
Terrestrial	Kanuka scrub.	Volcanic hard coast
Terrestrial	Pohutukawa/kanuka scrub and forest.	Volcanic hard coast
Palustrine	Cyperus-*Juncus* tussockland⇔oioi rushland.	Wetland
Palustrine	Oioi-kanuka-(pohutukawa)-(pampas) shrub-sedgeland.	Wetland
Terrestrial	*Cyperus ustulatus* tussockland.	Volcanic hard coast
Terrestrial	Oioi rushland.	Volcanic hard coast
Estuarine	Sea rush tussockland.	Intertidal flat
Terrestrial	(Pohutukawa)/oioi-(lupin) sandfield.	Sand dune
Terrestrial	Spinifex-(tauhinu) sandfield.	Sand dune
Terrestrial	Bracken fernland.	Volcanic hard coast
Terrestrial	(Oioi)/grasses-hairy birdsfoot treefoil-scarlet pimpernel grassland and herbfield⇔ring fern-*Pteris tremula* fernland⇔*Carex geminata* sedgeland.	Volcanic hard coast
Terrestrial	Rockland and boulderfield.	Volcanic hard coast
Terrestrial	(Lupin)/(*Carex pumila*) sandfield.	Beach sands
Terrestrial	Prostrate kanuka (*Kunzea ericoides* var. *microflora*) shrubland.	Ridge, hillslope (sinter deposits)
Terrestrial	Pohutukawa-kanuka forest.	Hillslope
Terrestrial	(Pohutukawa)/prostrate kanuka forest.	Hillslope
Terrestrial	Bare soil.	Sinter deposits

(Regnier 1986 and Wildland Consultants 2005b)

Vegetation and Indigenous Flora

There are 190 indigenous and 119 exotic vascular plant species on Moutohorā (Ogle 1990a; Department of Conservation 1999). In addition, the island has a relatively well described non-vascular flora, with 79 species of moss (Beever and Brownsey 1990) and 144 species of lichen recorded (Hayward and Hayward 1990). Five lichen species have their first New Zealand records from this island.

A unique sequence of geothermal vegetation occurs from the high tide mark: prostrate kanuka scrub and shrubland through to pohutukawa forest (Wildland

[1] Identified as SVHZ-212 in Wildland Consultants 2006g.

Consultants 2005b). Indigenous species present, typical of geothermal sites, include *Schizaea dichotoma* (At Risk-Naturally Uncommon), prostrate kanuka (At Risk-Naturally Uncommon), kanuka, mingimingi, turutu, *Psilotum nudum*, *Lycopodiella cernua*, *Drosera auriculata* and *Histiopteris incisa* (Wildland Consultants 2005b).

Myosotis spathulata, New Zealand spinach, (both At Risk-Naturally Uncommon), *Asplenium appendiculatum* subsp. *maritimum* (Ogle 1990a[1]), and a newly described and At Risk sedge species, *Cyperus insularis* (At Risk-Declining) (Heenan and de Lange 2005) occur on Moutohorā. *Doodia squarrosa* (At Risk-Naturally Uncommon) is locally common throughout (P. Cashmore, Department of Conservation, pers. comm. 2006). Moutohorā is the southernmost limit of distribution of *A. haurakiense* (NZPCN 2010).

Since 1999 ten Threatened plant species which occur naturally in the Bay of Plenty coastal bioclimatic zone have been planted on Moutohorā (Shaw 1997b; Gosling 1999): mawhai (At Risk-Naturally Uncommon), pingao (At Risk-Relict), *Pimelea tomentosa* (Threatened-Nationally Vulnerable), parapara (At Risk-Relict), New Zealand shore spurge, sand pimelea, sand tussock (all At Risk-Declining), Cook's scurvy grass (Threatened-Nationally Vulnerable), New Zealand spinach (At Risk-Naturally Uncommon) and *Rorippa divaricata* (Threatened-Nationally Vulnerable). Most of these appear to be establishing except sand pimelea (limited recruitment), sand tussock (limited recruitment) and *Rorippa divaricata* (unsuccessful). Tawapou was also been planted as part of this programme, but this species is no longer considered Threatened.

From 1984 to 1989 there was an extensive planting programme to supplement natural regeneration and enrich species diversity (McGlynn 1990; Smale and Owen 1990). This programme stopped because natural regeneration of species such as pohutukawa, mahoe and kanuka was abundant (Shaw *et al.* 2002). Photopoint vegetation monitoring has been carried out on Moutohorā from 1990 to the present (Shaw *et al.* 2002).

Indigenous Fauna

There are 40 naturally-occurring indigenous bird species on the island (Department of Conservation 1999), including the following Threatened species: North Island kākā (which are only occasional visitors), Caspian tern, reef heron, northern New Zealand dotterel, red-billed gull, banded dotterel (all Threatened-Nationally Vulnerable), northern little blue penguin (At Risk-Declining), and white-fronted tern (At Risk-Declining) 34 are present (K. Owen, Department of Conservation, pers. comm. 2012). A pair of bush falcons (Threatened-Nationally Vulnerable) was first recorded nesting on the island in 2000 (Parker *et al.* 2000) and has been resident ever since (N. Willems, Bay of Plenty Regional Council, pers. comm. 2006). Grey-faced petrel are the dominant avifauna on the island (N. Willems, Bay of Plenty Regional Council, pers. comm. 2006) and Tangata Whenua have a controlled legal right to harvest a set number of grey-faced petrel chicks (J. Heaphty, Department of Conservation, pers. comm. 2012).

Forty North Island saddlebacks (At Risk-Recovering) were translocated to Moutohorā from Cuvier Island in 1999 (Brunton 2000). Red-crowned kākāriki (At Risk-Relict) were introduced in 1986 (Department of Conservation 1999) and North Island brown kiwi (Threatened-Nationally Vulnerable) have also been reintroduced.

[1] Scientific names updated since original paper.

Speckled skink (At Risk-Declining), common gecko and copper skink are present on the island (Department of Conservation 1999). In 1996, 32 adult northern tuatara (At Risk-Relict) were released on Moutohorā. Seven were recaptured in 2005, and there were a further seven island-born individuals. The chances of long-term establishment of northern tuatara on Moutohorā are said to be promising (Ussher and Willems 2006).

Fourteen species of native land snail are present on Moutohorā (Ogle 1990b).

Condition/Pressures

The vegetation of Moutohorā has been highly modified, beginning with clearing and burning by Māori, followed by European farming and the introduction of goats, sheep, Norway rats and rabbits. All these introduced animals have subsequently been eradicated, leading to a recovery of the vegetation from mostly grassland with very little forest (Parris *et al.* 1971) to that described above.

There are numerous weed threats on the island but most infestations are under control. Department of Conservation led weed control over the past decade has focussed on pampas (especially on coastal cliffs), moth plant, Formosan lily (*Lilium formosanum*), tree lucerne (*Chamaecytisus palmensis*), boxthorn and any new incursions found during surveillance monitoring (e.g. Japanese walnut washed ashore by ocean currents) (P. Cashmore, Department of Conservation, pers. comm. 2006).

Although there is an island quarantine programme, there is still a substantial threat to the biodiversity of the island from illegal landings with associated fire and biosecurity risks (P. Cashmore, Department of Conservation, pers. comm. 2006).

Key Site Features

The vegetation of Moutohorā has been highly modified in the past. However, it has recovered well and pohutukawa forest, mahoe forest, kanuka scrub, shrublands, and bracken now dominate the present-day vegetation. Canopy species such as pohutukawa, mahoe, and kanuka are regenerating naturally, and kanuka, bracken, and *Ficinia nodosa* have replaced exotic grasses and bare areas. There is a small area of kanuka forest on sand, which is a regionally rare vegetation type (Beadel 1994a). Another vegetation type of regional significance present is pohutukawa forest. A very significant feature is the rapid natural regeneration of coastal forest because of the absence of introduced browsing animals. It is habitat for a large suite of Threatened and At Risk fauna and flora.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	H
	3.5	M
	3.6	H
Diversity and Pattern	3.7	H

Criterion*	RPS Number*	Ranking**
Naturalness	3.8	H
Ecological Context	3.9	L
	3.10	H
Viability and Sustainability	3.11	H
	3.12	H
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Naturally Occurring Flora:** *Cyperus insularis* (At Risk-Declining) Pingao (At Risk-Relict) *Doodia squarrosa* (At Risk-Naturally Uncommon) *Myosotis spathulata* (At Risk-Naturally Uncommon) (1990) New Zealand spinach (At Risk-Naturally Uncommon) (1990) Prostrate kanuka (At Risk-Naturally Uncommon) *Schizaea dichotoma* (At Risk-Naturally Uncommon) **Planted Flora:** Cook's scurvy grass (Threatened-Nationally Vulnerable) *Pimelea tomentosa* (Threatened-Nationally Vulnerable) Parapara (At Risk-Relict) Mawhai (At Risk-Naturally Uncommon) New Zealand shore spurge (At Risk-Declining) Sand pimelea (At Risk-Declining) Sand tussock (At Risk-Declining) New Zealand spinach (At Risk-Naturally Uncommon) **Fauna:** Banded dotterel (Threatened-Nationally Vulnerable) Bush falcon (Threatened-Nationally Vulnerable) Caspian tern (Threatened-Nationally Vulnerable) Northern New Zealand dotterel (Threatened-Nationally Vulnerable) North Island kākā (Threatened-Nationally Vulnerable) Red-billed gull (Threatened-Nationally Vulnerable) Reef heron (Threatened-Nationally Vulnerable) Northern little blue penguin (At Risk-Declining) White-fronted tern (At Risk-Declining) **Herpetofauna:** Speckled skink (At Risk-Declining) Northern tuatara (At Risk-Relict) **Translocated Fauna:** North Island brown kiwi (Threatened-Nationally Vulnerable) North Island saddleback (At Risk-Recovering) (1999) Red-crowned kākāriki (At Risk-Relict) (1986)

Policy	Criteria Met	Explanation
ii	✓	Kākā (Endangered) New Zealand dotterel (Endangered) Northern brown kiwi (Endangered)
iii	✓	Offshore Island that is free of introduced animals and includes geothermal vegetation (an originally rare ecosystem type).
iv	✓	*Asplenium haurakiense* is at the southern limit of its distribution, as is parapara, which has been planted on the island.
v	✓	Nationally Significant
vi	✓	Protected (Moutohorā (Whale) Island Wildlife Management Reserve, Department of Conservation)
Policy Met:		11(a)
Justification:		Moutohorā is consistent with Policy 11(a). It is habitat for a suite of Threatened and At Risk flora and fauna (some of which have been translocated to the island), and one plant species which is at the southern limit of its distribution. It is a nationally significant site that is protected as a Wildlife Management Reserve.

Notes

Ngāti Awa, the Department of Conservation and the Bay of Plenty Conservation Board manage the island jointly. Prior to introduction of pest animals, there used to be large populations of grey-faced petrel and sooty shearwater on the island which were harvested as muttonbirds or 'titi' by Ngāti Awa, but harvest has not continued to the present day (Te Runanga o Ngāti Awa 1992; Department of Conservation 1999). This site contains six regionally important geological sites of volcanic or geothermal origin (Kenny and Hayward 1996).

References

Parris *et al.* 1971; Regnier 1986; Beever and Brownsey 1990; McGlynn 1990; Hayward and Hayward 1990; Ogle 1990a; Ogle 1990b; Smale and Owen 1990; Wright 1990; Beadel 1994a; Kenny and Hayward 1996; Patrick 1996; Shaw 1997b; Department of Conservation 1999; Parker *et al.* 2000; Brunton 2000; Shaw *et al.* 2002; Heenan and de Lange 2005; Wildland Consultants 2005b; Ussher and Willems 2006; Wildland Consultants 2006g.

TE PAEPAE O AOTEA (VOLKNER ROCKS)

Site Number [1]	186
Grid Reference (NZMG)	E2875593 N6405396
Local Authority	
Ecological District	White Island
Protection Status	Protected (Te Paepae o Aotea (Volkner Rocks) Marine Reserve) and unprotected parts
Site Area	2.9 ha
Altitudinal Range	0 m asl
Geology-Landform Type	Volcanic hard coast

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa/taupata scrub.	Volcanic hard coast
Terrestrial	Taupata shrubland.	Volcanic hard coast
Terrestrial	Glasswort rockland. (Beadel 1994a)	Volcanic hard coast

Vegetation and Indigenous Flora

Cook's scurvy grass (nau, Threatened-Nationally Vulnerable) was present in 1993. In terms of terrestrial flora, Te Paepae o Aotea are considered complementary to Whakaari, containing several taxa not currently known from Whakaari, and potentially acting as a seed source for Whakaari during times when Whakaari is relatively stable (Shaw 1993).

Indigenous Fauna

This is an important breeding site for coastal avifauna. Red-billed gull (Threatened-Nationally Vulnerable), grey ternlet (At Risk-Naturally Uncommon), and other non-threatened sea birds have been recorded here since 2003 (OSNZ 2003 & 2006). White-fronted tern (At Risk-Declining) are also present (K. Owen, Department of Conservation, pers. comm. 2012).

Key Site Features

This site comprises a representative example of vegetation and flora of the White Island Ecological District. Te Paepae o Aotea is nationally significant as a pest-free breeding site for one Threatened and two At Risk sea birds, as habitat for a Threatened plant species, and as a potential seed source for Whakaari.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	H
	3.5	M
	3.6	L
Diversity and Pattern	3.7	L
Naturalness	3.8	H
Ecological Context	3.9	H
	3.10	L

[1] Identified as SVHZ-213 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	L
	3.12	H
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** Cook's scurvy grass (Threatened-Nationally Vulnerable) (1993) **Fauna:** Red-billed gull (Threatened-Nationally Vulnerable) White-fronted tern (At Risk-Declining) Grey ternlet (At Risk-Naturally Uncommon)
ii		
iii	✓	High quality example of coastal vegetation (including taupata scrub) on several small offshore islets.
iv		
v	✓	Nationally Significant
vi		Unprotected (Marine Reserve surrounds the rocks)
Policy Met:		11(a)
Justification:		Te Paepae O Aotea comprises coastal vegetation types (including one Threatened plant species that was recorded in 1993) and is habitat for Threatened and At Risk species of sea birds. It is an important breeding site for both Threatened and non-threatened avifauna, and is a nationally significant site. For these reasons it is consistent with Policy 11(a).

Notes

Te Paepae Aotea (Volkner Rocks) Marine Reserve was officially opened in October 2006. It extends one nautical mile out from the rocks except on the south-western side.

References

Shaw 1993; Beadel 1994a; Kenny and Hayward 1996; Department of Conservation and Whakaari Marine Protection Steering Committee 2002; OSNZ 2006; Wildland Consultants 2006g.

WHAKAARI (WHITE ISLAND)

Site Number [1]	197
Grid Reference (NZMG)	E2879818 N6400517
Local Authority	
Ecological District	White Island
Protection Status	Protected (White Island Private Scenic Reserve)
Site Area	327.8 ha
Altitudinal Range	0-74 m asl
Geology-Landform Type	Volcanic hard coast

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa forest and scrub.	Volcanic hard coast
Terrestrial	Dead and damaged pohutukawa forest and scrub.	Volcanic hard coast
Terrestrial	Horokaka-*Einadia trigonos-Poa anceps* agg. herbfield and grassland. (Clarkson *et al.* 1989)	Volcanic hard coast

Vegetation and Indigenous Flora

Much of the island is unvegetated due to the impact of volcanic eruptions. The understorey of pohutukawa forest and scrub is very depauperate. Only seven vascular plant species were recorded on the island in 1989 (Clarkson *et al.* 1989).

Indigenous Fauna

There is a very large colony of Australasian gannets, the only one in the Bay of Plenty. Grey-faced petrel are present (K. Owen, Department of Conservation, pers. comm. 2012). Fluttering shearwater and/or the common diving petrel may also be present (J. Heaphy, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Kiore are the only introduced mammals that occur on the island (J. Heaphy, Department of Conservation, pers. comm. 2012). Commercial tour operators land visitors on the island by boat and helicopter.

Key Site Features

Whakaari contains representative examples of vegetation regenerating on an active volcano. Whakaari is of international scientific importance as a place where an active volcano and its effects on plant and animal populations can be studied (Beadel 1994a). In addition, the site contains seven volcanic or geothermal sites of national or international geological importance, including New Zealand's most active volcano over the last thirty years and deposits from the debris avalanche that killed eleven sulphur miners in 1914 (Kenny and Hayward 1996).

[1] Identified as SVHZ-214 in Wildland Consultants 2006g.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	L
	3.3	L
	3.4	H
	3.5	H
	3.6	N/A
Diversity and Pattern	3.7	L
Naturalness	3.8	H
Ecological Context	3.9	H
	3.10	L
Viability and Sustainability	3.11	H
	3.12	H
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii	✓	Geothermal ecosystems are 'originally rare'.
iv		
v	✓	Nationally Significant
vi	✓	Protected (White Island Private Scenic Reserve)
Policy Met:		11(a)
Justification:		Whakaari (White Island) is consistent with Policy 11(a) because it is an active volcano and geothermal habitats are an 'originally rare' ecosystem type. It is a nationally significant site that is legally protected.

References Clarkson *et al.* 1989; Beadel 1994a; Wildland Consultants 2006g.

WHAKATĀNE
ECOLOGICAL REGION

8. WHAKATĀNE ECOLOGICAL REGION

8.1 Overview

The Whakatāne Ecological Region comprises the Te Teko, Taneatua and Ōpōtiki Ecological Districts, all of which adjoin the coast. This region is characterised by coastal and lowland alluvial plains and terraces and rolling hill country. Major features of the ecological region are the Rangitāiki Plains (through which flow the Whakatāne, Tarawera and Rangitāiki Rivers) and Ōhiwa Harbour. The Waioweka and Otara Rivers flow through the Ōpōtiki Ecological District.

8.2 Te Teko Ecological District

Te Teko Ecological District comprises the Rangitāiki Plains, a recent alluvial floodplain of the Whakatāne, Rangitāiki and Tarawera Rivers. The plains were originally largely wetlands but virtually the entire area has been drained and developed for farming. Today, less than 1% of the original wetlands remain (Beadel *et al*. 2012).

The coastal environment of Te Teko Ecological District largely consists of coastal sand dunes. However, where the sand dunes extend less than 1 km inland of the coast, the former Rangitāiki Swamp makes up the remainder of the coastal environment. There is a small estuary at the mouth of the Whakatāne River. Both the Rangitāiki and Tarawera Rivers have been diverted from their original shared outlet, but coastal wetlands still remain at this site (Matatā Wildlife Refuge).

The sand dune vegetation (both foredune and back dunes) has been subjected to a long history of disturbance, burning and grazing. Spinifex and pingao would have been common on the foredune, grading into pohuehue-*Ficinia nodosa* vineland and sedgelands, and kanuka forest and scrub. Today the foredune is generally dominated by spinifex, with only scattered pingao along much of the coast, although it is common in a few places. Behind the foredune the dominant species are pohuehue, African boxthorn (*Lycium ferocissimum*; an invasive weed) and *Ficinia nodosa*. Whilst the majority of the back dunes have been completely cleared of vegetation and are intensively grazed, there are relatively large areas of "rough pasture" where pohuehue is relatively common. In recent years some of these areas have been retired from farming and are beginning to recover. In addition, "Thornton" kanuka (Threatened-Nationally Vulnerable) forest, scrub and shrublands occur on the Wahieroa sand dunes between the Rangitāiki and Tarawera Rivers. This is considered to be a different species from the more common kanuka species found throughout the central North Island. Kanuka forest on sand dunes is a nationally rare vegetation type. Behind the sand dunes the Rangitāiki Swamp would have been dominated by raupo, ti kouka, harakeke and *Carex* species.

East of a lagoon in the old Tarawera River estuary near Matatā is a large wetland dominated by raupo reedland, and mixtures of harakeke, saltmarsh ribbonwood, sea rush, and oioi. There are small estuarine wetlands in the Whakatāne Estuary dominated by sea rush, *Bolboschoenus fluviatilis, B. caldwellii* and *Schoenoplectus pungens*, with local saltmarsh ribbonwood, glasswort, oioi, and bachelor's button. Thornton Lagoon, to the east of the Rangitāiki River mouth, is bounded by a narrow band of raupo reedland.

Cyclosorus interruptus (At Risk-Declining) and pingao (At Risk-Relict) both occur in the coastal environment of the Te Teko Ecological District. It also provides habitat for several Threatened bird species such as white heron, black-fronted tern and northern

New Zealand dotterel. Longfin eel and giant kōkopu, both At Risk species, have been recorded here.

Table 11: Threatened and notable species in coastal bioclimatic zone of Te Teko Ecological District.

Scientific Name	Common Name	Threat Classification[1]
BIRDS		
Threatened		
Anas superciliosa superciliosa	grey duck	Nationally Critical
Egretta alba modesta	white heron	Nationally Critical
Botaurus poiciloptilus	Australasian bittern	Nationally Endangered
Larus bulleri	black-billed gull	Nationally Endangered
Sterna albostriata	black-fronted tern	Nationally Endangered
Charadrius bicinctus bicinctus	banded dotterel	Nationally Vulnerable
Charadrius obscurus aquilonius	northern New Zealand dotterel	Nationally Vulnerable
Egretta sacra sacra	reef heron	Nationally Vulnerable
Larus novaehollandiae scopulinus	red-billed gull	Nationally Vulnerable
Phalacrocorax varius varius	pied shag	Nationally Vulnerable
Poliocephalus rufopectus	New Zealand dabchick	Nationally Vulnerable
Sterna caspia	Caspian tern	Nationally Vulnerable
At Risk		
Bowdleria punctata vealeae	North Island fernbird	Declining
Himantopus himantopus leucocephalus	pied stilt	Declining
Sterna striata striata	white-fronted tern	Declining
Porzana pusilla affinis	marsh crake	Relict
Porzana tabuensis plumbea	spotless crake	Relict
Gallirallus philippensis assimilis	banded rail	Naturally Uncommon
Phalacrocorax carbo novaehollandiae	black shag	Naturally Uncommon
Phalacrocorax melanoleucos brevirostris	little shag	Naturally Uncommon
Phalacrocorax sulcirostris	little black shag	Naturally Uncommon
Platalea regia	royal spoonbill	Naturally Uncommon
Haematopus unicolor	variable oystercatcher	Recovering
VASCULAR PLANTS		
Threatened		
Kunzea aff. *erioides* (a)	Thornton kanuka	Nationally Vulnerable
At Risk		
Coprosma acerosa	tarakupenga, sand coprosma	Declining
Cyclosorus interruptus		Declining
Poa billardierei	hinarepe, sand tussock	Declining
Thelypteris confluens	marsh fern	Declining
Ficinia spiralis	pingao	Relict
Korthalsella salicornioides	dwarf mistletoe	Naturally Uncommon
Tetragonia tetragonioides	New Zealand spinach, kokihi	Naturally Uncommon
Regionally Uncommon Species		
Bolboschoenus caldwellii	purua grass	Regionally Uncommon
Suaeda novae-zelandiae		Regionally Uncommon
Melicytus novae-zelandiae	coastal mahoe	Regionally Uncommon
Carex aff. *raoulii*		Regionally Uncommon
Oxalis rubens		Regionally Uncommon
Zoysia pauciflora		Regionally Uncommon
FRESHWATER FISH		
At Risk		
Anguilla dieffenbachii	longfin eel	Declining
Cheimarrichthys fosteri	torrentfish	Declining
Galaxias argenteus	giant kōkopu	Declining
Galaxias brevipinnis	kōaro	Declining
Galaxias maculatus	inanga	Declining
Galaxias postvectis	shortjaw kōkopu	Declining
Geotria australis	lamprey	Declining
Gobiomorphus hubbsi	bluegill bully	Declining

Scientific Name	Common Name	Threat Classification[1]
Gobiomorphus huttoni	redfin bully	Declining
OTHER FAUNA		
At Risk		
Oligosoma moco	Moko skink	Relict

Note

[1] Threat classifications and regionally significant evaluations follow de Lange *et al.* 2009, Miskelly *et al.* 2008; Allibone *et al*. 2010, and Beadel 2009.

ŌTAMARĀKAU-MATATĀ-WHAKATĀNE DUNES A[1]

Site Number [2]	135
Grid Reference (NZMG)	E2846534 N6360059
Local Authority	Whakatāne District Council
Ecological District	Te Teko, Ōtānewainuku
Protection Status	Protected (Thornton Beach Marginal Strip, Thornton Lagoon Wildlife Management Reserve, Matatā Wildlife Refuge Reserve, Piripai Government Purpose (Wildlife Management) Reserve, Ōtamarākau Marginal Strip, Old Rangitāiki River Bed Conservation Area and SH2 Conservation Area) and unprotected parts
Site Area	572.2 ha (493.2 ha in Te Teko Ecological District; 148.1 ha in Ōtānewainuku Ecological District)
Altitudinal Range	0-29 m asl
Geology-Landform Type	Estuarine, Sand
HVES Number	184

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Saltmarsh ribbonwood shrubland.	Intertidal flat
Estuarine	Sea rush-oioi tussockland.	Intertidal flat
Estuarine	(Harakeke)/sea rush-oioi-*Machaerina juncea* tussock-sedgeland.	Intertidal flat
Estuarine	*Machaerina juncea* sedgeland.	Intertidal flat
Palustrine	*Bolboschoenus fluviatilis* sedgeland.	Wetland
Palustrine	*Machaerina articulata-Bolboschoenus fluviatilis*-raupo reedland.	Wetland
Palustrine	Pampas-harakeke/raupo-*Machaerina articulata-Schoenoplectus tabernaemontani-Persicaria decipiens* reedland.	Wetland
Palustrine	Raupo reedland.	Wetland
Estuarine	Bachelor's button herbfield.	Intertidal flat
Estuarine	Bachelor's button-*Selliera radicans-Apium prostratum-Isolepis cernua*-arrow grass herbfield.	Intertidal flat
Palustrine	(Grey willow)/*Machaerina juncea* treeland.	Wetland
Palustrine	Reed sweetgrass grassland.	Wetland
Terrestrial	Thornton kanuka forest.	Dune and beach sands
Terrestrial	Thornton kanuka scrub.	Dune and beach sands
Terrestrial	Thornton kanuka shrubland.	Dune and beach sands
Terrestrial	*Ficinia nodosa*/pohuehue vineland.	Dune and beach sands
Terrestrial	Pohuehue vineland.	Dune and beach sands
Terrestrial	(African boxthorn)-(coastal mahoe)/pohuehue vineland.	Dune and beach sands
Terrestrial	(African boxthorn)/pohuehue- sea couch-harestail-catsear (*Hypochoeris radicata*) grass-vineland.	Dune and beach sands
Terrestrial	Spinifex-pingao tussockland.	Dune and beach sands
Terrestrial	Spinifex-(pingao) tussockland.	Dune and beach sands
Terrestrial	Spinifex sandfield and tussockland.	Dune and beach sands
Terrestrial	Bracken fernland.	Dune and beach sands
Terrestrial	*Carex pumila* sandfield.	Dune and beach sands
Terrestrial	Pingao-*Carex pumila*-spinifex sandfield.	Dune and beach sands
Terrestrial	*Carex pumila*/catsear-harestail sedge-grass-	Dune and beach sands

[1] This site extends over two Ecologcal Districts (Te Teko and Ōtānewainuku).
[2] This site is identifed as part of SVHZ-115 in Wildland Consultants 2006g.

Hydrosystem	Vegetation/Habitat Type	Landform
	herbfield.	
Terrestrial	Exotic tree plantations.	Dune and beach sands
Terrestrial	Gorse-pampas-blackberry shrubland.	Dune and beach sands
Terrestrial	Japanese honeysuckle-tall fescue-pampas grassland and vineland.	Dune and beach sands
Terrestrial	Marram grassland.	Dune and beach sands
Terrestrial	Kikuyu grass grassland.	Dune and beach sands
	(Beadel *et al*. 2011)	

Vegetation and Indigenous Flora

This site includes the largest population of Thornton kanuka (*Kunzea* aff. *erioides* (a) AK255350; Thornton)[1], which is classed as Threatened-Nationally Vulnerable (de Lange *et al.* 2009). *Cyclosorus interruptus* (At Risk-Declining) has been recorded at this site (Beadel *et al.* 1996a), as have dwarf mistletoe and New Zealand spinach (both At Risk-Naturally Uncommon) (P. Cashmore, Department of Conservation, pers. comm. 2012).

The site supports a relatively diverse range of indigenous sand dune and wetland species, including *Suaeda novae-zelandiae*[2] (Irving and Beadel 1992), *Carex* aff. *raoulii* (P. Cashmore, Department of Conservation, pers. comm. 2012), coastal mahoe, *Oxalis rubens*, and *Zoysia pauciflora* (all regionally uncommon), tauhinu, *Coprosma acerosa* (At Risk-Declining). One of these, *S. novae-zelandiae*, is not known from elsewhere in the Bay of Plenty, and coastal mahoe is only known from one or two mainland sites in the Bay of Plenty. Seedling whau, puriri, tawa, mangeao, and supplejack are present beneath the eucalyptus forest west of Matatā (Wildland Consultants 2007d).

Indigenous Fauna

White heron, grey duck (both Threatened-Nationally Critical), Australasian bittern (Threatened-Nationally Endangered), banded dotterel, New Zealand dabchick, reef heron (all Threatened-Nationally Vulnerable), banded rail (At Risk-Naturally Uncommon), North Island fernbird (At Risk-Declining), spotless crake (At Risk-Relict), northern New Zealand dotterel (Threatened-Nationally Vulnerable), red-billed gull (Threatened-Nationally Vulnerable), black-billed gull (Threatened-Nationally Endangered), Caspian tern (Threatened-Nationally Vulnerable), pied stilt (At Risk-Declining), and little black shag (At Risk-Naturally Uncommon) have been recorded at this site (Beadel *et al.* 1996a, Wildland Consultants 2001d, OSNZ 2006; BOPRC 2012 personal observations).

These dunes are summer breeding areas for northern New Zealand dotterel (Threatened-Nationally Vulnerable) (Wildland Consultants 2001d, OSNZ 2006). Nesting areas occur principally on sand dunes at or around river/stream mouths, e.g. Pikowai Stream, Herepuru Stream, Tarawera River and Rangitāiki River (Wildland Consultants 2001d; J. Heaphy, Department of Conservation, pers. comm. 2006).

Matatā Lagoon, Tarawera River mouth, Rangitāiki River mouth and Thornton Lagoon are important shorebird roosts that also incur significant human disturbance. Waitahanui Stream mouth, Tarawera River mouth, Rangitāiki River mouth, Pikowai Stream mouth, Mimiha Stream mouth and Hauone Stream mouth are all used as a roosting and breeding site for variable oystercatcher (At Risk-Recovering) and northern New Zealand

[1] The other population is in Taneatua Ecological District.
[2] Not seen at Matatā Lagoon since 1992.

dotterel (Threatened-Nationally Vulnerable). Piripai Sandspit Wildlife Refuge (the Whakatāne River mouth and dunes) are used by roosting and breeding variable oystercatcher, banded dotterel, and northern New Zealand dotterel (Owen *et al.* 2006).

Other species present in this site include black shag (At Risk-Naturally Uncommon), pied shag (Threatened-Nationally Vulnerable), little shag (At Risk-Naturally Uncommon), royal spoonbill (At Risk-Naturally Uncommon), marsh crake (At Risk-Relict), and white-fronted tern (At Risk-Declining), (K. Owen, Department of Conservation, pers. comm. 2012).

Matatā Lagoon is a roosting site for a range of coastal birds and waterbird species (Owen *et al.* 2006).

Moko skink (At Risk-Relict) are known to inhabit the dunes around the Waitahanui Stream mouth (J. Heaphy, Department of Conservation, pers. comm. 2006).

The mouths of at least six named streams (e.g. Hauone, Ruataniwha, Pikowai, Herepuru, Mimiha, Ohinekoao) and the Tarawera River and the Rangitāiki River are located within this site. Fish species which have been recorded in these streams include seven At Risk-Declining species (torrentfish, kōaro, bluegill bully, longfin eel, inanga, redfin bully, shortjaw kōkopu) and common bully, common smelt, giant bully, shortfin eel, and banded kōkopu (Environment Bay of Plenty 2008). All of these species, plus lamprey (At Risk-Declining), have also been recorded in the Tarawera River and the Rangitāiki River (ibid.). Giant kōkopu has been recorded from this site (NIWA 2006).

Condition/Pressures

Large-scale pampas control has been carried out. This site includes popular fishing spots and damage to the dune system is occurring as a result of trampling, four wheel driving, and trail bike riding. Following trail bike damage in 1993 the sand tussock population in the western part of the site was fenced in a joint Western Bay of Plenty District Council/Department of Conservation initiative. However, this population was then browsed by rabbits (Beadel 2006), and management intervention did not prevent this population from dying out.

Control of marram grass is recommended. Management issues for the eucalyptus stand are addressed in Wildland Consultants (2007d).

Key Site Features

The large size of this site, its diversity of vegetation types, diversity of plant species, and significance as a geological feature make it nationally significant, despite being affected by a range of pressures. The site contains the only population of one Threatened plant species and also provides habitat for four At Risk and five regionally uncommon plant species. There are recent records of 11 Threatened and 11 At Risk bird species, nine At Risk freshwater fish species, and one At Risk lizard species. The mouths of at least six named streams and the Tarawera River and the Rangitāiki River are located within this site and are important habitats and migratory pathways of indigenous species of freshwater fish.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	H
	3.5	H
	3.6	H
Diversity and Pattern	3.7	H
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	H
	3.12	H
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** Thornton kanuka (Threatened-Nationally Vulnerable) *Cyclosorus interruptus* (At Risk-Declining) Dwarf mistletoe (At Risk-Naturally Uncommon) *Tetragonia tetragonoides* (At Risk-Naturally Uncommon) *Coprosma acerosa* (At Risk-Declining) **Fauna:** White heron (Threatened-Nationally Critical) Grey duck (Threatened-Nationally Critical) Australasian bittern (Threatened-Nationally Endangered) Black-billed gull (Threatened-Nationally Endangered) Banded dotterel (Threatened-Nationally Vulnerable) Caspian tern (Threatened-Nationally Vulnerable) New Zealand dabchick (Threatened-Nationally Vulnerable) Northern New Zealand dotterel (Threatened-Nationally Vulnerable) Pied shag (Threatened-Nationally Vulnerable) Red-billed gull (Threatened-Nationally Vulnerable) Reef heron (Threatened-Nationally Vulnerable) Marsh crake (At Risk-Relict) Spotless crake (At Risk-Relict) Banded rail (At Risk-Naturally Uncommon) Black shag (At Risk-Naturally Uncommon) Little black shag (At Risk-Naturally Uncommon) Little shag (At Risk-Naturally Uncommon) Royal spoonbill (At Risk-Naturally Uncommon) North Island fernbird (At Risk-Declining) Pied stilt (At Risk-Declining) White-fronted tern (At Risk-Declining)

Policy	Criteria Met	Explanation
		Variable oystercatcher (At Risk-Recovering) **Fish**: Bluegill bully (At Risk-Declining) Giant kōkopu (At Risk-Declining) Inanga (At Risk-Declining) Kōaro (At Risk-Declining) Lamprey (At Risk-Declining) Longfin eel (At Risk-Declining) Redfin bully (At Risk-Declining) Shortjaw kōkopu (At Risk-Declining) Torrentfish (At Risk-Declining) **Other Fauna:** Moko skink (At Risk-Relict)
ii	✓	Australasian bittern (Endangered) Black-billed gull (Endangered) New Zealand dotterel (Endangered) Giant kōkopu (Vulnerable) Shortjaw kōkopu (Vulnerable)
iii	✓	Large, high quality area of coastal dunes, a threatened coastal ecosystem.
iv	✓	Thornton kanuka is endemic to Taneatua Ecological District.
v	✓	Nationally Significant
vi	✓	Partially protected (Matatā Wildlife Refuge, Thornton Lagoon Wildlife Management reserve, Piripai Wildlife Management reserve)
Policy Met:		11(a)
Justification:		Ōtamarākau-Matatā-Whakatāne Dunes A is a large, high quality area of coastal duneland and wetlands, including Matatā Lagoon, an ecosystem type which has been greatly reduced in extent in the Ecological District and nationally. It is a habitat for a large suite of Threatened and At Risk plants and birds, and is a nationally significant site. Most of Ōtamarākau-Matatā-Whakatāne Dunes A is legally protected. For these reasons the site is consistent with Policy 11(a).

Notes

This site contains a regionally important geological feature, an actively prograding cuspate foreland (Kenny and Hayward 1996). Coastal dunes are a threatened habitat and have been identified as a national priority for the protection of biodiversity on private land (MfE and Department of Conservation 2007).

References

Beadel 1994a; Beadel *et al.* 1996a; Beadel *et al*. 2012; BOPRC 2012; Environment Bay of Plenty 2008; Gosling and Beadel 2000a; Kenny and Hayward 1996; NIWA 2006; OSNZ 2006; Owen *et al.* 2006; Wildland Consultants 2001d; Wildland Consultants 2007d.

ŌTAMARĀKAU-MATATĀ-WHAKATĀNE DUNES C

Site Number [1] 138
Grid Reference (NZMG) E2846534 N6360059
Local Authority Whakatāne District Council
Ecological District Te Teko
Protection Status Unprotected
Site Area 95.2 ha
Altitudinal Range 0-29 m asl
Geology-Landform Type Sand

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	*Ficinia nodosa*/pohuehue vineland.	Dune and beach sands
Terrestrial	Pohuehue vineland.	Dune and beach sands
Terrestrial	Pohuehue-mapou vineland.	Dune and beach sands
Terrestrial	(African boxthorn)/pohuehue vineland.	Dune and beach sands
Terrestrial	(African boxthorn)/pohuehue- sea couch-harestail-catsear grass-vineland.	Dune and beach sands
Terrestrial	Spinifex-pingao tussockland.	Dune and beach sands
Terrestrial	Spinifex-(pingao) tussockland.	Dune and beach sands
Terrestrial	Spinifex sandfield and tussockland.	Dune and beach sands
Terrestrial	Bracken fernland.	Dune and beach sands
Terrestrial	*Carex pumila* sandfield.	Dune and beach sands
Terrestrial	Pingao-*Carex pumila*-spinifex sandfield.	Dune and beach sands
Terrestrial	(Lupin)/*Carex pumila*-harestail-pohuehue-catsear-grass-sedgeland.	Dune and beach sands
Terrestrial	*Carex pumila*/catsear-harestail sedge-grass-herbfield.	Dune and beach sands
Terrestrial	Marram grassland.	Dune and beach sands
Terrestrial	Kikuyu grass grassland.	Dune and beach sands
	(Beadel *et al.* 2011)	

Vegetation and Indigenous Flora

Spinifex, pingao (At Risk-Relict), *Ficinia nodosa*, and exotic grass tussockland, grassland, and vineland vegetation and habitat types are present along the dune coastline. This site is contiguous with Ōtamarākaua-Matatā-Whakatāne Dunes A and B and may include very small populations of one or more of the Threatened and regionally uncommon plant species present at those sites.

Indigenous Fauna

No information.

Condition/Pressures

This site includes popular fishing spots, and associated damage to the dune system is occurring as a result of trampling, four wheel driving, and trail bike riding. Rabbit browsing is also having negative impacts. Control of marram within this site should be undertaken.

Key Site Features

The sand dunes along this coastline are good examples of sand dune vegetation, a habitat type which has been greatly reduced from its previous extent. They are also contiguous with the less modified, nationally significant Ōtamarākau-Matatā-Whakatāne Dunes A, and provide buffering to this site. They also provide an important ecological link along the coastline with Ōtamarākau-Matatā-Whakatāne Dunes A and Ōtamarākau-Matatā-Whakatāne Dunes B.

[1] This site is identifed as part of SVHZ-115 in Wildland Consultants 2006g.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	M
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	Pingao (At Risk-Relict)
ii		
iii		
iv		
v		Regionally Significant
vi		Unprotected
11(b)		
i	✓	Indigenous dune vegetation dominated by mixtures of species such as spinifex, pohuehue, pingao, *Ficinia nodosa*, and *Carex pumila.*
ii		
iii	✓	Indigenous dune vegetation dominated by mixtures of species such as spinifex, pohuehue, pingao, *Ficinia nodosa*, and *Carex pumila.*
iv	N/A	
v		
vi	✓	Part of a corridor of dune land that extends from Pukehina in the west to Whakatāne River in the East.
Policy Met:		11(b)
Justification:		Ōtamarākau-Matatā-Whakatāne Dunes C comprises dunelands. It is not consistent with Policy 11(a) because it is not among the highest quality examples of dunelands in the Ecological District due to impacts such as weeds, trampling, and vehicles. However, it is ecologically significant because it is an example of a habitat type which has been greatly reduced in extent, it provides habitat for one Threatened plant species, is probably habitat for avifauna, and it is part of a corridor of dunelands that also includes Ōtamarākau-Matatā-Whakatāne Dunes A and Ōtamarākau-Matatā-Whakatāne Dunes B. Therefore, it is consistent with Policy 11(b).

References Beadel 1994a; Beadel *et al.* 1996a; Beadel *et al*. 2011; Gosling and Beadel 2000a.

KOHIKA WETLAND (PART)[1]

Site Number [2]	131
Grid Reference (NZMG)	E2843161 N6360150
Local Authority	Whakatāne District Council
Ecological District	Te Teko
Protection Status	Protected (Department of Conservation, Tarawera River Marginal Strip and Awaiti Stream Marginal Strip) and unprotected parts
Site Area	3.5 ha
Altitudinal Range	4-5 m asl
Geology-Landform Type	Sand
HVES Number	190

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Ti kouka/raupo-harakeke-*Coprosma propinqua* subsp. *propinqua* shrub-flax-reedland.	Wetland
Palustrine	Raupo-*Bolboschoenus fluviatilis*/swamp millet sedge-reedland.	Wetland
Palustrine	Raupo-*Machaerina articulata*/swamp millet reedland.	Wetland
Palustrine	Ti kouka-grey willow/*Coprosma propinqua* subsp. *propinqua*-swamp coprosma scrub. (Beadel *et al*. 2011)	Wetland

Vegetation and Indigenous Flora

Thelypteris confluens and *Cyclosorus interruptus*, both species classified as At Risk-Declining (Beadel *et al*. 2011).

Other taxa present include *Myriophyllum propinquum*, *Hypolepis distans* (regionally uncommon), swamp millet, *Machaerina articulata* and harakeke (Beadel *et al*. 2011).

Indigenous Fauna

Australasian bittern (Threatened-Nationally Endangered); banded dotterel (Threatened-Nationally Vulnerable), North Island fernbird (At Risk-Declining) and spotless crake (At Risk-Relict) (Beadel *et al.* 1996a).

Condition/Pressures

Threats to the site include grazing, weeds and altered hydrology (N. Willems, Bay of Plenty Regional Council, pers. comm. 2011). There is currently a grazing concession on Awaiti Stream Marginal Strip and Tarawera River Marginal Strip (P. Livingstone, Department of Conservation, pers. comm. 2012). In February 2000 earthworks were carried out, including vegetation clearance and construction of ponds (Beadel and Shaw 2000a).

Key Site Features

Kohika Wetland is ecologically important because it is a relatively large freshwater wetland linking two other protected freshwater wetlands and it is one of the few remaining examples of wetland vegetation in the Te Teko Ecological District (Beadel *et al*. 2011). This site provides habitat for two Threatened and two At Risk bird species. Two At Risk and one regionally uncommon plant species are also present.

[1] Part of Kohika Wetland occurs outside the 'coastal environment' study area (i.e. further than 1 km inland of MHWS).

[2] Identified as SVHZ-118 in Wildland Consultants 1345.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	M
	3.5	M
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** *Thelypteris confluens* (At Risk-Declining) *Cyclosorus interruptus* (At Risk-Declining) **Avifauna:** Australasian bittern (Threatened-Nationally Endangered) Banded dotterel (Threatened-Nationally Vulnerable) North Island fernbird (At Risk-Declining) Spotless crake (At Risk-Relict)
ii	✓	Australasian bittern (Endangered)
iii	✓	High quality, relatively large example of a palustrine wetland.
iv		
v		Regionally Significant
vi		Unprotected
Policy Met:		11(a)
Justification:		Kohika Wetland is consistent with Policy 11(a) because it is a relatively large, high quality example of a palustrine wetland, a threatened ecosystem type. It provides habitat for a suite of Threatened and At Risk plant and avifauna species and, in addition, it links two other protected palustrine wetlands.

Notes

Kohika Pa, an archaeological site of national significance, is at the southern end of Kohika Wetland, outside of the Coastal Environment (Beadel *et al*. 2012). This site was ranked as a Category 2 Natural Heritage Area in Beadel *et al.* (1996b).

References

Beadel *et al.* 1996a; Beadel *et al.* 1996b; Beadel *et al.* 2011; Wildland Consultants 2006g.

TARAWERA RIVER RAUPO WETLAND

Site Number [1] 132
Grid Reference (NZMG) 260-V15 434605
Local Authority Whakatāne District Council
Ecological District Te Teko
Protection Status Unprotected
Site Area 0.6 ha
Altitudinal Range 2-3 m asl
Geology-Landform Type Sand

Hydrosystem	Vegetation / Habitat Type	Landform
Palustrine	Raupo reedland. (Wildland Consultants 2007a)	Wetland

Vegetation and Indigenous Flora No Threatened species recorded. Species present include *Schoenoplectus tabernaemontani*, *Carex virgata, Carex secta, Eleocharis acuta*, arrow grass and bachelor's button.

Indigenous Fauna Pukeko are present. This site is adjacent to the Old Rangitāiki Channel, and there is a fish pass where it connects with the Tarawera River. Inanga (At Risk-Declining) use this channel, and it is likely that other indigenous freshwater fish species would use this channel as well.

Condition/Pressures This site is a small wetland that was formerly part of an extensive wetland. It has been isolated by development and modified following artificial diversion of the Rangitāiki River to the Thornton outlet. The site is small and is not buffered from surrounding pastoral land.

Key Site Features This small site contains one of the few remaining wetlands in Te Teko Ecological District (Beadel *et al.* 2011), and wetlands are a national priority for protection.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	L
Rarity or Distinctive Features	3.2	L
	3.3	M
	3.4	M
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	M

[1] Identified as SVHZ-217 in Wildland Consultants Contract Report 1742.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	L
	3.12	H
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		**Fish:** Inanga (At Risk-Declining).
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Raupo reedland
ii		
iii		
iv	N/A	
v	✓	The river is a migratory pathway for indigenous freshwater fish.
vi		
Policy Met:		11(b)
Justification:		Tarawera River Raupo Wetland is consistent with Policy 11(b) because it is a small example of a palustrine wetland dominated by indigenous vegetation, a habitat type that has been greatly reduced in extent in Te Teko Ecological District.

References

Beadel *et al.* 1996a; Beadel *et al*. 2011; OSNZ 2006; Gosling and Beadel 2000a; Wildland Consultants 2007a.

THORNTON ROAD DUNES

Site Number [1]	133
Grid Reference (NZMG)	E2845353 N6360545
Local Authority	Whakatāne District Council
Ecological District	Te Teko
Protection Status	Protected (Western Whakatāne Coastal Recreation Reserves)
Site Area	31.6 ha
Altitudinal Range	0-1 m asl
Geology-Landform Type	Sand

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	(Boxthorn)/Indian doab-ratstail-yarrow grassland.	Sand dune
Terrestrial	(Boxthorn)/(sweet brier)/kikuyu grass grassland. (Beadel *et al.* 2011)	Sand dune

Vegetation and Indigenous Flora No significant species recorded.

Indigenous Fauna No significant species recorded.

Condition/Pressures This site is dominated by exotic vegetation, including some well established pest plants e.g. boxthorn, exotic grasses, sheep's sorrel, wild carrot, lupin, sweet briar, blackberry and pampas.

Key Site Features This site, although dominated by exotic plant species, is of local ecological significance as a protective buffer to the area of Thornton kanuka forest, scrub, and shrublands in the nationally significant dunelands in the Ōtamarākau-Matatā-Whakatāne Dunes A site. If grazing was removed, this site would revert to indigenous vegetation with a low level of management input (including timely weed control).

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	L
Rarity or Distinctive Features	3.2	L
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	L
Ecological Context	3.9	M
	3.10	L
Viability and Sustainability	3.11	M
	3.12	L
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

[1] Identified as SVHZ-119 in Wildland Consultants 2006g.

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Locally Significant
vi	✓	The site is a recreation reserve that is managed to protect the ecological values of the Thornton kanuka forest.
11(b)		
i		
ii		
iii		
iv		N/A
v		
vi	✓	Is protected and is a key connection between the coast and the Thornton kanuka forest.
Policy Met:		11(b)
Justification:		Thornton Road Dunes is not predominantly indigenous but is managed to protect the ecological values of the nationally significant Thornton kanuka site. It is, therefore, consistent with Policy 11(b). The site has a high potential for restoration and coastal dunes are a threatened habitat type.

Notes Coastal dunes are a threatened habitat and have been identified as a national priority for the protection of biodiversity on private land (MfE and Department of Conservation 2007).

References Gosling and Beadel 2000a; Beadel *et al*. 2011; Wildland Consultants 2006g.

WALKER ROAD WETLANDS

Site Number [1] 136
Grid Reference (NZMG) 260-V15 473594; V15 475597
Local Authority Whakatāne District Council
Ecological District Te Teko
Protection Status Unprotected
Site Area 2.8 ha
Altitudinal Range 2-3 m asl
Geology-Landform Type Sand

Hydrosystem	Vegetation / Habitat Type	Landform
Palustrine	*Juncus edgariae*/pasture rushland.	Wetland
Palustrine	*Eleocharis sphacelata*-reed sweetgrass-*Juncus articulatus* sedgeland.	Wetland
Palustrine	*Eleocharis sphacelata*-reed sweetgrass/spearwort sedgeland.	Wetland
Palustrine	(Grey willow)/reed sweetgrass grassland.	Wetland
Palustrine	Reed sweetgrass-mercer grass/spearwort grassland.	Wetland
Palustrine	*Juncus edgariae*-spearwort-*Juncus articulatus*-open water rushland.	Wetland
	(Wildland Consultants 2007a)	

Vegetation and Indigenous Flora No significant species recorded.

Indigenous Fauna Pied stilt (At Risk-Declining) have been recorded at the site. It may also provide habitat for white-faced heron and/or white heron (Threatened-Nationally Critical), which have been recorded nearby. It is likely to provide habitat for other waterbirds such as paradise shelduck and pukeko.

Condition/Pressures The site is grazed, which causes pugging of the soil, damage to vegetation, and disturbance of fauna. Reed sweetgrass is present through most of the wetland and may spread further to replace indigenous species. Grey willow is also present.

Key Site Features These small wetlands are dominated by exotic species, but are two of the few remaining wetlands in Te Teko Ecological District, an ecological district that once almost entirely comprised wetland. Wetlands are a national priority for protection on private land (MfE and Department of Conservation 2007).

Significance Assessment

Criterion	RPS Number*	Ranking**
Representativeness	3.1	L
Rarity or Distinctive Features	3.2	L
	3.3	M
	3.4	H
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	L

[1] Identified as SVHZ-218 in Wildland Consultants Contract Report 1742.

Criterion	RPS Number*	Ranking**
Ecological Context	3.9	H
	3.10	L
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Pied stilt (At Risk-Declining) May be seasonal habitat for white heron (Threatened-Nationally Critical)
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Indigenous reedland and open water.
ii		
iii		
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Walker Road Wetlands are consistent with Policy 11(b) because most of the site comprises indigenous palustrine wetlands, a habitat type that has been greatly reduced in extent in Te Teko Ecological District. The site is a habitat of pied stilt (At Risk-Declining). White heron (Threatened-Nationally Critical) have been recorded nearby and may use the site on a seasonal basis.

Notes The site is grazed by domestic stock. There are several smaller wetlands nearby which are dominated by exotic species so were excluded in this site.

References Beadel *et al.* 1996a; Beadel *et al*. 2011; OSNZ 2006; Gosling and Beadel 2000a; Wildland Consultants 2007a.

WAHIEROA WETLAND

Site Number [1] 134
Grid Reference (NZMG) E2846835 N6359584
Local Authority Whakatāne District Council
Ecological District Te Teko
Protection Status Unprotected
Site Area 6.8 ha
Altitudinal Range 2-3 m asl
Geology-Landform Type Sand

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	(Grey willow)/Mercer grass-*Schoenoplectus tabernaemontani* sedge-grassland.	Wetland
Palustrine	Grey willow-(ti kouka) forest.	Wetland
Palustrine	(Grey willow)/raupo reedland.	Wetland
Palustrine	Bamboo forest.	Wetland
Palustrine	Open water.	Wetland
Palustrine	Grey willow forest. (Gosling 2001)	Wetland

Vegetation and Indigenous Flora No significant species recorded.

Indigenous Fauna Spotless crake (At Risk-Relict) (Rasch 1989a).

Condition/Pressures The site comprises two areas of wetland which are surrounded by pastoral land and are not buffered from it. Infestations of grey willow and bamboo are present.

Key Site Features This small site is dominated by exotic vegetation, but is one of the few remaining examples of freshwater wetland in Te Teko Ecological District (Beadel *et al.* 2011). It provides habitat for an At Risk wetland bird species.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	L
	3.10	L

[1] Identified as SVHZ-120 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	M
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		**Avifauna:** Spotless crake (At Risk-Relict) (1989)
ii		
iii		
iv		
v		Regionally Significant
vi		Unprotected
11(b)		
i	✓	Grey willow above raupo reedland and open water.
ii		
iii		
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Wahieroa Wetland is consistent with Policy 11(b) because it is an example of a palustrine wetland that retains indigenous vegetation and it is likely to continue to provide habitat for spotless crake (At Risk-Relict), which was recorded at the site in 1989.

Notes This site was ranked as a Category 3 Natural Heritage Area in Beadel *et al.* (1996b).

References Rasch 1989a; Beadel *et al.* 1996a; Beadel *et al.* 1996b; Beadel *et al*. 2011; Gosling 2001.

ORINI STREAM (PART)[1]

Site Number [2] 139
Grid Reference (NZMG) E2858061 N6355469
Local Authority Whakatāne District Council
Ecological District Te Teko
Protection Status Unprotected
Site Area 5.5 ha
Altitudinal Range 13-20 m asl
Geology-Landform Type Sand

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Raupo reedland (raupo abundant, with scattered crack willow, *Carex secta*, *Persicaria decipiens* and local *Bolboschoenus fluviatilis*).	Wetland
Palustrine	Duckweed herbfield (dense cover of duckweed).	Wetland
Palustrine	Open water. (Beadel *et al.* 2011)	Wetland

Vegetation and Indigenous Flora

Vegetation has established in the Orini Stream channel when the natural water floor was diverted to an artificial canal. Plant species present include ti kouka, *Schoenoplectus tabernaemontani*, *Coprosma propinqua* subsp. *propinqua* × *C. robusta, Lobelia angulata, Eleocharis acuta* and pohuehue (Beadel *et al.* 2011).

Indigenous Fauna

Pukeko present. This area contains suitable habitat for spotless crake (Beadel *et al.* 2011), though none have been recorded here.

Condition/Pressures

The site comprises three narrow strips of wetland within a matrix of pastoral land. This area is grazed, and requires fencing to exclude stock. The vegetation is predominantly indigenous with a few scattered grey willow and crack willow (Beadel *et al.* 2011).

Key Site Features

This small area is part of one of the few remaining examples of indigenous wetland vegetation in Te Teko Ecological District.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	L
Rarity or Distinctive Features	3.2	L
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	M

[1] Part of Orini Stream occurs outside the 'coastal environment' study area (i.e. further than 1 km inland of MHWS).
[2] Identified as SVHZ-121 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Raupo reedland and duckweed herbfield.
ii		
iii		
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Orini Stream (Part) is consistent with Policy 11(b) because it is a wetland that is dominated by indigenous plant species.

Notes Identified as a Recommended Area for Protection (RAP) in the Te Teko Ecological District Protected Natural Areas Programme (PNAP) report (Beadel *et al.* 2011).

References Beadel *et al.* 2011; Wildland Consultants 2006g.

WHAKATĀNE ESTUARY

Site Number [1]	141
Grid Reference (NZMG)	E2860825 N6353855
Local Authority	Whakatāne District Council
Ecological District	Te Teko (and part Taneatua)
Protection Status	Protected (Department of Conservation, Keepa Road Conservation Area and Piripai Wildlife Management Reserve) and unprotected parts
Site Area	155.1 ha
Altitudinal Range	0-12 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	*Schoenoplectus pungens* sedgeland; saltmarsh ribbonwood-sea rush shrubland; sea rush tussockland; pampas tussockland.	Intertidal flat
Estuarine	Saltmarsh ribbonwood/sea rush shrubland.	Intertidal flat
Estuarine	Pampas tussockland (with saltmarsh ribbonwood/sea rush shrubland, *Bolboschoenus caldwellii* sedgeland, *Bolboschoenus fluviatilis-Bolboschoenus medianus* sedgeland, *Schoenoplectus pungens* sedgeland, bachelor's button herbfield); crack willow/tall fescue-pampas grassland and treeland.	Intertidal flat/river flats
Estuarine	Glasswort herbfield.	Intertidal flat
Estuarine	Sea rush tussockland.	Intertidal flat
Estuarine	Sea rush tussockland; saltmarsh ribbonwood/sea rush-oioi shrubland.	Intertidal flat
Estuarine	Sea rush/arrow grass tussockland; *Bolboschoenus caldwellii*-raupo-saltmarsh ribbonwood-sea rush reed-shrubland; open water.	Intertidal flat
Estuarine	Pasture.	Intertidal flat
Estuarine	Oioi-sea rush sedgeland.	Intertidal flat
Palustrine	Raupo reedland and pasture.	Wetland
Palustrine	*Schoenoplectus pungens* sedgeland; raupo reedland; arrow grass herbfield; bachelor's button herbfield; sea rush/arrow grass tussockland; *Bolboschoenus medianus*-raupo-saltmarsh ribbonwood-sea rush reed-shrubland; *Bolboschoenus caldwellii* sedgeland; pasture.	Wetland/river flats
Palustrine	Raupo reedland; crack willow treeland and pasture.	Wetland/river flats
Palustrine	*Juncus articulata-Isolepis cernua* herbfield.	Wetland/river flats
Estuarine/palustrine	Raupo-saltmarsh ribbonwood-sea rush shrub-reedland and mudflats.	Wetland/intertidal flats
Marine	Worm field	Subtidal channel
Marine	Worm field.	Intertidal flat
Marine	Pipi bed.	Subtidal channel
	(Beadel *et al.* 1996a; Beadel 1999a; S. Park, BOPRC, pers. comm. 2006).	

Vegetation and Indigenous Flora

Bolboschoenus caldwellii is present. This is the only location for this species in the ecological district. This species is considered to be regionally

[1] Identified as SVHZ-122 in Wildland Consultants 2006g.

uncommon.

Indigenous Fauna

Several Threatened bird species have been recorded in the Whakatāne Estuary, including: Caspian tern, reef heron, banded dotterel, New Zealand dabchick (all Threatened-Nationally Vulnerable), banded rail (At Risk-Naturally Uncommon), North Island fernbird (At Risk-Declining), spotless crake (At Risk-Relict), white heron (Threatened-Nationally Critical), and royal spoonbills (At Risk-Naturally Uncommon) (authors personal observation).

Other species recorded include northern New Zealand dotterel (Threatened-Nationally Vulnerable), black shag (At Risk-Naturally Uncommon), little shag (At Risk-Naturally Uncommon), pied shag (Threatened-Nationally Vulnerable), and little black shag (At Risk-Naturally Uncommon) (K. Owen, Department of Conservation, pers. comm. 2012).

The Whakatāne River is a habitat and migratory pathway for indigenous freshwater fish, including eight At Risk-Declining species (torrentfish, kōaro, bluegill bully, longfin eel, inanga, redfin bully, giant kōkopu, shortjaw kōkopu) and common bully, common smelt, shortfin eel, and banded kōkopu (Environment Bay of Plenty 2008).

Condition/Pressures

Since the early 1900s about 29 ha of land has been infilled adjacent to the estuary. Harbour works include the construction of the eastern training wall, closure of the Orini Channel, river training devices, rock blasting, and flood protection works. The works were carried out by the Whakatāne Harbour Board and Bay of Plenty Catchment Commission and their successors, the Bay of Plenty Regional Council and Whakatāne District Council. Aerial photography from 1944 shows that saltmarsh vegetation was formerly more extensive (Gosling and Beadel 2000b). There are local concentrations of pampas around the estuary margins (Beadel *et al.* 1996a). A marina development is proposed.

Key Site Features

Whakatāne Estuary contains the only sizeable remaining examples of estuarine saltmarsh in the Te Teko Ecological District, which has very little indigenous vegetation remaining (Gosling and Beadel 2000b). These remnants are affected by human disturbance and modification. Seven Threatened and six At Risk bird species have been recorded, in addition to a range of more common wading birds. One regionally uncommon plant species is also present at this site. The Whakatāne River is a habitat and migratory pathway for a suite of indigenous freshwater fish.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	M
	3.5	M
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	M

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** White heron (Threatened-Nationally Critical) Banded dotterel (Threatened-Nationally Vulnerable) (1989) Caspian tern (Threatened-Nationally Vulnerable) (1989) New Zealand dabchick (Threatened-Nationally Vulnerable) (1989) Northern New Zealand dotterel (Threatened-Nationally Vulnerable) Pied shag (Threatened-Nationally Vulnerable) Reef heron (Threatened-Nationally Vulnerable) (1989) North Island fernbird (At Risk-Declining) Spotless crake (At Risk-Relict) Banded rail (At Risk-Naturally Uncommon) Black shag (At Risk-Naturally Uncommon) Little black shag (At Risk-Naturally Uncommon) Little shag (At Risk-Naturally Uncommon)
ii	✓	New Zealand dotterel (Endangered)
iii	✓	Estuaries are an originally rare ecosystem type, and this site includes the largest saltmarsh in Te Teko Ecological District.
iv		
v		Regionally Significant
vi		Partially protected (Keepa Road Conservation Area and Piripai Wildlife Management Reserve)
Policy Met:		11(a)
Justification:		Whakatāne Estuary is consistent with Policy 11(a) because it is a habitat for a large suite of Threatened and At Risk avifauna species, and is a relatively large, good quality example of an estuarine ecosystem, an originally rare ecosystem type. A very small proportion of the site is legally protected.

Notes There are considerable opportunities for restoration of the saltmarsh areas.

References Rasch 1989a; Beadel 1995a; Beadel *et al.* 1996a; Beadel 1999a; Environment Bay of Plenty 2008; Gosling and Beadel 2000b; OSNZ 2006, Wildland Consultants 2006g.

8.3 Taneatua Ecological District

There is considerable variation in landform where Taneatua Ecological District adjoins the coast. Most of the coastal strip is a long sandy beach (Ōhope Beach) running into a large spit at the eastern end. Much of the formerly extensive dune system has been levelled for residential development. A major estuary system, Ōhiwa Harbour, occurs behind the spit. This shallow estuary is a post-glacial drowned valley system. West of Ōhiwa Harbour, and behind much of Ōhope Beach, a system of coastal cliffs extends to meet a series of rugged greywacke headlands in the vicinity of Otarawairere Bay and Kōhi Point.

Before the arrival of humans, most of the Taneatua Ecological District would have been forested. Non-forest vegetation would have been limited to coastal cliffs, dunelands, estuaries, riverbeds, wetlands and areas of secondary vegetation induced by natural fires (e.g. caused by lightning strike) or wind damage to forests. The coastal dune system would have been dominated by native sand-binders such as spinifex and pingao. Mangroves would probably have occurred in Ōhiwa Harbour but may not have covered as extensive an area as they do now. The coastal forests would have been dominated by pohutukawa, houpara, puriri, and kohekohe, with a range of other species present.

The present day vegetation is vastly different. The limited sand dune system which remains is dominated by spinifex sandfield and grassland, and pohuehue-bracken vineland and fernland. In the past, pingao (At Risk-Relict), now reduced to only a few plants, would have been common. Ōhope Scenic Reserve now contains the largest area of coastal forest remaining in Taneatua Ecological District. Kōhi Point has been burnt (probably repeatedly) and is now mainly secondary forest dominated by rewarewa, mahoe, houpara and kanuka, with scattered pockets of pohutukawa, mangeao and houpara. The coastal cliffs support windshorn scrub comprising kanuka, whaririki and mingimingi.

A narrow fringe of estuarine wetland vegetation lines the margins of much of Ōhiwa Harbour, dominated by sea rush and oioi with local mangroves. Ōhiwa Harbour is the southern limit of distribution for mangrove communities in New Zealand. There are several more extensive areas of estuarine wetland in the Harbour, notably in Nukuhou Estuary and around Motuotu Island. Locally, there are small freshwater wetlands comprising manuka and raupo contiguous with the estuarine wetlands. A few small remnant pockets of pohutukawa forest and treeland occur on the steep hillslopes around the harbour, and secondary forest, scrub and shrubland occurs locally (e.g. Uretara Island). Dominant species include kanuka, manuka, rewarewa, kamahi and mamaku.

Pimelea tomentosa (Threatened-Nationally Vulnerable), occurs at several sites in the coastal environment of this Taneatua Ecological District. At Risk species present include New Zealand spinach, dwarf mistletoe, *Peperomia tetraphylla* (At Risk-Naturally Uncommon), and *Adelopetalum tuberculatum* (At Risk-Naturally Uncommon).

Ōhiwa Harbour provides extensive habitat for waders, shorebirds and marsh birds, including Threatened species such as white heron and New Zealand fairy tern that use the area for roosting and feeding outside of their breeding seasons. Forest at Ōhope

supports a population of North Island brown kiwi (Threatened-Nationally Vulnerable), and North Island kākā (Threatened-Nationally Vulnerable) are seasonal visitors.

Table 12: Threatened and notable species in Taneatua Ecological District, coastal bioclimatic zone.

Scientific Name	Common Name	Threat Classification/ Significance[1]
BIRDS		
Threatened		
Egretta alba modesta	white heron	Nationally Critical
Sterna nereis davisae[2]	New Zealand fairy tern	Nationally Critical
Botaurus poiciloptilus	Australasian bittern	Nationally Endangered
Larus bulleri	black-billed gull	Nationally Endangered
Anarhynchus frontalis	wrybill	Nationally Vulnerable
Apteryx mantelli	North Island brown kiwi	Nationally Vulnerable
Charadrius bicinctus bicinctus	banded dotterel	Nationally Vulnerable
Charadrius obscurus aquilonius	northern New Zealand dotterel	Nationally Vulnerable
Egretta sacra sacra	reef heron	Nationally Vulnerable
Falco novaeseelandiae sensu stricto	bush falcon	Nationally Vulnerable
Gallirallus australis greyi	North Island weka	Nationally Vulnerable
Larus novaehollandiae scopulinus	red-billed gull	Nationally Vulnerable
Phalacrocorax varius varius	pied shag	Nationally Vulnerable
Sterna caspia	Caspian tern	Nationally Vulnerable
At Risk		
Bowdleria punctata vealeae	North Island fernbird	Declining
Haematopus finschi	New Zealand pied oystercatcher	Declining
Himantopus himantopus leucocephalus	pied stilt	Declining
Sterna striata striata	white-fronted tern	Declining
Porzana tabuensis plumbea	spotless crake	Relict
Eudynamys taitensis	long-tailed cuckoo	Naturally Uncommon
Gallirallus philippensis assimilis	banded rail	Naturally Uncommon
Phalacrocorax carbo novaehollandiae	black shag	Naturally Uncommon
Phalacrocorax melanoleucos brevirostris	little shag	Naturally Uncommon
Phalacrocorax sulcirostris	little black shag	Naturally Uncommon
Haematopus unicolor	variable oystercatcher	Recovering
Other Notable Species		
Calidris canutus	lesser knot	Migrant
Limosa lapponica	bar-tailed godwit	Migrant
VASCULAR PLANTS		
Threatened		
Kunzea aff. ericoides	Thornton kanuka	Nationally Vulnerable
Pimelea tomentosa		Nationally Vulnerable
At Risk		
Dianella haematica		Declining
Juncus pauciflorus	leafless rush	Declining
Poa billardierei	sand tussock	Declining
Ficinia spiralis	pingao	Relict
Adelopetalum tuberculatum		Naturally Uncommon
Korthalsella salicornioides	dwarf mistletoe	Naturally Uncommon
Peperomia tetraphylla		Naturally Uncommon
Tetragonia tetragonioides	New Zealand spinach, kokihi	Naturally Uncommon
Other Notable Species		
Astelia grandis		Regionally uncommon
Austrostipa stipoides		Regionally uncommon
Bolboschoenus caldwellii		Regionally uncommon
Carex lambertiana		Regionally uncommon
Crassula sieberiana		Regionally uncommon
Limosella lineata		Regionally uncommon

Scientific Name	Common Name	Threat Classification/ Significance[1]
Lophomyrtus bullata		Regionally uncommon
Melicope ternata		Regionally uncommon
Olearia solandri		Regionally uncommon
Senecio quadridentatus		Regionally uncommon
Tetraria capillaris		Regionally uncommon
Avicennia marina subsp. *australasica*[3]	mangrove	Distribution limit
FRESHWATER FISH		
At Risk		
Anguilla dieffenbachia	longfin eel	Declining
Cheimarrichthys fosteri	torrentfish	Declining
Galaxias argenteus	giant kōkopu	Declining
Galaxias brevipinnis	kōaro	Declining
Galaxias maculatus[3]	inanga	Declining
Galaxias postvectis	shortjaw kōkopu	Declining
Gobiomorphus hubbsi	bluegill bully	Declining
Gobiomorphus huttoni	redfin bully	Declining

Notes

[1] Threat classifications and regionally significant evaluations follow de Lange *et al.* 2009, Miskelly *et al.* 2008; Beadel 2009.

[2] Reaches its southern limit on the eastern side of the North Island in Ōhiwa Harbour.

[3] Attains its southernmost limit of distribution in Ōhiwa Harbour.

KŌHI POINT

Site Number [1]	142
Grid Reference (NZMG)	E2862799 N6353577
Local Authority	Whakatāne District Council
Ecological District	Taneatua
Protection Status	Protected (Whakatāne District Council Reserves, Kōhi Point Scenic Reserve)
Site Area	193.0 ha
Altitudinal Range	0-180 m asl
Geology-Landform Type	Greywacke hard coast

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Rewarewa/mahoe-whauwhaupaku-kanuka forest ⇔ pohutukawa-mangeao forest.	Steep hillslope, gully
Terrestrial	Pohutukawa/houpara forest.	Steep hillslope
Terrestrial	Kanuka-whararikiki-mingimingi flaxland-scrub.	Steep hillslope
Terrestrial	Bracken fernland.	Steep hillslope
Terrestrial	Grassland-herbfield.	Steep hillslope
Terrestrial	(*Carex pumila*) sandfield.	Steep hillslope
Terrestrial	(Pohutukawa) rockland.	Steep hillslope
Terrestrial	Brush wattle forest.	Steep hillslope
Terrestrial	(Rewarewa)/mahoe-whauwhaupaku-(kanuka)-mamaku forest.	Steep hillslope
Terrestrial	Pohutukawa/privet forest (with occasional brush wattle, kanuka, whauwhaupaku, mamaku, kawakawa and infrequent ngaio. Small-leaved privet and cotoneaster occur locally). (Beadel *et al.* 1996a; Beadel *et al.* 1999a; Beadel and Shaw 1988)	Steep hillslope, cliff

Vegetation and Indigenous Flora

Pimelea tomentosa (Threatened-Nationally Vulnerable), dwarf mistletoe (At Risk-Naturally Uncommon), and *Juncus pauciflorus* (At Risk-Declining) are present. The site is also habitat for two regionally uncommon species: *Crassula sieberiana* and *Senecio quadridentatus.*

Indigenous Fauna

Common forest and field birds are present (Beadel *et al.* 1999a). Bush falcon (Threatened-Nationally Vulnerable) spotted in flight, 2006; North Island brown kiwi (Threatened-Nationally Vulnerable) (Llewellyn 2005); long-tailed cuckoo (At Risk-Naturally Uncommon) recorded since 2003 (OSNZ 2006). Grey-faced petrel nesting colony.

Condition/Pressures

The steep, western part of the site (outside the reserve) has been heavily modified by human-induced fire, local landslides and weed invasion. There are large areas of privet forest (Beadel *et al.* 1999a). Wilding pine control has been indertaken in recent years (A. Kirk, Department of Conservation, pers. comm. 2012).

Key Site Features

Kōhi Point is a regionally significant coastal headland. The vegetation is diverse and supports two At Risk plant species and three regionally uncommon plant species. North Island brown kiwi, which are Threatened, are present within this site and are part of a regionally significant population which extends into Ōhope Scenic Reserve. The site is also occasionally used

[1] Identified as SVHZ-123 in Wildland Consultants 2006g.

by the Threatened New Zealand falcon and long-tailed cuckoo. It supports one of the few mainland breeding populations of grey-faced petrels in the Bay of Plenty Region.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	H
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** *Pimelea tomentosa* (Threatened-Nationally Vulnerable) Dwarf mistletoe (At Risk-Naturally Uncommon) *Juncus pauciflorus* (At Risk-Declining) **Avifauna:** Bush falcon (Threatened-Nationally Vulnerable) North Island brown kiwi (Threatened-Nationally Vulnerable) Long-tailed cuckoo (At Risk-Naturally Uncommon)
ii	✓	Northern brown kiwi (Endangered)
iii	✓	High quality site with unusually diverse vegetation.
iv		
v		Regionally Significant
vi	✓	Part is protected as Kōhi Point Scenic Reserve (Department of Conservation) and the remainder is a council reserve.
Policy Met:		11(a)
Justification:		The flora of Kōhi Point is diverse and the site includes high quality examples of coastal vegetation types. It is habitat for a suite of Threatened and At Risk plant and fauna species, and the site is legally protected. Therefore, Kōhi Point is consistent with Policy 11(a). In addition it includes a breeding colony of grey-faced petrel.

Notes The unprotected steep land on the western side of the reserve was selected as a Category 2 RAP (see 'Whakatāne Heads') for its landscape values as a scenic

backdrop to Whakatāne and because it contains a considerable indigenous element that is improving in quality as succession progresses (Beadel *et al.* 1999a).

References

Beadel and Shaw 1988; Beadel 1994a; Beadel *et al.* 1996a; Beadel *et al.* 1999a; Llewellyn 2005; OSNZ 2006; Beadel 2006; Wildland Consultants 2006g.

ŌHOPE SCENIC RESERVE AND EXTENSION (PART)[1]

Site Number [2]	143
Grid Reference (NZMG)	E2864341 N6351516
Local Authority	Whakatāne District Council
Ecological District	Taneatua
Protection Status	Protected (Department of Conservation, Ōhope Scenic Reserve, QEII Covenant) and unprotected parts
Site Area	136.4 ha
Altitudinal Range	4-138 m asl
Geology-Landform Type	Sedimentary coast hinterland
HVES Number	91

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa forest.	Hillslope
Terrestrial	Rewarewa/kanuka/karamu-kohuhu-hangehange-whauwhaupaku-manuka forest and scrub.	Hillslope
Terrestrial	Mamaku-mapou-mahoe-karamu-hangehange forest and scrub.	Hillslope
Terrestrial	Rewarewa-pohutukawa forest.	Hillslope
Terrestrial	Rewarewa/kanuka forest.	Hillslope
Terrestrial	Rewarewa/kanuka-pohutukawa forest.	Hillslope
Terrestrial	Pohutukawa forest.	Hillslope
Palustrine	*Carex geminata* sedgeland. (Beadel *et al.* 1999a)	Wetland

Vegetation and Indigenous Flora

Pimelea tomentosa (Threatened-Nationally Vulnerable), *Peperomia tetraphylla* (At Risk-Naturally Uncommon), and three regionally uncommon species (*Adiantum diaphanum, Olearia solandri*, and *Melicope ternata*) are present (Beadel *et al.* 1999a, Beadel 2008, 2011a).

Indigenous Fauna

Common forest birds are present (Beadel *et al.* 1999a). Long-tailed cuckoo (At Risk-Naturally Uncommon) was recorded between 2003 and 2006 (OSNZ 2006). The population of North Island brown kiwi (Threatened-Nationally Vulnerable) is being managed by Department of Conservation and Bay of Plenty Regional Council. The site provides habitat for indigenous freshwater fish species, including redfin bully (At Risk-Declining) (NZFFD).

Condition/Pressures

Some of the unprotected portions of this site are under threat of subdivision and clearance for house sites and amenities (e.g. driveways, tennis court). Weeds are common around the margins of this site (e.g. Japanese honeysuckle, wild ginger) (see Wildland Consultants 2010b). There is ongoing control of ginger, pampas, wilding pine, climbing asparagus, and several other weed species. Keep pest animals (such as possums, rodents, cats and mustelids) at very low densities, however there is a network of bait stations which are being maintaiend throughout reserve (A. Kirk, Department of Conservation, pers. comm. 2012).

Key Site Features

This site contains the best example of pohutukawa forest in the Taneatua

[1] Part of Ōhope Scenic Reserve and Extension occurs outside the 'coastal environment' study area (i.e. further than 1 km inland of MHWS).

[2] Identified as SVHZ-124 in Wildland Consultants 2006g.

Ecological District, and is also one of the best examples of pohutukawa forest on the New Zealand mainland (Beadel *et al.* 1999a). Major pressures on the site are residential development, pest plants on the margins, and pest animals throughout. One Threatened, one At Risk, and three regionally uncommon plant species are present, as well as one Threatened and one At Risk bird species.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	H
	3.5	H
	3.6	N/A
Diversity and Pattern	3.7	H
Naturalness	3.8	H
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	H
	3.12	H
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** *Pimelea tomentosa* (Threatened-Nationally Vulnerable) *Peperomia tetraphylla* (At Risk-Naturally Uncommon) **Avifauna:** North Island brown kiwi (Threatened-Nationally Vulnerable) Long-tailed cuckoo (At Risk-Naturally Uncommon) **Fish:** Redfin bully (At Risk-Declining)
ii	✓	Northern brown kiwi (Endangered)
iii	✓	High quality example of pohutukawa forest.
iv		
v	✓	Nationally Significant
vi	✓	Partially protected (Ōhope Scenic reserve, Department of Conservation)
Policy Met:		11(a)
Justification:		Ōhope Scenic Reserve and Extension (Part) is a very high quality example of pohutukawa forest (a threatened ecosystem type). It is one of the best examples on the New Zealand mainland and the best example in Taneatua Ecological District. It provides habitat for Threatened and At Risk flora and avifauna species, is regarded as nationally significant, and most of the site is

Policy	Criteria Met	Explanation
		legally protected. For these reasons, Ōhope Scenic Reserve and Extension (Part) is consistent with Policy 11(a).

Notes

There are three unprotected areas within this site which are Recommended Areas for Protection (RAPs) in the Taneatua Ecological District Protected Natural Areas Programme report (Beadel *et al.* 1999a) - see 'West End', 'Pohutukawa Remnant' and 'Ōhope Scenic Reserve Extension'.

References

Beadel and Shaw 1988; Shaw 1988b; Beadel 1994a; Beadel 1995a; Beadel *et al.* 1999a; Llewellyn 2005; OSNZ 2006; Wildland Consultants 2006g; Wildland Consultants 2010b.

ŌHOPE POHUTUKAWA REMNANTS

Site Number [1] 144
Grid Reference (NZMG) E2865387 N6351330
Local Authority Whakatāne District Council
Ecological District Taneatua
Protection Status Unprotected
Site Area 16.1 ha
Altitudinal Range 17-121 m asl
Geology-Landform Type Sedimentary coast hinterland

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa-(radiata pine) forest. (Wildland Consultants 2006g)	Steep hillslope and cliff

Vegetation and Indigenous Flora No Threatened, At Risk, or regionally uncommon species have been recorded. The forest understorey includes hangehange, mahoe, five finger, rangiora and mapou. The pohutukawa forest includes minor areas of manuka-*Machaerina sinclairii*-whatariki-koromiko shrubland, mamaku forest; rewarewa/kanuka/karamu-kohuhu-hangehange-five finger-mamaku forest and scrub; mamaku-mapou-mahoe-karamu-hangehange forest and scrub; rewarewa-pohutukawa forest, and rewarewa/kanuka forest (Wildland Consultants 2002c).

Indigenous Fauna No significant species recorded.

Condition/Pressures Radiata pine is present in the canopy and the site is heavily infested with wild ginger. Further invasion of garden plant species are a threat, especially along the northern edge of the site.

Key Site Features This site is of local significance in augmenting and buffering the nearby Ōhope Scenic Reserve, which contains one of the best mainland New Zealand examples of pohutukawa forest.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	L
	3.3	L
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M

[1] Identified as SVHZ-125 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	L
	3.12	H
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

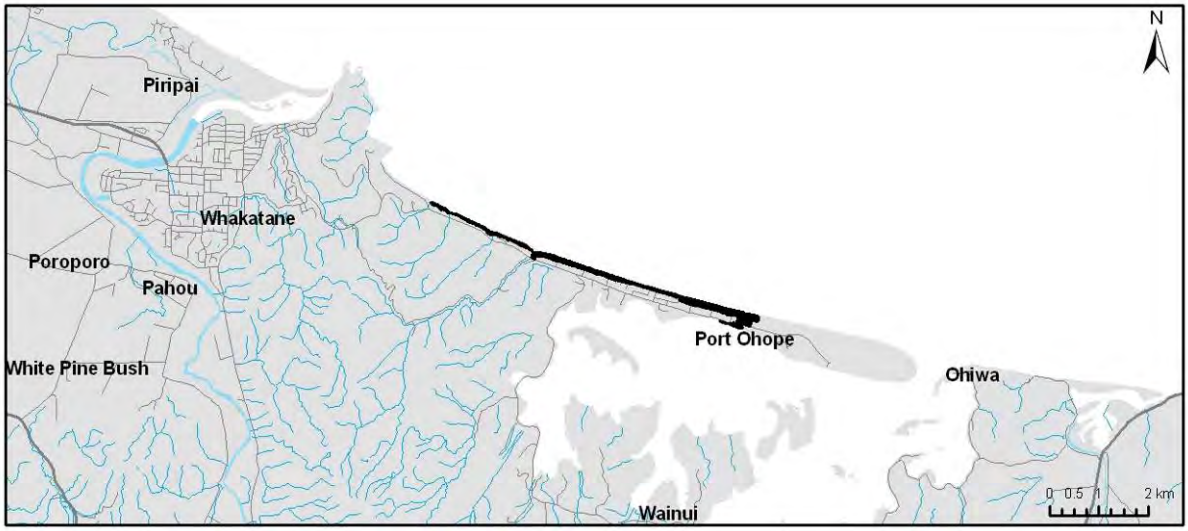
Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Locally Significant
vi		
11(b)		
i	✓	Pohutukawa forest with radiata pine and an indigenous understorey.
ii		
iii	✓	Pohutukawa forest
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Ōhope Pohutukawa Remnants is consistent with Policy 11(b) because, though somewhat degraded by weeds, it is an example of a threatened ecosystem type (i.e. pohutukawa forest). In addition, it acts as a buffer to Ōhope Scenic Reserve, a nationally significant site.

Notes Parts of this site are considered important for erosion control (Wildland Consultants 2002c).

References Wildland Consultants 2002c; Wildland Consultants 2006g.

ŌHOPE DUNES

Site Number[1]	157
Grid Reference (NZMG)	E2869077 N6350299
Local Authority	Whakatāne District Council
Ecological District	Taneatua
Protection Status	Unprotected
Site Area	42.8 ha
Altitudinal Range	0-20 m asl
Geology-Landform Type	Sand, Estuarine



Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Sandfield.	Sand dune
Terrestrial	Exotic grassland.	Sand dune
Terrestrial	Spinifex sandfield.	Sand dune
Terrestrial	Bracken/pohuehue-sea couch grass-vine-fernland.	Sand dune
Terrestrial	Lupin-(pohuehue) shrubland.	Sand dune
Terrestrial	Pampas/lupin shrubland.	Sand dune
Terrestrial	Sea couch grassland.	Sand dune
	(Beadel 1988b and Beadel *et al.* 1999a)	

Vegetation and Indigenous Flora

Spinifex, pingao (At Risk-Relict), pohuehue, *Ficinia nodosa*, *Oxalis rubens* (regionally uncommon), and *Lachnagrostis billardierei* are all present. Several other indigenous sand dune species had been planted locally, including sand tussock (At Risk-Declining), New Zealand shore spurge (At Risk-Declining), *Tetragonia implexicoma*, tauhinu, and *Carex testacea* (Beadel 2008).

Indigenous Fauna

Banded dotterel (Threatened-Nationally Vulnerable) use this area. Maraetōtara Stream Mouth is used by roosting variable oystercatcher (At Risk-Recovering) (Owen *et al.* 2006).

The site includes the mouth of Maraetōtara Stream, which is a habitat and migratory pathway of five At Risk species of freshwater fish (giant kōkopu, shortjaw kōkopu, longfin eel, redfin bully, torrentfish) and shortfin eel, common bully, common smelt, and banded kōkopu (Environment Bay of

[1] Identified as SVHZ-126 in Wildland Consultants 2006g.

Plenty 2008).

Condition/Pressures There are widespread infestations of lupin, pampas, kikuyu grass and sea couch, and local infestations of iceplant, wild ginger and fennel (Beadel 1988b). The site has been heavily modified through, removal of dunes, disturbance of the vegetation cover, weed establishment, and establishment of walking tracks (Beadel *et al.* 1999a). Further subdivision and residential development is a threat to this site.

Key Site Features This site is locally significant for sand dune vegetation which, although modified, comprises predominantly indigenous species. One Threatened and one At Risk bird species, and one At Risk and one regionally uncommon plant species are present in this area. The site includes the mouth of Maraetōtara Stream, which is a habitat and migratory pathway of indigenous species of freshwater fish.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	L
Rarity or Distinctive Features	3.2	L
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	L
Ecological Context	3.9	M
	3.10	L
Viability and Sustainability	3.11	L
	3.12	L
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** Pingao (At Risk-Relict) **Avifauna:** Banded dotterel (Threatened-Nationally Vulnerable) Variable oystercatcher (At Risk-Recovering) **Fish:** Giant kōkopu (At Risk-Declining) Longfin eel (At Risk-Declining) Redfin bully (At Risk-Declining)

Policy	Criteria Met	Explanation
		Shortjaw kōkopu (At Risk-Declining) Torrentfish (At Risk-Declining) **Planted flora:** Sand tussock (At Risk-Declining) New Zealand shore spurge (At Risk-Declining)
ii	✓	Giant kōkopu (Vulnerable) Shortjaw kōkopu (Vulnerable)
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Sandfield and spinifex sandfield.
ii		
iii	✓	Sandfield and spinifex sandfield.
iv	N/A	
v	✓	The mouth of the Maraetōtara Stream is migratory pathway for indigenous freshwater fish.
vi	✓	Ōhope Dunes is contiguous with Ōhope Spit.
Policy Met:		11(b)
Justification:		Ōhope Dunes is consistent with Policy 11(b) because it includes indigenous dune vegetation, is a habitat of Threatened and At Risk species, and includes a stream mouth that is a migratory pathway for indigenous freshwater fish. It is not consistent with Policy 11(a) because it is not one of the higher quality examples of its type and has been modified by weed infestations, dune removal, and the establishment of walking tracks.

Notes Part of the eastern end of this site was identified as a Category 3 recommended area for protection (RAP) in the Taneatua Ecological District PNA report (Beadel *et al.* 1999a).

References Beadel 1988b; Beadel *et al.* 1999a; Environment Bay of Plenty 2008; Owen *et al.* 2006; Wildland Consultants 2006g.

ŌHOPE SPIT

Site Number[1]	169
Grid Reference (NZMG)	E2872754 N6349117
Local Authority	Whakatāne District Council
Ecological District	Taneatua
Protection Status	Protected (Department of Conservation, Port Ōhope Recreation Reserve, Ōhiwa Harbour Marginal Strip and Ōhope Spit Wildlife Refuge Reserve) and unprotected parts
Site Area	103.4 ha
Altitudinal Range	0-20 m asl
Geology-Landform Type	Sand

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Maritime pine treeland.	Dune and beach sands
Terrestrial	Torrey pine treeland.	Dune and beach sands
Terrestrial	Manuka scrub and shrubland.	Dune and beach sands
Palustrine	Manuka scrub and shrubland.	Wetland
Terrestrial	Bracken fernland⇔bracken-pohuehue-sea couch-blackberry fernland⇔sea couch-pohuehue grassland.	Dune and beach sands
Terrestrial	Pampas/sea couch-pohuehue grassland.	Dune and beach sands
Palustrine	*Machaerina articulata*/*M. juncea*-sea couch grass-sedgeland⇔raupo reedland.	Wetland
Terrestrial	Spinifex sandfield. (Beadel 1993c)	Dune and beach sands

Vegetation and Indigenous Flora

Pingao (At Risk-Relict), *Limosella lineata* and *Oxalis rubens* (both regionally uncommon) occur at this site.

Indigenous Fauna

This is one of two principal spring tide shorebird roosts in Ōhiwa Harbour (Owen *et al.* 2006). North Island fernbird (At Risk-Declining) was seen and heard in 1990 and 2010 (Owen 1994a, Beattie 2011). Banded dotterel (Threatened-Nationally Vulnerable) are present. The spit is used by breeding variable oystercatcher (At Risk-Recovering) and northern New Zealand dotterel (Threatened-Nationally Vulnerable) (Owen *et al.* 2006). Variable oystercatcher were also recorded at this site in 2010 (Beattie 2011). Other species present include pied shag (Threatened-Nationally Vulnerable), Caspian tern (Threatened-Nationally Vulnerable), white-fronted tern (At Risk-Declining), and red-billed gull (Threatened-Nationally Vulnerable) (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

The site is a significant geological feature that is vulnerable to development (Kenny and Hayward 1996). Weeds (including moth plant, wild ginger, pampas, Japanese honeysuckle, blackberry, sea couch, pampas, wilding pines etc) have a major impact on this site. There is on going control of pampas, gorse, agave, and blackberry (A. Kirk, Department of Conservation, pers. comm. 2012). Many informal walking tracks and organic rubbish dumps are present (Owen 1994a and Beattie 2011). The site also faces the additional pressures of natural erosion and accretion (Owen *et al.* 2006).

Key Site Features

Ōhope Spit is regarded as the best example of sand dune vegetation in the Taneatua Ecological District (Beadel 1993c). One At Risk and two regionally

[1] Identified as SVHZ-127 in Wildland Consultants 2006g.

uncommon plant species, and five Threatened and three At Risk bird species have been recorded at this site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** Pingao (At Risk-Relict) **Fauna:** Banded dotterel (Threatened-Nationally Vulnerable) Caspian tern (Threatened-Nationally Vulnerable) Northern New Zealand dotterel (Threatened-Nationally Vulnerable) Pied shag (Threatened-Nationally Vulnerable) Red-billed gull (Threatened-Nationally Vulnerable) North Island fernbird (At Risk-Declining) (1990) White-fronted tern (At Risk-Declining) Variable oystercatcher (At Risk-Recovering)
ii	✓	New Zealand dotterel (Endangered)
iii	✓	High tide roost: one of two principal spring tide roosts in Ōhiwa Harbour.
iv		
v		Regionally Significant
vi		Partially protected (Port Ōhope Recreation Reserve, WDC), Ōhope Spit Wildlife Refuge (Department of Conservation).
Policy Met:		11(a)
Justification:		Ōhope Spit is consistent with Policy 11(a) because it is a principal high tide roost in Ōhiwa Harbour and is a habitat for several Threatened and At Risk avifauna species, some of which breed at the site. A Threatened plant species is also present. A small part of the site is legally protected as recreation reserve.

Notes

A regionally important example of a late Holocene barrier spit/dune ridge formation (Kenny and Hayward 1996).

The Port Ōhope Wharf area (western side of site) was identified as a Category 3 Recommended Area for Protection (RAP) in the Taneatua Ecological District Protected Natural Areas Programme report (Beadel *et al.* 1999a).

Beattie (2011) states: "Large size but adventives dominate most areas, domestic animals frequent the area and there is extensive tracking. Low habitat diversity".

The western end of the site is subject to development pressure.

References

Beadel 1993c; Beattie 2011; Owen 1994a; Kenny and Hayward 1996; Beadel *et al.* 1999a; Owen *et al.*2006; Wildland Consultants 2006g.

ŌHIWA HARBOUR - UNVEGETATED AND SPARSELY VEGETATED INTERTIDAL AND SUBTIDAL AREAS

Site Number	163
Grid Reference (NZMG)	E2871375 N6347272
Local Authority	Whakatāne District Council, Ōpōtiki District Council
Ecological District	Taneatua
Protection Status	Protected (Department of Conservation Port Ōhope Recreation Reserve, Unnamed Stewardship Areas) and unprotected parts
Site Area	2,365.0 ha
Altitudinal Range	0 m
Geology-Landform Type	Unvegetated and sparsely vegetated intertidal and subtidal areas

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	*Bolboschoenus fluviatilis* sedgeland.	Intertidal flat
Estuarine	*Machaerina juncea* sedgeland.	Intertidal flat
Estuarine	*Machaerina articulata/M. juncea*-sea couch grass sedgeland⇔raupo reedland.	Intertidal flat
Estuarine	Bachelor's button herbfield.	Intertidal flat
Estuarine	*Carex pumila* sandfield.	Intertidal flat
Estuarine	Sea rush tussockland.	Intertidal flat
Estuarine	Mangrove scrub.	Intertidal flat
Estuarine	Mangrove/sea rush tussock-shrubland.	Intertidal flat
Estuarine	Mangrove scrub and sedgeland.	Intertidal flat
Estuarine	Mangrove sedgeland.	Intertidal flat
Estuarine	Mangrove mudflat.	Intertidal flat
Estuarine	Oioi rushland.	Intertidal flat
Estuarine	Oioi-sea rush tussock-sedgeland.	Intertidal flat
Estuarine	Marsh ribbonwood shrubland.	Intertidal flat
Estuarine	Marsh ribbonwood/oioi shrub-sedgeland.	Intertidal flat
Estuarine	Sea rush-*Machaerina juncea*-sea couch-oioi grass-sedge-tussockland.	Intertidal flat
Estuarine	(Sea rush)/*Selliera radicans-Carex pumila-Isolepis cernua*-arrow grass herbfield.	Intertidal flat
Estuarine	Sea couch-pohuehue grassland.	Intertidal flat
Estuarine	Sea rush-oioi/*Selliera radicans-Samolus repens* tussockland.	Intertidal flat
Estuarine	*Schoenoplectus pungens* sedgeland.	Intertidal flat
Estuarine	Glasswort herbfield.	Intertidal flat
Estuarine	*Samolus repens* herbfield.	Intertidal flat
Estuarine	*Schoenoplectus pungens/Selliera radicans*-sea couch tussockland.	Intertidal flat
Estuarine	Seagrass grassland.	Intertidal and sub-tidal flat
Marine	Worm field.	Subtidal channel
Marine	Worm field.	Intertidal flat
Marine	Cockle bed.	Intertidal flat
Marine	Scallop bed.	Subtidal channel
Marine	Pipi bed.	Subtidal channel
Marine	Horse mussel field.	Subtidal channel
Marine	Green-lipped mussel field. (Beadel 1993c; Environment Bay of Plenty 1996; Stephen Park, Environment BOP, pers. comm. 2006; Wildland Consultants 2006g).	Subtidal channel

Indigenous Flora

Mangroves reach their southernmost limit of distribution nationally within the Ōhiwa Harbour.

Indigenous Fauna

Threatened and At Risk species of avifauna which utilise Ōhiwa harbour include: fairy tern (Threatened-Nationally Critical), Australasian bittern (Threatened-Nationally Endangered), northern New Zealand dotterel (25, as at 3 November 2011), wrybill, reef heron, Caspian tern, banded dotterel, red-billed gulls (all of which are Threatened-Nationally Vulnerable), breeding white-fronted tern, North Island fernbird (At Risk-Declining) (OSNZ 2006, Beattie 2010). Caspian tern (At Risk-Nationally Vulnerable), variable oystercatcher (At Risk-Recovering), white-fronted tern (At Risk-Declining), black-backed gulls, and New Zealand dotterel (Threatened-Nationally Vulnerable) all roost in this site (K. Owen, Department of Conservation, pers. comm. 2012). The harbour is among the ten most important wintering/non-breeding sites for New Zealand dotterel, banded dotterel, variable oystercatcher and arctic migrants like godwit (OSNZ 1998, Dowding and Moore 2006). Other species which utilise the harbour include New Zealand pied oystercatcher (At Risk-Declining), pied stilt (At Risk-Declining), pied shag (Threatened-Nationally Vulnerable), and little shag (At Risk-Naturally Uncommon) (K. Owen, Department of Conservation, pers. comm. 2012). Four-to-five thousand godwit (kuaka) and other wader species are present in summer (BOPRC 2012). Two important roosting and nesting sites are Uretara Shellbank and Ōhiwa Loop Road Sandbank (K. Owen, Department of Conservation, pers. comm. 2012).

The harbour provides habitat for estuarine fish, and habitat and migratory pathways for a suite of indigenous freshwater fish including shortfin eel (Bloxham 2007)..

Condition/Pressures

Historic clearance of vegetation in the harbour catchment, and drainage of harbour catchment wetlands has contributed to increased levels of sedimentation, particularly in low-energy environments of the upper harbour. These processes have manifested in changes to the ecology of the harbour, with mangroves increasing in extent and seagrass decreasing in extent.

The Nukuhou river, which flows into the southern part of the harbour, has the second-lowest water quality of monitored Bay of Plenty rivers, based on parameters including clarity, suspended solids, nutrients and bacteria (Park 2005).

Stock have direct access to many parts of the shoreline (Owen 1994a), resulting in grazing and trampling of shoreline vegetation communities and contributing to the spread of invasive weeds.

Control and eradication efforts in recent years mean that *Spartina alterniflora*, which is a significant weed of intertidal flats, now poses a potential threat rather than an actual threat.

Key Site Features

Ōhiwa Harbour contains regionally significant examples of estuarine and marine habitats that are represented on a much larger scale in Tauranga Harbour. A long history of modification and activity in the catchment is reflected in changing patterns of vegetation such as mangrove and seagrass, and variable water quality. A large suite of threatened, At Risk and international and New Zealand migratory shorebird species are known to use

the harbour. The harbour also provides habitat to estuarine fish and invertebrates and is a migratory pathway for indigenous freshwater fish.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	H
	3.5	H
	3.6	H
Diversity and Pattern	3.7	H
Naturalness	3.8	H
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	H
	3.12	H
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** New Zealand fairy tern (Acutely Threatened, Nationally Critical) Australasian bittern (Threatened-Nationally Endangered) Banded dotterel (Threatened-Nationally Vulnerable) Caspian tern (Threatened-Nationally Vulnerable) Northern New Zealand dotterel (Threatened-Nationally Vulnerable) Pied shag (Threatened-Nationally Vulnerable) Red-billed gull (Threatened-Nationally Vulnerable) Reef heron (Threatened-Nationally Vulnerable) Wrybill (Threatened-Nationally Vulnerable) New Zealand pied oystercatcher (At Risk-Declining) North Island fernbird (At Risk-Declining) Pied stilt (At Risk-Declining) Little shag (At Risk-Naturally Uncommon)White-fronted tern (At Risk-Naturally Uncommon) Variable oystercatcher (At Risk-Recovering)
ii	✓	Australasian bittern (Endangered) New Zealand dotterel (Endangered) Fairy tern (Vulnerable) Wrybill (Vulnerable)
iii	✓	Ōhiwa Harbour has very high ecological values and is the second-highest quality example of an estuarine ecosystem in the region.
iv		
v	✓	Nationally Significant
vi		

Policy	Criteria Met	Explanation
Policy Met:		11(a)
Justification:		Ōhiwa Harbour is a nationally significant site and one of the best quality examples of an estuarine ecosystem in the Region. Its catchment and hydrology have not been modified as dramatically as sites such as Waihī Estuary and Maketū Estuary and it provides habitat for a large suite of Threatened and At Risk avifauna. For these reasons it is consistent with Policy 11(a). It is also a habitat and migratory pathway for indigenous freshwater fish, and a habitat for marine fish and other marine organisms.

References

Beattie 2010; Environment Bay of Plenty 1996 (GIS layer: Ōhiwa_seagrass 1996_region); Park 2005; Dowding and Moore 2006; OSNZ 2006; Wildland Consultants 2006g.

HARBOUR ROAD

Site Number[1]	161
Grid Reference (NZMG)	E2869440 N6349748
Local Authority	Whakatāne District Council
Ecological District	Taneatua
Protection Status	Unprotected
Site Area	11.4 ha
Altitudinal Range	0 m asl
Geology-Landform Type	Estuarine, Sand

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Sea rush tussockland.	Intertidal flat
Estuarine	Oioi-sea rush tussock-sedgeland.	Intertidal flat
Estuarine	Manuka scrub. (Beadel 1993c)	Intertidal flat

Vegetation and Indigenous Flora

Austrostipa stipoides (considered to be regionally uncommon) is present here (Wildland Consultants 2011b). Scatttered mangroves are also present.

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon) prints and pied stilt (At Risk-Declining) were present in 2010 (Beattie 2011). Fernbird (At Risk-Declining) were heard in 2011 (Wildland Consultants 2011b).

Condition/Pressures

Stormwater drains, litter, dogs and tracks were all recorded as issues in 2010 (Beattie 2011). The site is bounded by residential properties, so additional threats incude weed invasion from gardens and dumping of garden waste.

Key Site Features

This site comprises a small example of estuarine vegetation typical of Ōhiwa Harbour. It is under pressure from residential areas along its landward edge. This site provides habitat for one regionally uncommon plant species and three At Risk bird species.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M

[1] The eastern portion of this site was identified as SVHZ-128 in Wildland Consultants 2006g and the western as Harbour Road (Site number 3) in Beattie 2011.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	L
	3.12	H
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Banded rail (Threatened-Naturallly Uncommon) North Island fernbird (At Risk-Declining) Pied stilt (At Risk-Declining)
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Sea rush tussockland, oioi rushland, and manuka scrub.
ii		
iii	✓	Estuarine wetlands of oioi, sea rush and manuka.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Harbour Road is consistent with Policy 11(b) because it is a small example of estuarine habitat for three At Risk species.

References Beadel 1993c; Wildland Consultants 2011b; Beattie 2011; Owen 1994a; Wildland Consultants 2006g.

CLAYDON PLACE

Site Number[1]	156
Grid Reference (NZMG)	E2868438 N6349837
Local Authority	Whakatāne District Council
Ecological District	Taneatua
Protection Status	Unprotected
Site Area	0.8 ha
Altitudinal Range	0-20 m asl
Geology-Landform Type	Sedimentary coast hinterland

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa forest. (Wildland Consultants 2011b)	Steep hillslope

Vegetation and Indigenous Flora

Claydon Place includes the only recently confirmed population of *Pimelea tomentosa* (Threatened-Nationally Vulnerable) in the Ōhiwa catchment, which comprises 3 seedlings (Wildland Consultants 2011b). Other species present include lancewood, houpara, *Coprosma rhamnoides*, turutu, mingimingi, bracken, and *Poa anceps* agg..

Indigenous Fauna

No specific fauna information.

Condition/Pressures

Threats to the *Pimelea tomentosa* population include track clearing and, trampling. In the long-term, as the canopy closes, shading will also be a threat (Wildland Consultants 2011b). Weeds that were recorded in 1990 include wattle, banana passionfruit, and grape (*Vitis vinifera*) (Owen 1994a), and Japanese spindleberry was recorded near the boat ramp in 2011.

Key Site Features

This small area of coastal pohutukawa forest is a remnant of a vegetation type which has been greatly reduced in extent. It provides habitat for a Threatened plant species which has not been recorded recently at any other site in the Ōhiwa catchment.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	L
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	L
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	L

[1] Identified as SVHZ-129 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	*Pimelea tomentosa* (Threatened-Nationally Vulnerable)
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Pohutukawa forest
ii		
iii	✓	Pohutukawa forest is largely confined to the coastal environment.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Claydon Place is consistent with Policy 11(b) because it comprises a small example of pohutukawa forest which is a habitat for *Pimelea tomentosa* (Threatened-Nationally Vulnerable). This is currently the only confirmed population of *Pimelea tomentosa* in the Ōhiwa catchment and comprises three seedlings.

Notes Identified as a Category 4 Recommended Area for Protection (RAP) in the Taneatua Protected Natural Areas Programme report (Beadel *et al.* 1999a).

References Owen 1994a; Beadel *et al.* 1999a; Wildland Consultants 2006g; Wildland Consultants 2011b.

OHAKANA

Site Number [1]	155
Grid Reference (NZMG)	E2868364 N6349897
Local Authority	Whakatāne District Council
Ecological District	Taneatua
Protection Status	Unprotected
Site Area	0.3 ha
Altitudinal Range	0 m asl
Geology-Landform Type	Estuarine

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial/Estuarine	Mānuka scrub.	Hillslope
Terrestrial	Planted indigenous scrub.	Hillslope
Estuarine	Estuarine wetland. (Beattie 2011)	Intertidal flat

Vegetation and Indigenous Flora A detailed botanical survey of the site has not been undertaken. Restoration plantings on the margins of this site include kawakawa, New Zealand shore spurge, tī kōuka, and toetoe (Beattie 2011).

Indigenous Fauna Banded rail (At Risk-Naturally Uncommon) and unconfirmed pied stilt (At Risk-Declining) prints were recorded in 2010 (Beattie 2011).

Condition/Pressures Beattie (2011) recorded stormwater drains, litter, pest plants (e.g. sea couch and wattle) and domestic pets as threats to the wetland.

Key Site Features This small wetland area has been modified by urban development. It provides habitat for two At Risk bird species.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	L
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	L
Ecological Context	3.9	M
	3.10	L
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

[1] Identified as Ohakana (Site Number 4) in Beattie 2011.

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Banded rail (At Risk-Naturally Uncommon) **Unconfirmed Record:** Pied stilt (At Risk-Declining)
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Estuarine wetland, manuka scrub, and planted indigenous scrub.
ii		
iii	✓	Estuarine wetland.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Ohakana is consistent with Policy 11(b) because it comprises a very small example of indigenous estuarine wetland and it provides habitat for one, possibly two, At Risk species of avifauna. It is not likely to be consistent with Policy 11(a) because of its very small size.

Notes This area is identified by Beattie (2011) as providing 'moderate' habitat quality for marshbirds: "Site is small in size, has grass encroaching and domestic pets frequent the area".

References Beattie 2011

TAUWHARE

Site Number [1]	152
Grid Reference (NZMG)	E2867765 N6350061
Local Authority	Whakatāne District Council
Ecological District	Taneatua
Protection Status	Protected (Department of Conservation, Tauwhare Pa Scenic Reserve) and unprotected parts
Site Area	22.0 ha
Altitudinal Range	0-40 m asl
Geology-Landform Type	Estuarine, Sedimentary coast hinterland

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa forest.	Sea cliff hillslope
Terrestrial	Manuka-brush wattle scrub and shrubland.	Hillslope
Terrestrial	Blackberry/*Carex geminata* shrub-sedgeland.	Wetland
Estuarine	Sea rush tussockland.	Intertidal flat
Terrestrial	Exotic grassland.	Hilltop
Estuarine	Mangrove shrubland	Intertidal flat
Estuarine/palustrine	Raupo reedland.	Intertidal flat
	(Beadel *et al.* 1999a)	

Vegetation and Indigenous Flora

Olearia solandri (regionally uncommon) as been recorded at this site (Beadel and Shaw 1988).

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon), North Island fernbird (At Risk-Declining), and variable oystercatcher (At Risk-Recovering) were all recorded in 2010 (Beattie 2011),

Condition/Pressures

Brush wattle, pampas, ginger, blackberry, Japanese walnut, woolly nightshade, fennel, Formosan lily, tradescantia, banana passionfruit, boneseed, cotoneaster, Sydney golden wattle, fatsia, Japanese honeysuckle, flowering Cherry, and tree privet were controlled throughout reserve in 2012 and in previous years (A. Kirk, Department of Conservation, pers. comm. 2012). A large infestation of mature wattle trees felled, or drilled and filled in 2010. Some of these species were also recorded in 1990 (Owen 1994a). Beattie (2011) identified stormwater drains, litter, and pest plants (e.g. tradescantia, montbretia and ginger) as threats to the western estuary within this site.

Key Site Features

This site comprises a good quality example of pohutukawa forest on the harbour margin (Beadel *et al.* 1999a). It is of moderate size and regular shape, and grades into estuarine vegetation. However, a wide range of weed species are present. One regionally uncommon plant species and three At Risk bird species have been recorded at this site.

[1] Identified as SVHZ-130 in Wildland Consultants 2006g. The eastern intertidal flat was identified as Harbour Reach (Site number 5) and the western intertidal flat was identified as Wainui Road Inlet (Site 6) in Beattie 2011.

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Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** North Island fernbird (At Risk-Declining) Banded rail (At Risk-Naturally Uncommon), Variable oystercatcher (At Risk-Recovering)
ii		
iii	✓	High quality example of pohutukawa forest on the margin of Ōhiwa Harbour.
iv		
v		Regionally Significant
vi	✓	Partially protected (Tauwhare Pa Scenic Reserve, Department of Conservation)
Policy Met:		11(b)
Justification:		Tauwhare comprises predominantly indigenous vegetation, including a high quality example of pohutukawa forest and areas of estuarine wetland. It is a habitat of three At Risk bird species and more than half of the site is legally protected. Its values are consistent with Policy 11(a).

Notes

This site was identified as an area of significant conservation value based on a detailed survey of Ōhiwa Harbour vegetation in 1992 (Beadel 1993c), and includes a Category 3 Recommended Area for Protection (RAP) identified in the Taneatua Ecological District Protected Natural Areas Programme report (Beadel *et al.* 1999a).

This estuarine portions of the site were identified by Beattie (2011) as providing 'moderate' habitat quality for marshbirds.

References

Beadel 1988b; Beadel 1992c; Beadel 1993c; Beadel *et al.* 1999a; Beadel and Shaw 1998; Beattie 2011; Owen, 1994a; Wildland Consultants 2006g.

AWARAPUTUNA STREAM

Site Number [1]	148
Grid Reference (NZMG)	E2866727 N6349365
Local Authority	Whakatāne District Council
Ecological District	Taneatua
Protection Status	Unprotected
Site Area	9.4 ha
Altitudinal Range	0-40 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Indigenous scrub and shrubland.	Hillslope
Terrestrial and Palustrine	Manuka shrubland.	Hillslope and wetland
Estuarine	Sea rush tussockland.	Intertidal flat
Palustrine	Freshwater wetland vegetation. (Beadel *et al.* 1999a)	Wetland

Vegetation and Indigenous Flora

No significant species recorded.

Indigenous Fauna

Australasian bittern (Threatened-Nationally Endangered), pied stilt and North Island fernbird (both At Risk-Declining) were recorded in 1990 (Owen 1994a). Australasian bittern, banded rail (At Risk-Naturally Uncommon), North Island fernbird, and variable oystercatcher (At Risk-Recovering) were all recorded in 2010 (Beattie 2011).

The site includes the mouth of Arawaputuna Stream, which is a habitat and migratory pathway of indigenous species of freshwater fish, including inanga (At Risk-Declining) (Matt Bloxham, Bay of Plenty Regional Council, pers. comm. 2007).

Condition/Pressures

Threats that were recorded in 1990 include rubbish, weeds, and pumice in-wash from nearby quarry (Owen 1994a). In addition, Beattie (2011) recorded a sewage plant and power lines in close proximity to the site. This site is cut off from the main harbour by Wainui Road.

Key Site Features

This site contains small examples of estuarine and freshwater vegetation, and contiguous secondary scrub on hillslopes. Weeds and human activity threaten the site. One Threatened and four At Risk bird species have been recorded here. The site includes the mouth of Arawaputuna Stream, which is a habitat and migratory pathway of indigenous species of freshwater fish.

[1] Identified as SVHZ-31 in Wildland Consultants 2006g and as Awarapatuna Stream (Site number 7) in Beattie 2011.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Australasian bittern (Threatened-Nationally Endangered) North Island fernbird (At Risk-Declining) Pied stilt (At Risk-Declining) (1990) Banded rail (At Risk-Naturally Uncommon) Variable oystercatcher (At Risk-Recovering) **Fish:** Inanga (At Risk-Declining)
ii	✓	Australasian bittern (Endangered)
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Indigenous scrub and shrubland, and sea rush tussockland.
ii		
iii	✓	Sea rush tussockland
iv	N/A	
v	✓	The stream is a migratory pathway for indigenous species of freshwater fish.
vi		
Policy Met:		11(b)
Justification:		Awaraputuna Stream is a small example of estuarine and palustrine wetlands. It is consistent with Policy 11(b) because it is dominated by indigenous vegetation. In provides habitat for second Threatened and At Risk avifauna species. It includes the mouth of a stream which is habitat for a migratory pathway of indigenous freshwater fish species.

Notes	Identified as a Category 4 Recommended Area for Protection (RAP) in the Taneatua Ecological District Protected Natural Areas Programme report (Beadel *et al.* 1999a). This area is identified by Beattie (2011) as providing 'high' quality habitat for marshbirds: "Fairly thin band of vegetation and a number of adventives and disturbances but good species and habitat quality".
References	Beadel *et al.* 1999a; Beattie 2011; Owen 1994a; Wildland Consultants 2006g.

HARBOUR QUARRY SHORELINE

Site Number [1]	150
Grid Reference (NZMG)	E2867043 N6348785
Local Authority	Whakatāne District Council
Ecological District	Taneatua
Protection Status	Unprotected
Site Area	2.4 ha
Altitudinal Range	0-10 m asl
Geology-Landform Type	Estuarine, Sedimentary coast hinterland

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Estuarine wetlands.	Intertidal flat
Terrestrial	Mixed indigenous-exotic shrubland. (Beattie 2011)	Hillslope

Vegetation and Indigenous Flora A detailed botanical survey of the site has not been undertaken. Beattie (2011) recorded sea rush, oioi, mangroves and *Schoenoplectus pungens* at this site.

Indigenous Fauna Banded rail (At Risk-Naturally Uncommon) prints, North Island fernbird (At Risk-Declining), variable oystercatcher (At Risk-Recovering), and pied stilt (At Risk-Declining) were recorded in 2010 (Beattie 2011).

Condition/Pressures Beattie (2011) identified litter, recreational activites, and pest plants (e.g. wattle, sea couch and ginger) as threats to the wetland.

Key Site Features Although modified the thin band of estuarine vegetation and terrestrial habitat, typical of the Ōhiwa Harbour, provides habitat for four At Risk bird species.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	L
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

[1] Identified as Harbour Quarry Shoreline (Site Number 8) in Beattie 2011.

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Pied stilt (At Risk-Declining) North Island fernbird (At Risk-Declining) **Unconfirmed Record:** Banded rail (At Risk-Naturally Uncommon)
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Estuarine wetlands of sea rush, oioi, mangroves, and *Schoenoplectus pungens*.
ii		
iii	✓	Estuarine wetlands of sea rush, oioi, mangroves, and *Schoenoplectus pungens*.
iv	N/A	
v		
Policy Met:		11(b)
Justification:		Harbour Quarry Shoreline is consistent with Policy 11(b) because it is a small example of an estuarine wetland that provides habitat for North Island fernbird (At Risk-Declining). The site is not consistent with Policy 11(a) because it is small and narrow.

Notes This area is identified by Beattie (2011) as providing habitat of 'moderate' quality for marshbirds: "Very thin based vegetation with a large number of adventives and multiple disturbances".

References Beattie 2011

TUNANUI STREAM INLET

Site Number [1]	145
Grid Reference (NZMG)	E2866326 N6348407
Local Authority	Whakatāne District Council
Ecological District	Taneatua
Protection Status	Unprotected
Site Area	14.1 ha
Altitudinal Range	0-11 ha
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Sea rush tussockland.	Intertidal flat
Estuarine	Oioi rushland.	Intertidal flat
Estuarine	Saltmarsh ribbonwood shrubland.	Intertidal flat
Estuarine	*Schoenoplectus pungens* sedgeland.	Intertidal flat
Estuarine	Mudflat.	Intertidal flat
Estuarine	Mangrove scrub.	Intertidal flat
Palustrine	Manuka shrubland. (Beadel 1993c)	Wetland

Vegetation and Indigenous Flora

Olearia solandri (a regionally uncommon plant species) and *Hebe parviflora* occur at this site (Wildland Consultants 2011b).

Indigenous Fauna

Australasian bittern (Threatened-Nationally Endangered); North Island fernbird (At Risk-Declining), and banded rail (At Risk-Naturally Uncommon) were all recorded in 1990 (Owen 1994a) and 2010 (Beattie 2011). Australasian bittern are likely to be intermittent visitors, not breeding at the site.

Neap high tide roost for shorebirds (Owen *et al.* 2006).

Tunanui Stream is a migratory pathway for indigenous freshwater fish species, including inanga, redfin bully, and longfin eel (all At Risk-Declining) (Bloxham 2007).

This site contains an inanga (At Risk-Declining) spawning site (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Reclamation, drainage, stock access, herbicide contamination via road verge spraying (Beattie 2011). Gorse and plum trees are also present (Wildland Consultants 2011b). Most of this site is cut off from the main harbour by Wainui Road.

Key Site Features

This site comprises a small example of estuarine and wetland vegetation characteristic of Ōhiwa Harbour. Several pressures including weeds and human activity, have impacted on the site. One Threatened and two At Risk marshbird species, and one regionally uncommon plant species have been recorded here.

[1] Identified as SVHZ-132 in Wildland Consultants 2006g, and as Tunanui Inlet (Site Number 9) and Burma Road (Site Number 10) in Beattie 2011.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	M
	3.12	H
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Australasian bittern (Threatened-Nationally Endangered) North Island fernbird (At Risk-Declining) Banded rail (At Risk-Naturally Uncommon) **Fish:** Inanga (At Risk-Declining) Lonfin eel (At Risk-Declining) Redfin bully (At Risk-Declining)
ii	✓	Australasian bittern (Endangered)
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Estuarine wetland with species such as sea rush, oioi, saltmarsh ribbonwood, and mangrove.
ii		
iii	✓	Estuarine wetland with species such as sea rush, oioi, saltmarsh ribbonwood, and mangrove.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Tunanui Stream Inlet has been adversely affected by reclamation, drainage and stock access and most of the site is cut off from Ōhiwa Harbour by Wainui Road. However, it comprises indigenous vegetation and habitat types which

Policy	Criteria Met	Explanation
		are confined to the coastal environment, and is a habitat for Threatened and At Risk avifauna so its values are consistent with Policy 11(b).

Notes

Ranked 'High' quality habitat for marshbirds (Owen 1994a).

Identified as a Category 4 Recommended Area for Protection (RAP) in the Taneatua Ecological District Protected Natural Areas Programme report (Beadel *et al.* 1999a).

This site was divided into two by Beattie (2011):
The Tunanui Stream Inlet portion of this site (on the western side of Wainui Road) is identified by Beattie (2011) as providing 'high' quality habitat for marshbirds: "Good birdlife and plenty of suitable habitat, but a number of threats are present, particulary the altered drainage".

The Burma Road portion of this site site (on the western side of Wainui Road) is identified by Beattie (2011) as providing 'moderate' quality habitat for marshbirds: "This site is small in size and close to the road, although there is relatively good habitat diversity".

References

Beadel 1993c; Beadel *et al.* 1999a; Beattie 2011; Owen 1994a; Owen *et al.* 2006; Wildland Consultants 2006; Wildland Consultants 2011b.

PUKEHOKO

Site Number [1] 146
Grid Reference (NZMG) E2866415 N6347777
Local Authority Whakatāne District Council
Ecological District Taneatua
Protection Status Unprotected
Site Area 1.0 ha
Altitudinal Range 0 m asl
Geology-Landform Type Estuarine

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Estuarine wetland. (Beattie 2011)	Intertidal flat

Vegetation and Indigenous Flora A detailed botanical survey of this site has not been undertaken.

Indigenous Fauna Banded rail (At Risk-Naturally Uncommon) prints, and North Island fernbird (At Risk-Declining) were recorded in 2010 (Beattie 2011).

Condition/Pressures Beattie (2011) identified stormewater drains, litter, and pest plants (e.g. wattle, sea couch and willows) as threats to the wetland.

Key Site Features This small site comprises estuarine vegetation typical of Ōhiwa Harbour and habitat for two At Risk bird species.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	L
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.
** H = High, M = Medium, L = Low.

Significance Level: Local

[1] Identified as Pukehoko (Site Number 11) in Beattie 2011.

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** North Island fernbird (At Risk-Declining) Banded rail (At Risk-Naturally Uncommon)
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Indigenous estuarine wetland vegetation.
ii		
iii	✓	Indigenous estuarine wetland vegetation.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Pukehoko is consistent with Policy 11(b) because it is a small example of an estuarine wetland that provides habitat for two At Risk species of avifauna. The site is not likely to be consistent with Policy 11(a) because it is very small.

Notes This area is identified by Beattie (2011) as providing 'moderate' habitat quality for marshbirds: "Very small in size and the vegetation is dominated by adventives".

References Beattie 2011

WAIOTANE STREAM

Site Number [1]	147
Grid Reference (NZMG)	E2866413 N6347462
Local Authority	Whakatāne District Council
Ecological District	Taneatua
Protection Status	Unprotected
Site Area	5.0ha
Altitudinal Range	1-20 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Sea rush tussockland.	Intertidal flat
Estuarine	Manuka scrub and shrubland. (Beadel 1993c)	Wetland

Vegetation and Indigenous Flora

No significant species recorded.

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon) and North Island fernbird (At Risk-Declining) were present in 1990 (Owen 1994a) and again in 2010 (Beattie 2011). Australasian bittern (Threatened-Nationally Endangered) were recorded in 2010 and the site was described as being good fernbird habitat (Beattie 2011). Tunanui Stream is a migratory pathway for indigenous freshwater fish species, including inanga, redfin bully, bluegill bully, and longfin eel (all At Risk-Declining), and common bully, and banded kōkopu (Bloxham 2007).

Condition/Pressures

Owen (1994a) recorded stock access and grey willow. This site is cut off from the main harbour by Wainui Road so is affected by highly modified hydrology (Beattie 2011). The site is bounded by grazed pasture and Wainui Road.

This site contains an inanga (At Risk-Declining) spawning site (K. Owen, Department of Conservation, pers. comm. 2012).

This site includes a migratory pathway for indigenous freshwater fish species.

Key Site Features

This site is a small example of estuarine and wetland vegetation characteristic of Ōhiwa Harbour. Threats from weeds and human activity have been noted in the past. One Threatened and two At Risk marshbird species have been recorded at this site.

[1] Identified as SVHZ-133 in Wildland Consultants 2006g and as Waiotane Stream (site Number 12) in Beattie 2011.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	L
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	L
	3.12	H
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Australasian bittern (Threatened-Nationally Endangered) North Island fernbird (At Risk-Declining) Banded rail (At Risk-Naturally Uncommon) **Fish:** Bluegill bully (At Risk-Declining) Inanga (At Risk-Declining) Redfin bully (At Risk-Declining) Longfin eel (At Risk-Declining)
ii	✓	Australasian bittern (Endangered)
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Sea rush tussockland and manuka scrub and shrubland.
ii		
iii	✓	Sea rush tussockland
iv	N/A	
v	✓	Waiotane Stream may be a migratory pathway for indigenous species of freshwater fish.
vi		
Policy Met:		11(b)
Justification:		Waiotane Stream is a habitat of Threatened and At Risk avifauna species but it is a relatively small site so its values are consistent with Policy 11(b). It

Policy	Criteria Met	Explanation
		comprises indigenous vegetation and the stream is a migratory pathway for indigenous species of freshwater fish.

Notes

Identified as a Category 4 Recommended Area for Protection (RAP) in the Taneatua Ecological District Protected Natural Areas Programme report (Beadel *et al.* 1999a).

This area is identified by Beattie (2011) as providing 'moderate' quality habitat for marshbirds: "Large areas of good fernbird habitat and high numbers, but drainage has been extensively modified and site is subject to seversal disturbances".

References

Beadel 1993c; Beadel *et al.* 1999a; Beattie 2011; Owen 1994a; Wildland Consultants 2006g.

STUART'S BITTERN SPOT

Site Number [1]	149
Grid Reference (NZMG)	E2866680 N6347017
Local Authority	Whakatāne District Council
Ecological District	Taneatua
Protection Status	Unprotected
Site Area	0.4 ha
Altitudinal Range	0 m asl
Geology-Landform Type	Estuarine

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Estuarine wetland.	Intertidal flat
Estuarine	Raupo reedland. (Beattie 2011)	Intertidal flat

Vegetation and Indigenous Flora A botanical survey of the site has not been undertaken.

Indigenous Fauna Banded rail (At Risk-Naturally Uncommon), Australasian bittern (Threatened-Nationally Endangered), and long-tailed cuckoo (At Risk-Naturally Uncommon) were recorded in 2010 (Beattie 2011).

Condition/Pressures Beattie (2011) identified rectreational use, litter and restricted tidal flows as threats to the wetland.

Key Site Features This is a small esturine wetland separated from the harbour by Wainui Road. It provides habitat for one Threatened and two At Risk bird species.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	L
Ecological Context	3.9	M
	3.10	L
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

[1] Identified as Stuart's Bittern Spot (Site Number 43) in Beattie 2011.

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Australasian bittern (Threatened-Nationally Endangered) Banded rail (At Risk-Naturally Uncommon) Long-tailed cuckoo (At Risk-Naturally Uncommon)
ii	✓	Australasian bittern (Endangered)
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Impounded intertidal flat with estuarine wetland, and raupo reeedland.
ii		
iii	✓	Estuarine wetland.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Stuart's Bittern Spot is consistent with Policy 11(b) because it is a small area of impounded intertidal flat where Australasian bittern (Threatened-Nationally Endangered) and banded rail (At Risk-Naturally Uncommon) have been recorded. The site is not large enough or of high enough quality to be consistent with Policy 11(a).

Notes This area is identified by Beattie (2011) as providing habitat of 'moderate' quality to marshbirds: "Small in size and isolated from harbour".

References Beattie 2011

WHITIWHITI

Site Number [1]	151
Grid Reference (NZMG)	E2867586 N6346847
Local Authority	Whakatāne District Council; Ōpōtiki District Council
Ecological District	Taneatua
Protection Status	Protected (QEII covenants) and unprotected parts
Site Area	68.9 ha
Altitudinal Range	0-80 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium, Sedimentary coast hinterland
HVES Number	93

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Grey willow forest.	Wetland
Terrestrial	Pole kahikatea forest.	Alluvial terrace
Terrestrial	Kanuka forest.	Hillslope
Terrestrial	Rewarewa/kamahi-kanuka-mamaku forest.	Hillslope
Estuarine	Open water.	Intertidal flat
Terrestrial	Manuka scrub.	Hillslope
Terrestrial	Manuka shrubland.	Wetland
Estuarine	Sea rush tussockland.	Intertidal flat
Estuarine	Oioi rushland.	Intertidal flat
Estuarine	*Schoenoplectus pungens* sedgeland.	Intertidal flat
Palustrine	Raupo reedland.	Wetland
	(Beadel *et al.* 1999a)	

Vegetation and Indigenous Flora

Black beech is present (Beadel *et al.* 1999a).

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon), pied stilt and North Island fernbird (both At Risk-Declining) were recorded in 1990 (Owen 1994a). Beattie (2011) recorded banded rail, North Island fernbird, Australasian bittern (Threatened-Nationally Endangered), black shag (At Risk-Naturally Uncommon), and pied stilt. Likely habitat for spotless crake although there was no response to tapes in 2010 (Beattie 2011).

The site includes the mouth of Wainui Stream, which is a habitat and migratory pathway of indigenous species of freshwater fish including inanga, longfin eel, redfin bully, kōaro, bluegill bully, torrentfish (all of which are At Risk-Declining), common smelt, shortfin eel, giant bully, banded kōkopu, and common bully (Environment Bay of Plenty 2008).

Condition/Pressures

In 1990, stock access, pampas, blackberry and mature pines were present, and there was possible illegal reclamation (Owen 1994a). Beadel *et al.* (1999a) noted severe grazing and minor drainage in wetlands. In 2010, weeds, litter and drainage remained on-going issues (Beattie 2011).

Key Site Features

This moderately sized site comprises relatively good quality, representative examples of contiguous estuarine and freshwater wetlands and hillslope vegetation. Examples of such sequences are uncommon in the Taneatua Ecological District (Beadel *et al.* 1999a). One Threatened and four At Risk bird species have been recorded at this site, and are still likely to be present.

[1] Identified as SVHZ-134 in Wildland Consultants 2006g, and as Te Kooti Inlet (Site Number 13), Wainui Stream (Site Number 14) and Paparoa Road Inlet (Site Number 15) in Beattie 2011.

This site includes the mouth of Wainui Stream, which is a habitat and migratory pathway of indigenous species of freshwater fish.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	M
	3.5	M
	3.6	M
Diversity and Pattern	3.7	H
Naturalness	3.8	H
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	M
	3.12	H
	3.13	M

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** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Australasian bittern (Threatened-Nationally Endangered) Banded rail (At Risk-Naturally Uncommon) Black shag (At Risk-Naturally Uncommon) North Island fernbird (At Risk-Declining) Pied stilt (At Risk-Declining) **Fish:** Inanga (At Risk-Declining) Bluegill bully (At Risk-Declining) Kōaro (At Risk-Declining) Lonfin eel (At Risk-Declining) Redfin blly (At Risk-Declining) Torrentfish (At Risk-Declining)
ii	✓	Australasian bittern (Endangered)
iii	✓	Examples of contiguous estuarine and freshwater wetlands, and indigenous hillslope vegetation are uncommon in the Taneatua Ecological District.
iv		
v		Regionally Significant
vi		Unprotected
Policy Met:		11(a)
Justification:		Whitiwhiti is consistent with Policy 11(a) because it is a good quality example of a vegetation sequence that is uncommon in Taneatua Ecological District (i.e. contiguous estuarine wetland, freshwater wetland, and terrestrial vegetation types) and it is a habitat of Threatened and At Risk avifauna.

Notes

Identified as a Category 1 Recommended Area for Protection (RAP) in the Taneatua Ecological District Protected Natural Areas report (Beadel *et al.* 1999a). Some estuarine areas in this site were ranked as 'High' quality habitat for marshbirds (Owen 1994a).

Part of this site is protected under a Land Improvement Agreement on the McKay property (Beadel *et al.* 1999a).

This site was divided into three by Beattie (2011):
The Te Kooti Inlet portion of this site is identified by Beattie (2011) as providing 'moderate' habitat quality for marshbirds: "Small inlet with a large proportion of adventive cover and rubbish".

The Wainui Stream portion of this site is identified by Beattie (2011) as providing 'moderate' habitat quality for marshbirds: "Large area but low habitat diversity and drainage has been extensively modified".

The Paparoa Road Inlet portion of this site is identified by Beattie (2011) as providing 'high' habitat quality for marshbirds: "Low densities of birds but relatively large area with diverse habitat and low human impacts".

References

Beadel 1993c; Beadel *et al.* 1999a; Beattie 2011; Environment Bay of Plenty 2008; Owen 1994a; Wildland Consultants 1999a; Wildland Consultants 2006g.

ISLETS NEAR OHAKANA ISLAND (UNNAMED)

Site Number [1]	154
Grid Reference (NZMG)	E2868233 N6348565
Local Authority	Whakatāne District Council
Ecological District	Taneatua
Protection Status	Unprotected
Site Area	0.4 ha
Altitudinal Range	0 m asl
Geology-Landform Type	Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa forest. (Beadel *et al.* 1999a)	Hillslope; cliff

Vegetation and Indigenous Flora Horokaka (native iceplant; *Disphyma australe*) is common on the steep sides of the islets (Beadel *et al.* 1999a).

Indigenous Fauna No specific information.

Condition/Pressures The islet's location in Ōhiwa Harbour means it is somewhat isolated from direct human-induced impacts. However, its small size may make it vulnerable to coastal erosion. Weeds, particularly wind-blown species, may be present.

Key Site Features These islets contain small but locally significant examples of pohutukawa forest on harbour margins. The understorey on these islets is in good condition (Beadel *et al.* 1999a). Unmodified coastal forest is severely depleted in extent in the Taneatua Ecological District.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	L
	3.3	M
	3.4	M
	3.5	L
	3.6	N/A
Diversity and Pattern	3.7	L
Naturalness	3.8	H
Ecological Context	3.9	H
	3.10	L
Viability and Sustainability	3.11	L
	3.12	H
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

[1] Identified as SVHZ-135 in Wildland Consultants 2006g.

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Pohutukawa forest
ii		
iii	✓	Pohutukawa forest is largely confined to the coastal environment.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		The Islets Near Ohakana Island (Unnamed) are consistent with Policy 11(b) because they comprise small examples of pohutukawa forest, an indigenous vegetation type which is largely confined to the coastal zone and has been greatly reduced in extent.

Notes

This site was identified as an area of significant conservation value based on a detailed survey of Ōhiwa Harbour vegetation in 1992 (Beadel 1993c).

Identified as a Category 3 Recommended Area for Protection (RAP) in the Taneatua Ecological District Protected Natural Areas Programme report (Beadel *et al.* 1999a).

References

Beadel 1993c; Beadel *et al.* 1999a; Wildland Consultants 2006g.

PAPAROA PA HISTORIC RESERVE AND SURROUNDS

Site Number [1]	160
Grid Reference (NZMG)	E2869160 N6347795
Local Authority	Whakatāne District Council
Ecological District	Taneatua
Protection Status	Protected (Department of Conservation, Paparoa Pa Historic Reserve).
Site Area	1.1 ha
Altitudinal Range	0-20 m asl
Geology-Landform Type	Sedimentary coast hinterland

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa-(kanuka)-(brush wattle) forest. (Beadel 1995a)	Cliff, steep hillslope

Vegetation and Indigenous Flora No unusual species noted.

Indigenous Fauna Common field birds.

Condition/Pressures The site comprises two very small areas that would be vulnerable to 'edge effects'. Brush wattle is present. The landward portions of the site are bounded by pastoral land but it is not known if stock have access to the site.

Key Site Features This site contains small patches of pohutukawa forest that are in good condition. This is a coastal vegetation type that has been severely depleted in extent.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	L
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	L
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

[1] Identified as SVHZ-136 in Wildland Consultants 2006g.

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Locally Significant
vi	✓	Protected (Paparoa Pā Historic Reserve, Department of Conservation).
11(b)		
i	✓	Pohutukawa-(kanuka)-(brush wattle) forest.
ii		
iii	✓	Pohutukawa forest is largely confined to the coastal environment.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		The values of Paparoa Pā Historic Reserve and Surrounds are consistent with Policy 11(b) because, though the site is modified by weeds, it is an example of pohutukawa forest, an indigenous vegetation type which is largely confined to the coastal.

Notes This site has a 'moderate' botanical conservation rank in Beadel (1995a). Two pa sites are present.

References Beadel 1995a, Wildland Consultants 1999a; Wildland Consultants 2006g.

PAPAROA ROAD PENINSULA INLET

Site Number [1] 158
Grid Reference (NZMG) E2868753 N6346857
Local Authority Whakatāne District Council
Ecological District Taneatua
Protection Status Unprotected
Site Area 0.8 ha
Altitudinal Range 0 m asl
Geology-Landform Type Estuarine

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Sea rush-oioi tussockland-rushland.	Intertidal flat
Estuarine	Mangrove shrubland. (Beattie 2011)	Intertidal flat

Vegetation and Indigenous Flora A botanical survey of the site has not been undertaken.

Indigenous Fauna Banded rail (At Risk-Naturally Uncommon) prints, variable oystercatcher (At Risk-Recovering), and North Island fernbird (At Risk-Declining) were recorded in 2010 (Beattie 2011).

Condition/Pressures Beattie (2011) identified stream channelisation, drains, and pest plants (e.g. sea couch and willows) as threats to the wetland.

Key Site Features Situated in a small bay on the eastern side of Paparoa Road peninsula the estuarine vegetation is typical of Ōhiwa Harbour. The site provides habitat for three At Risk bird species.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	L
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	L
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

[1] Identified as Paparoa Road Peninsula Inlet (Site Number 19) in Beattie 2011.

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** North Island fernbird (At Risk-Declining) Variable oystercatcher (At Risk-Recovering) **Unconfirmed report:** Banded rail (At Risk-Naturally Uncommon) prints
ii		
iii		
iv		
v		Local.
vi		Unprotected
11(b)		
i	✓	Estuarine wetlands of mangrove, oioi, and sea rush.
ii		
iii	✓	Estuarine wetlands of mangrove, oioi, and sea rush.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Paparoa Road Peninsula Inlet is consistent with Policy 11(b) because it is a small example of an estuarine wetland that provides habitat for two At Risk species of avifauna. The site is not likely to be consistent with Policy 11(a) because it is small.

Notes This area is identified by Beattie (2011) as providing 'moderate' habitat quality for marshbirds: "Very small area and estuarine vegetation is confined to a very narrow band. Numerous adventive species present".

References Beattie 2011

WAINUI WETLAND

Site Number [1]	159
Grid Reference (NZMG)	E2868888 N6345865
Local Authority	Whakatāne District Council
Ecological District	Taneatua
Protection Status	Unprotected
Site Area	8.4 ha
Altitudinal Range	0-20 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Sea rush tussockland.	Intertidal flat
Estuarine	*Schoenoplectus pungens* sedgeland.	Intertidal flat
Palustrine	Grey willow forest.	Wetland
Palustrine	Raupo reedland.	Wetland
Palustrine	Freshwater wetland vegetation.	Wetland
Terrestrial	Indigenous forest and shrubland.	Alluvial plain
Terrestrial	Estuary margin vegetation. (Beadel 1993c)	Alluvial plain

Vegetation and Indigenous Flora

No significant species recorded.

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon), spotless crake (At Risk-Relict) and North Island fernbird (At Risk-Declining) were recorded in 1990 (Owen 1994a). Australasian bittern (Threatened-Nationally Endangered), banded rail, spotless crake, North Island fernbird and pied stilt (At Risk-Declining) were all recorded in 2010 (Beattie 2011). The site is a neap high tide roost site of importance for shorebirds (Owen *et al.* 2006).

The stream that flows through this site is a migratory pathway for indigenous freshwater fish, including inanga (At Risk-Declining) and longfin eel (At Risk-Declining) (Bloxham pers. comm. 2007).

Condition/Pressures

The freshwater wetland has increased in extent during recent years following a lapse in maintenance of farm drains. There has also been progressive infilling on the western side since the marshbird survey in 1990. The eastern side of the wetland is fenced, but stock still have access to the harbour on the western side (Beattie 2011). Weed issues include: gorse, blackberry, pines, willow, wattle, sea couch and eucalyptus (Beattie 2011).

Key Site Features

Wainui Wetland is a small, irregularly shaped example of estuarine and freshwater wetland vegetation. Parts of the site are heavily modified by human activity. One Threatened and four At Risk bird species have been recorded at this site.

[1] Identified as SVHZ-137 in Wildland Consultants 2006g and as Wainui Wetland (Site Number 20) in Beattie 2011.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Australasian bittern (Threatened-Nationally Endangered) North Island fernbird (At Risk-Declining) Pied stilt (At Risk-Declining) Spotless crake (At Risk-Relict) Banded rail (At Risk-Naturally Uncommon) **Fish:** Inanga (At Risk-Declining) Longfin eel (At Risk-Declining)
ii	✓	Australasian bittern (Endangered)
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Sea rush tussockland, *Schoenoplectus pungens* sedgeland, raupo reedland, and Indigenous forest and shrubland.
ii		
iii	✓	Sea rush tussockland, *Schoenoplectus pungens* sedgeland, and other estuarine vegetation.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Wainui Wetland is a relatively small, narrow wetland, and parts have been highly modified by human activity. However, it includes indigenous

Policy	Criteria Met	Explanation
		vegetation and habitats that are typical of the coastal environment, and it is a habitat for Threatened and At Risk avifauna species, so its values are consistent with Policy 11(b). The stream is a migratory pathway for indigenous freshwater fish species, including At Risk species.

Notes

Identified as a Category 4 Recommended Area for Protection (RAP) in the Taneatua Ecological District Protected Natural Areas Programme report (Beadel *et al.* 1999a).

This area is identified by Beattie (2011) as providing 'high' habitat quality for marshbirds: "Large size of site, and relatively limited human access. Local residents actively involved in revegetation and pest control. Good habitat diversity and healthy populations of many species, but some adventive cover present".

References

Beadel 1993c; Beadel *et al.* 1999a; Beattie 2011; Owen 1994a; Owen *et al.* 2006; Wildland Consultants 1999a; Wildland Consultants 2006g.

WILLIAMS WETLAND (PART)[1]

Site Number [2] 153
Grid Reference (NZMG) E2868186 N6345245
Local Authority Whakatāne District Council
Ecological District Taneatua
Protection Status Unprotected
Site Area 4.6 ha
Altitudinal Range 20-40 m asl
Geology-Landform Type Sedimentary coast hinterland

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	(Grey willow)-(ti kouka)/manuka-raupo-harakeke/swamp millet scrub and shrubland.	Wetland
Terrestrial	Kanuka-mamaku forest (with local rewarewa, pohutukawa, kahikatea, kamahi, mangeao, manuka, rimu, mapou and black wattle). (Beadel *et al.* 1999a)	Hillslope

Vegetation and Indigenous Flora No significant species recorded.

Indigenous Fauna North Island fernbird (At Risk-Declining) and pukeko occur in the wetland (Beadel *et al.* 1999a). An unnamed stream that flows through this site is a migratory pathway for indigenous freshwater fish species, including inanga, longfin eel (both At Risk-Declining), and banded kōkopu (Bloxham 2007).

Condition/Pressures This wetland has been invaded by grey willow. The surrounding hillslope has been cleared for farming but small examples of secondary indigenous vegetation have developed on some of the hillslopes adjacent to the wetland. Grazing and trampling are ongoing threats. A duck pond has been created by the construction of a dam which bisects the wetland (Beadel *et al.* 1999a).

Key Site Features This site comprises an example of wetland vegetation and secondary scrub. One At Risk bird species has been recorded from here.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	H
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M

[1] Part of Williams Wetland occurs outside the 'coastal environment' study area (i.e. further than 1 km inland of MHWS).
[2] Identified as SVHZ-138 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	M
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** North Island fernbird (At Risk-Declining) (1999) **Fish:** Inanga (At Risk-Declining) Longfin eel (At Risk-Declining)
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Predominantly indigenous palustrine wetland, and kanuka-mamaku forest.
ii		
iii		
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Williams Wetland (Part) is consistent with Policy 11(b) because it a small example of indigenous wetland and indigenous secondary forest. Palustrine wetlands have been greatly reduced in extent in Taneatua Ecological District. Fernbird (At Risk-Declining) has been recorded at the site in the past and is likely to still be present.

Notes

Identified as a Category 3 Recommended Area for Protection (RAP) in the Taneatua Ecological District Protected Natural Areas Programme report, on the basis of its wildlife habitat values (Beadel *et al.* 1999a).

Identified as SSWI Site No. 4 'Hiwarau Swamp', of 'potential' rank (Rasch 1989b).

References

Rasch 1989b; Beadel *et al.* 1999a; Wildland Consultants 2006g.

OUAKI CREEK WETLANDS

Site Number [1]	162
Grid Reference (NZMG)	E2869645 N6345987
Local Authority	Whakatāne District Council
Ecological District	Taneatua
Protection Status	Unprotected
Site Area	6.1 ha
Altitudinal Range	0-20 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Sea rush tussockland.	Intertidal flat
Estuarine	*Schoenoplectus pungens* sedgeland.	Intertidal flat
Estuarine	Mangrove mudflat.	Intertidal flat
Estuarine	Mudflat.	Intertidal flat
Palustrine	Manuka scrub.	Wetland
Palustrine	Freshwater wetland vegetation. (Beadel 1993c)	Wetland

Vegetation and Indigenous Flora

Sparganium subglobosum is known to occur in freshwater wetland vegetation at this site. This is a species considered to be regionally uncommon in the Bay of Plenty.

Indigenous Fauna

Australasian bittern (Threatened-Nationally Endangered); banded rail (At Risk-Naturally Uncommon), and North Island fernbird (At Risk-Declining) were recorded in 1990 (Owen 1994a). In 2010, banded rail, North Island fernbird and pied stilt (At Risk-Declining) were recorded (Beattie 2011).

Condition/Pressures

Drainage has been modified, adventive weeds on the stopbank are an issue, and pasture drainage and runoff is likely (Beattie 2011).

Key Site Features

The Ouaki Creek Wetlands contain a small and typical example of the estuarine and palustrine vegetation around Ōhiwa Harbour. One regionally uncommon plant species is known from this site, and there are records of one Threatened and three At Risk marshbird species.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M

[1] Identified as SVHZ-139 in Wildland Consultants 2006g and as Ouaki Creek (Site Number 21) in Beattie 2011.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Australasian bittern (Threatened-Nationally Endangered) (1990) Pied stilt (At Risk-Declining) North Island fernbird (At Risk-Declining) Banded rail (At Risk-Naturally Uncommon)
ii	✓	Australasian bittern (Endangered) (1990)
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Sea rush tussockland, *Schoenoplectus pungens* sedgeland, mangrove mudflat, manuka scrub, and indigenous palustrine wetland vegetation.
ii		
iii	✓	Sea rush tussockland, *Schoenoplectus pungens* sedgeland, and mangrove mudflat.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Ouaki Creek Wetlands is consistent with Policy 11(b) because it comprises a relatively small example of an estuarine wetland that is a habitat for Threatened and At Risk avifauna species.

Notes This area is identified by Beattie (2011) as providing 'high' quality habitat for marshbirds: "The inland area has been highly modified, but the rest of the inlet appears well fenced, is a decent size, and human access is limited. There is also good habitat diversity with area of flax and raupo present".

References Beadel 1993c; Beattie 2011; Owen 1994a; Wildland Consultants 2006g.

TORITORI

Site Number [1]	164
Grid Reference (NZMG)	E2871060 N6346992
Local Authority	Whakatāne District Council
Ecological District	Taneatua
Protection Status	Protected (Bay of Plenty Regional Council Land Improvement Agreement)
Site Area	0.2 ha
Altitudinal Range	0-2 m asl
Geology-Landform Type	Sedimentary coast hinterland

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa forest. (Beadel *et al.* 1999a)	Hillslope, terrace

Vegetation and Indigenous Flora

Pohutukawa forest on the edge of Ōhiwa Harbour. A single plant of *Pimelea tomentosa* (Threatened-Nationally Vulnerable) was recorded here in the early 1990s (Beadel *et al.* 1999a), however a thorough search failed to relocate the species during field work in 2012. However the site comprises a seral habitat type (open coastal cliffs) preferred by this species and seed may persist in the seedbank.

Indigenous Fauna

Common bird species were recorded during 2012 field survey. Toritori is in close proximity to Uretara Island and is likely to provide a habitat link from the island to the mainland for a variety of forest birds.

Conditions/Pressures

The small size of this site means that it is highly vulnerable to edge effects and the death of even one large, canopy tree could have a significant effect on the vegetation pattern and species composition within site. Few weed species are present at this site.

Key Site Features

This site is a small example of pohutukawa forest. One individual of a Threatened plant species was recorded here in the early 1990s but was not located in 2012.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	L
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	L

[1] Identified as SVHZ-140 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	L
	3.12	L
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		**Flora:** *Pimelea tomentosa* (Threatened-Nationally Vulnerable) (early 1990s)
ii		
iii		
iv		
v		Locally Significant
vi	✓	Protected (Bay of Plenty Regional Council Land Improvement Agreement)
11(b)		
i	✓	Pohutukawa forest.
ii		
iii	✓	Pohutukawa forest is largely confined to the coastal environment.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Toritori is a very small remnant of pohutukawa forest. Despite its small size, it is consistent with Policy 11(b) because it is a high quality site with an indigenous understorey where one plant of *Pimelea tomentosa* (Threatened-Nationally Vulnerable) was observed in the early 1990s. While no plants were found during a thorough field search in 2012 the site provides a habitat type preferred by this species and plants may occur here intermittently.

Notes Identified as a Category 4 Recommended Area for Protection (RAP) in the Taneatua Ecological District Protected Natural Areas Programme report (Beadel *et al.* 1999a).

References Beadel 1993c; Beadel *et al.* 1999a; Wildland Consultants 1999a; Wildland Consultants 2006g.

URETARA ISLAND

Site Number [1]	166
Grid Reference (NZMG)	E2871778 N6347298
Local Authority	Whakatāne District Council
Ecological District	Taneatua
Protection Status	Protected (Department of Conservation, Uretara Island Scenic Reserve) and unprotected parts
Site Area	122.2 ha
Altitudinal Range	0-20 m asl
Geology-Landform Type	Estuarine
HVES Number	96

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Kanuka forest.	Hillslope
Terrestrial	Rewarewa/kanuka forest.	Hillslope
Terrestrial	Pohutukawa forest (very small areas).	Hillslope
Terrestrial	Black wattle forest.	Hillslope
Terrestrial	Brush wattle scrub.	Hillslope
Terrestrial	Brush wattle-gorse-manuka-bracken scrub and shrubland.	Hillslope
Palustrine	Raupo reedland.	Wetland
Terrestrial	Grassland-herbfield (dominated by adventive species, minor area).	Alluvial plain
Terrestrial/Palustrine	Manuka scrub.	Wetland
Estuarine	Sea rush tussockland.	Intertidal flat
Estuarine	Mangrove scrub and shrubland.	Intertidal flat
Estuarine	Mangrove mudflat.	Intertidal flat
Estuarine	Open water.	Intertidal flat
	(Beadel and Shaw 1988)	

Vegetation and Indigenous Flora

Adelopetalum tuberculatum (At Risk-Naturally Uncommon) was recorded growing epiphytically on rewarewa in 2011 (Wildland Consultants 2011b). *Pimelea tomentosa* (Threatened-Nationally Vulnerable) and New Zealand spinach (Threatened-Naturally uncommon) have been recorded on Uretara Island in the past but were not found during a survey in 2011 (ibid.). *Dianella haematica* (At Risk-Declining), which is not known from anywhere else in the Ecological District, was observed on the Island in 2011 (Sarah Beadel pers. comm. 2012).

The forest canopy is relatively intact and the groundcover and understorey are dense.

Austrostipa stipoides, a regionally uncommon species which reaches its southeastern limit of distribution in Ōhiwa Harbour, is present (Wildland Consultants 2011b). *Olearia solandri* (regionally uncommon) also occurs at this site (Beadel and Shaw 1988).

Indigenous Fauna

A moderately important roost site for shorebirds (Owen *et al.* 2006), part of Ōhiwa Harbour (SSWI No. 2), and an area of outstanding wildlife value. Important bird species include white heron (Threatened-Nationally Critical); Australasian bittern (Threatened-Nationally Endangered); reef heron, Caspian

[1] Identified as SVHZ-141 in Wildland Consultants 2006g and as Uretara Island Scenic Reserve (Site Number 39) in Beattie 2011.

tern (both Threatened-Nationally Vulnerable); banded rail (At Risk-Naturally Uncommon), spotless crake (At Risk-Relict) and North Island fernbird (At Risk-Declining) (Rasch 1989b; Owen 1994a). It is a roosting site for northern New Zealand dotterel (Threatened-Nationally Vulnerable) and variable oystercatcher (At Risk-Recovering) (Owen *et al.* 2006).

In 2010, banded rail, spotless crake, variable oystercatcher, and North Island fernbird were recorded again, and long-tailed cuckoo (At Risk-Naturally Uncommon) was also noted (Beattie 2011).

Condition/Pressures

The vegetation of Uretara Island has been extensively modified by human activity and fire and most of it is secondary vegetation. Possums are present, and are controlled on an ongoing basis by the Department of Conservation (Wildland Consultants 1999a). Pampas, montbretia, ginger, saltwater paspalam, mothplant, fig, tree privet, and Japanese walnut were controlled in 2012 around the old hut site and the eastern side of island (A. Kirk, Department of Conservation, pers. comm. 2012). An infestation of elaeagnus infestation has been worked on over a number of years, including aerial control (ibid). Litter is an issue (Beattie 2011).

Key Site Features

This site contains one of the best examples of mangrove stands in the Ōhiwa Harbour (Beadel *et al.* 1999a), and is also very close to the southern limit of distribution of mangroves. One Threatened, two At Risk and two regionally uncommon plant species are present. Uretara Island is a nationally significant area for birdlife, providing habitat for five Threatened species, five At Risk species, and international migratory waders.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	H
	3.5	H
	3.6	M
Diversity and Pattern	3.7	H
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	H
	3.12	H
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** *Dianella haematica* (At Risk-Declining) *Adelopetalum tuberculatum* (At RiskNaturally Uncommon) **Avifauna:** White heron (Threatened-Nationally Critical) (1989; 1994) Australasian bittern (Threatened-Nationally Endangered) (1989; 1994) Caspian tern (Threatened-Nationally Vulnerable) (1989; 1994) Northern New Zealand dotterel (Threatened-Nationally Vulnerable) Reef heron (Threatened-Nationally Vulnerable) (1989; 1994) North Island fernbird (At Risk-Declining) Spotless crake (At Risk-Relict) Banded rail (At Risk-Naturally Uncommon) Long-tailed cuckoo (At Risk-Naturally Uncommon) Variable oystercatcher (At Risk-Recovering)
ii	✓	Australasian bittern (Endangered) New Zealand dotterel (Endangered)
iii	✓	High quality estuarine wetlands, including of the best areas of mangrove in Ōhiwa Harbour, and a shore bird roosting site.
iv	✓	*Austrostipa stipodes* is at its southern limit of distribution.
v	✓	Nationally Significant
vi	✓	Most of the site is protected (Uretara Island Scenic Reserve, Department of Conservation)
Policy Met:		11(a)
Justification:		Uretara Island is a relatively large, high quality site that is a habitat of several Threatened and At Risk avifauna species and two At Risk plant species. The site is regarded as nationally significant and more than 70% of the site is protected and administered by Department of Conservation. For these reasons, Uretara Island is consistent with Policy 11(a).

Notes

The unprotected parts were identified as a Category 1 Recommended Area for Protection (RAP) in the Taneatua Ecological District Protected Natural Areas Programme report (Beadel *et al.* 1999a).

This area is identified by Beattie (2011) as providing 'high' habitat quality for marshbirds: "Good habitat diversity and a large number of fernbirds, but a number of adventives are present".

References

Beadel 1993c; Beadel 1994a; Beadel 1995a; Beadel *et al.* 1999a; Beadel and Shaw 1988; Beattie 2011; Crisp *et al.* 1990; Owen 1994a; Owen *et al.* 2006; Rasch 1989b; Smale 1993; Wildland Consultants 1999a; Wildland Consultants 2006g; Wildland Consultants 2011b.

HIWARAU (PART)[1]

Site Number [2]	165
Grid Reference (NZMG)	E2871223 N6344663
Local Authority	Ōpōtiki District Council and Whakatāne District Council
Ecological District	Taneatua
Protection Status	Protected (Department of Conservation, Nukuhou Saltmarsh Conservation Area) and unprotected parts
Site Area	336.3 ha
Altitudinal Range	0-160 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium, Sedimentary coast hinterland
HVES Number	94

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Broadleaved species-treefern forest.	Hillslope
Terrestrial	Grey willow forest.	Wetland
Terrestrial	Kanuka-kamahi-forest.	Hillslope
Terrestrial	Pohutukawa forest.	Hillslope
Terrestrial	Rewarewa/kamahi forest.	Hillslope
Terrestrial	Tawa forest.	Hillslope
Terrestrial	Tawa-puriri-mangeao-kohekohe forest.	Hillslope
Terrestrial	Tawa-mangeao forest.	Hillslope
Terrestrial	Mahoe-koromiko-karamu scrub.	Hillslope
Estuarine	Mangrove scrub and shrubland.	Intertidal flat
Terrestrial and palustrine	Manuka scrub and shrubland.	Hillslope, wetland
Terrestrial	Manuka-bracken shrubland.	Hillslope
Palustrine	Manuka/*Gleichenia dicarpa-Machaerina rubiginosa-M. teretifolia* shrubland.	Wetland
Palustrine	Manuka/swamp millet-*Machaerina rubiginosa* grass-shrubland.	Wetland
Terrestrial	Rewarewa-ti kouka-mahoe/manuka treefern - shrubland.	Hillslope
Estuarine	Sea rush tussockland.	Intertidal flat
Estuarine	Saltmarsh ribbonwood shrubland.	Intertidal flat
Estuarine	Oioi-sea rush tussock-sedgeland.	Intertidal flat
Estuarine	Oioi rushland.	Intertidal flat
Riverine	*Bolboschoenus fluviatilis* sedgeland.	River margins
Palustrine	Raupo reedland.	Wetland
Riverine	Bachelor's button-arrow grass herbfield.	River margins
Palustrine	Swamp millet-*Machaerina rubiginosa*-oioi-manuka-swamp coprosma sedgeland.	Wetland
Riverine	Manuka/raupo-*Machaerina rubiginosa*-swamp kiokio-swamp millet sedge-reedland.	River margins
Palustrine	Grey willow/raupo-harakeke-manuka/swamp kiokio forest and reed-flaxland.	Wetland
Estuarine	Tidal flats with seaweed and mangrove. (Beadel *et al.* 1999a)	Intertidal flat
Terrestrial	Indigenous shrubland (restoration planting) (Beattie 2011)	River terraces

[1] Part of Hiwarau occurs outside the 'coastal environment' study area (i.e. further than 1 km inland of MHWS).

[2] Identified as SVHZ-142 in Wildland Consultants 2006g and, as Toritori Point (Site Number 22), Nukuhou River Marshes (Site Number 23) and Nukuhou River Riparian Margins (Site Number 24) in Beattie 2011.

Vegetation and Indigenous Flora

Pimelea tomentosa (Threatened-Nationally Vulnerable) has been recorded at this site in the past and is likely to be still present (although a survey of part of the site in 2011 did not relocate any individuals of this species (Wildland Consultants 2011b)). The plant species diversity of this site is relatively high and contains several species which have either not been recorded from elsewhere in the Ecological District, or have been recorded from only a few other sites in the Ecological District (Beadel 1994a, Beadel *et al.* 1999a).

Plant species considered regionally uncommon and recorded only from this site in the Taneatua Ecological District:

- *Astelia grandis*
- *Tetraria capillaris*
- *Schoenus apogon*
- *Leptinella squalida* subsp. *squalida*

(Beadel 1994, Wildland Consultants 2011b)

Two other regionally uncommon species are present; *Bolboschoenus caldwellii* and *Sparganium subglobosum,* both of which have only been recorded from one other site in the Ecological District (Beadel *et al.* 1993, Wildland Consultants 2011b). *Hierochloe redolens* is also present and this species is not known from any other coastal site in the Bay of Plenty (Beadel 1993).

Epilobium pallidiflorum, Drosera binata, Hydrocotyle pterocarpa and *Nertera scapanioides* are all species present in the site (Beadel 1994a, Wildland Consultants 2011b) and known from only one or two other sites in the Ecological District.

Mangroves reach their southern distribution limit as a community in Ōhiwa Harbour (Crisp *et al.* 1990).

Indigenous Fauna

Australasian bittern (Threatened-Nationally Endangered), banded rail (At Risk-Naturally Uncommon), spotless crake (At Risk-Relict) and North Island fernbird (At Risk-Declining) were recorded in 1990 (Owen 1994a) and again in 2010 (Beattie 2011). Black shag (At Risk-Naturally Uncommon) was also recorded in 2010 (Beattie 2011). Rasch (1989b) recorded white heron (Threatened-Nationally Critical), reef heron, and Caspian tern (both Threatened-Nationally Vulnerable). Owen (1994a) ranked the habitat values of the site as 'Outstanding'. Red-billed gull (Threatened-Nationally Vulnerable), little shag (At Risk-Naturally Uncommon), and little black shag (At Risk-Naturally Uncommon) are also present (K. Owen, Department of Conservation, pers. comm. 2012). There are also common field and forest species and migratory waders such as lesser knots and godwits.

Mangrove communities are important as a nursery for invertebrates and fish, and as feeding sites for birds. The site includes the mouth of Nukuhou River, which is a habitat and migratory pathway of indigenous freshwater fish species, including inanga, longfin eel, redfin bully, kōaro, bluegill bully, shortjaw kōkopu (all of which are At Risk-Declining), common smelt, shortfin eel, giant bully, banded kōkopu, and common bully (Environment Bay of Plenty 2008). Torrentfish (At Risk-Declining) are also present within the Waingarara Stream that flows through the site. There is an inanga (At Risk-Declining) spawning site present (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Ongoing threats include siltation and/or eutrophication from farm runoff

(including upstream areas alongside the Nukuhou River) and physical damage to plant communities by recreational users; mangrove aerial roots are particularly vulnerable to this form of disturbance (Wildland Consultants 1999a). There is a large area of saltwater paspalum on the margins of the river (pers. obs.), with local gorse and blackberry.

Stock intrusion occurs on the eastern side of this site into the Nukuhou Saltmarsh (Beattie 2011). In addition, there is ongoing vegetation clearance of small areas within the site for dwellings and tracks.

Key Site Features

This site includes large estuarine and freshwater wetland contiguous with indigenous forest and the mouth of Nukuhou River, which is a habitat and migratory pathway of indigenous species of freshwater fish. It contains some of the best wetland vegetation in Ōhiwa Harbour; one of the best quality, large examples of mangrove scrub and shrublands in the harbour; and the best remaining example of wetland manuka scrub and shrubland in Taneatua Ecological District. The freshwater wetlands are the best remaining examples in the Taneatua Ecological District. The tall forest on the hillslopes is the largest remaining example of its type contiguous with the harbour. It contains some of the only remnants of primary forest (e.g. tawa-puriri-mangeao-kohekohe forest and tawa-puriri-mangeao-pohutukawa forest), apart from pohutukawa forest, adjacent to the harbour (Beadel *et al.* 1999a). Its large size reduces the vulnerability of the site to adjacent land use practises (farming) common to many natural areas around Ōhiwa Harbour. Two Threatened plant species and seven regionally uncommon plant species are found here. Five Threatened and six At Risk bird species have been recorded at the site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	H
	3.5	H
	3.6	M
Diversity and Pattern	3.7	H
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	H
	3.12	H
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** *Pimelea tomentosa* (Threatened-Nationally Vulnerable) (1993) *Dianella haematica* (At Risk-Declining) **Avifauna:** White heron (Threatened-Nationally Critical) (1989) Australasian bittern (Threatened-Nationally Endangered) Caspian tern (Threatened-Nationally Vulnerable) (1989) Red-billed gull (Threatened-Nationally Vulnerable) Reef heron (Threatened-Nationally Vulnerable) (1989) North Island fernbird (At Risk-Declining) Spotless crake (At Risk-Relict) Banded rail (At Risk-Naturally Uncommon) Black shag (At Risk-Naturally Uncommon) Little black shag (At Risk-Naturally Uncommon) Little shag (At Risk-Naturally Uncommon)
ii	✓	Australasian bittern (Endangered)
iii	✓	Large, high quality complex of estuarine and palustrine wetlands contiguous with indigenous forest. The palustrine wetlands are the best in Taneatua Ecological District.
iv		
v	✓	Nationally Significant
vi		Partially protected (Stewardship Area).
Policy Met:		11(a)
Justification:		Hiwarau (Part) is a large, high quality site that includes the best palustrine wetlands in Taneatua Ecological District and one of the best areas of mangrove-dominant vegetation in Ōhiwa Harbour. It is the only known location in the Ecological District of a suite of wetland species and mangroves reach their southern limit in Ōhiwa Harbour. It is a habitat of a suite of Threatened and At Risk avifauna and is regarded as nationally significant. For these reasons, Hiwarau (Part) is consistent with Policy 11(a). Only a small portion of the site is legally protected.

Notes

Along with Pataua Island, Motuotu Island and Uretara Island, this site contains one of the best examples of mangrove stands in the Ōhiwa Harbour (Beadel *et al.* 1999a). Hiwarau (which includes most of the unprotected parts of the present site) was identified as a Category 1 Recommended Area for Protection (RAP) in the Taneatua Ecological District Protected Natural Areas report (Beadel *et al.* 1999a).

This site was divided into three parts by Beattie (2011):

The Toritori Point portion was described as providing 'high' quality habitat for marshbirds with relatively large numbers of birds, and a wide variety of habitat. Difficult access has resulted in limited human impacts, although the site is relatveily small in size, with weeds encroaching in some ares.

The Nukuhou River Marshes portion was described as providing habitat of 'outstanding' quality for marshbirds, with significant populations present. The habitat is of very high quality. The local care group have been very active with pest control and revegetation activites, further enhancing the ecological significance of this area.

The Nukuhou River Margins portion was described as providing high quality habitat quality for marshbirds, with large bird populations and high ecological values. Large bird population and ecological values have been greatly enhanced through work by the local care group.

References

Beadel 1993c; Beadel 1994a; Beadel 1995a; Beadel *et al.* 1999a; Beattie 2011; Burns and Ogden 1985; Crisp *et al.* 1990; Environment Bay of Plenty 2008; Owen 1994a; Rasch 1989b, Wildland Consultants 2006g; Wildland Consultants 2011b.

HIWARAU POHUTUKAWA

Site Number [1]	167
Grid Reference (NZMG)	E2872180 N6344800
Local Authority	Ōpōtiki District Council
Ecological District	Taneatua
Protection Status	Unprotected
Site Area	3.5 ha
Altitudinal Range	0-20 m asl
Geology-Landform Type	Sedimentary coast hinterland
HVES Number	95

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa forest. (Beadel *et al.* 1999a)	Hillslope

Vegetation and Indigenous Flora This site contains some of the largest diameter pohutukawa seen during a botanical survey of the Ōhiwa Harbour in 1992/1993 (Beadel *et al.* 1999a).

Indigenous Fauna No specific fauna information.

Condition/Pressures In recent years, parts of the site have been cleared for residential development. The site is relatively narrow and is located within farmland. It is not known if the site is fenced to exclude stock.

Key Site Features This small site is distinctive for its large diameter pohutukawa, underneath which there is good quality indigenous understorey vegetation (Beadel *et al.* 1999a).

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	L
	3.3	L
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	L
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

[1] Identified as SVHX-143 in Wildland Consultants 2006g.

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Pohutukawa forest
ii		
iii	✓	Pohutukawa forest is largely confined to the coastal environment.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Hiwarau Pohutukawa is consistent with Policy 11(b) because it comprises an indigenous vegetation type that is largely confined to the coastal environment.

Notes Identified as a Category 4 Recommended Area for Protection (RAP) in the Taneatua Ecological District Protected Natural Areas Programme report (Beadel *et al.* 1999a).

References Beadel 1993c; Beadel *et al.*1999a; Wildland Consultants 2006g.

HIWARAU WETLANDS

Site Number [1]	168
Grid Reference (NZMG)	E2872347 N6344084
Local Authority	Ōpōtiki District Council
Ecological District	Taneatua
Protection Status	Unprotected
Site Area	8.0 ha
Altitudinal Range	0-10 m asl
Geology-Landform Type	Estuarine

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Estuarine wetland.	Intertidal flat
Estuarine	Mangrove shrubland. (Beattie 2011)	Intertidal flat

Vegetation and Indigenous Flora A botanical survey of this site has not been undertaken.

Indigenous Fauna Australasian bittern (Threatened-Naturally Endangered) and North Island fernbird (At Risk-Declining) were recorded in 2011 (Beattie 2011).

Condition/Pressures Reclamation of wetland, rubbish, pest plant species (gorse, wilding pines, blackberry, willow and pampas), recreational users and stock access are threats to this site (Beattie 2011).

Key Site Features This site comprises a tidal inlet, estuarine wetland and associated vegetation on either side of Hiwarau Road. The area provides habitat for one Threatened and one At Risk bird species.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	L
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

[1] Identified as Hiwarau Wetlands (Site Number 25) in Beattie 2011.

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** North Island fernbird (At Risk-Declining) **Unconfirmed report:** Australasian bittern (Threatened-Nationally Endangered)
ii		Unconfirmed: Australasian bittern (Endangered)
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Indigenous estuarine wetland vegetation, including mangroves.
ii		
iii	✓	Indigenous estuarine wetland vegetation.
iv	N/A	
v	✓	The stream mouth may be a migratory pathway for indigenous freshwater fish.
vi		
Policy Met:		11(b)
Justification:		Hiwarau Wetlands is consistent with Policy 11(b) because it is a small area of estuarine wetland where an At Risk bird species has been recorded, and the stream mouth may be a migratory pathway for indigenous freshwater fish. In addition, there is an unconfirmed record of Australasian bittern (Threatened-Nationally Endangered).

Notes This area is identified by Beattie (2011) as providing 'moderate' habitat quality for marshbirds: "Diverse habitat present but recorded bird numbers lower than expected and stock are having a significant impact".

References Beadel 1993c; Beadel *et al.*1999a; Beattie 2011; Wildland Consultants 2006g.

TE AWAWAIROA STREAM

Site Number [1]	170
Grid Reference (NZMG)	E2872927 N6343247
Local Authority	Ōpōtiki District Council
Ecological District	Taneatua
Protection Status	Protected (Department of Conservation, Kutarere Recreation Reserve and Ōhiwa Harbour Marginal Strip) and unprotected parts
Site Area	6.5 ha
Altitudinal Range	0-20 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	*Schoenoplectus pungens* sedgeland.	Intertidal flat
Estuarine	Mangrove scrub and shrubland.	Intertidal flat
Estuarine	Mangrove mudflat.	Intertidal flat
Estuarine	Sea rush tussockland.	Intertidal flat
Palustrine	*Juncus* spp. tussockland[2].	Wetland
Palustrine	Estuary margin vegetation.	Wetland
Palustrine	Freshwater wetland vegetation. (Beadel 1993c)	Wetland

Vegetation and Indigenous Flora

No significant species recorded.

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon) and North Island fernbird (At Risk-Declining) were recorded in 1990 (Owen 1994a) and again in 2010 (Beattie 2011). Caspian tern (Threatened-Nationally Vulnerable) were also recorded in 2010 (Beattie 2011).

Condition/Pressures

In 1990 stock access and weeds (i.e. pampas, grey willow, wattle) were recorded (Owen 1994a):. These pressures remain and rubbish, runoff and drainage issues were also recorded in 2010 (Beattie 2011). Pampas, ginger, barberry and Japanese honeysuckle in the Kutarere Recreation Reserve were controlled in 2012 (A. Kirk, Department of Conservation, pers. comm. 2012). In previous years, willow, poplar and green goddess have also been treated (ibid.).

Key Site Features

Te Awawairoa Stream has modified estuarine and palustrine vegetation typical of Ōhiwa Harbour. Two At Risk and one Threatened marshbird species have been recorded here.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	M

[1] Identified as SVHZ-145 in Wildland Consultants 2006g and as Te Awawairoa Stream (Site Number 26) in Beattie (2011).

[2] Dominated by rushes, including sea rush, *J. effusus* and *J. edgariae*.

Criterion*	RPS Number*	Ranking**
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Caspian tern (Threatened-Nationally Vulnerable) North Island fernbird (At Risk-Declining) Banded rail (At Risk-Naturally Uncommon)
ii		
iii		
iv		
v		Locally Significant
vi		Partially protected (Kutarere Recreation Reserve, Department of Conservation)
11(b)		
i	✓	*Schoenoplectus pungens* sedgeland, mangrove scrub and shrubland, mangrove mudflat, sea rush tussockland, *Juncus* spp. rushland, estuary margin vegetation and freshwater wetland vegetation.
ii		
iii	✓	Estuarine wetland vegetation
iv	N/A	
v	✓	The stream may be a migratory pathway for freshwater fish.
vi		
Policy Met:		11(b)
Justification:		Te Awawairoa Stream is consistent with Policy 11(b) because it is an area of indigenous vegetation that includes vulnerable habitat types which are confined to the coastal environment. Most of the site is not legally protected.

Notes This area is identified by Beattie (2011) as providing habitat of 'moderate' quality for marshbirds: "Area has potential but is currently in poor condition with modified drainage, grazing and litter".

References Beadel 1993c; Beattie 2011; Owen 1994a; Wildland Consultants 2006g.

KUTARERE

Site Number [1]	177
Grid Reference (NZMG)	E2874286 N6342603
Local Authority	Ōpōtiki District Council
Ecological District	Taneatua
Protection Status	Unprotected
Site Area	9.6 ha
Altitudinal Range	0-19 m asl
Geology-Landform Type	Estuarine

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Mangrove scrub and shrubland.	Intertidal flat
Estuarine	Sea rush tussockland.	Intertidal flat
Estuarine	Open water. (Beadel 1993c)	Intertidal flat
Terrestrial	Mixed exotic-indigenous shrubland. (Beattie 2011)	River terraces

Vegetation and Indigenous Flora

This site contains the southernmost mangrove community on the east coast of the North Island (Crisp *et al.* 1990).

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon) were recorded in 1990 (Owen 1994a) and again in 2010 (Beattie 2011). North Island fernbird were recorded in the northwestern part of the site in 2010 (Beattie 2011). Redfin bully, inanga (both At Risk-Declining), common bully, and shortfin eel have been recorded from the Kutarere Stream, which flows through the site (Bloxham 2007).

Condition/Pressures

Issues that were noted in 1990 include restricted fish access at Mudflat Creek culvert, dumping of road spoil, wattle, pampas, and Japanese honeysuckle (Owen 1994a). Weeds, stock access and rubbish were again recorded as issues in 2010 (Beattie 2011).

Key Site Features

This site supports the southernmost mangrove community on the east coast of the North Island. This site has been subject to pressures associated with road construction and maintenance. One At Risk bird species has been recorded from the site.

[1] Identified as SVHZ-146 in Wildland Consultants 2006g and as Papanui Road (Site Number 29) and Kutarere Stream Mouth (Site Number 28) in Beattie (2011).

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	H
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna** North Island fernbird (At Risk-Declining) Banded rail (At Risk-Naturally Uncommon) **Fish:** Inanga (At Risk-Declining) Redfin bully (At Risk-Declining)
ii		
iii		
iv	✓	Southernmost mangrove community on the east coast.
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Mangrove scrub and shrubland, sea rush tussockland, and open water.
ii		
iii	✓	Mangrove scrub and shrubland and sea rush tussockland.
iv	N/A	
v		
vi	✓	The stream mouth may be a migratory pathway for indigenous freshwater fish.
Policy Met:		11(b)
Justification:		Kutarere supports the southernmost mangrove community on the east coast and populations of two At Risk bird species, and the stream may be a migratory pathway for indigenous species of freshwater fish. However, the site is small and modified and, therefore, its overall values are more consistent with Policy 11(b).

Notes

Identified as a Category 2 Recommended Area for Protection (RAP) in the Taneatua Ecological District Protected Natural Areas Programme report (Beadel *et al.* 1999a).

Larger representative examples of Ōhiwa Harbour mangrove communities are present at Uretara Island, Hiwarau, Motuotu Island and Pataua Island, and were all ranked as being of national significance by Beadel *et al.* (1999a).

This site is described by Beattie (2011) as providing 'moderate' quality habitat for marshbirds: "Dense mangroves dominate most of the site with little evidence of birdlife. The other habitat areas are small and often full of weeds and rubbish".

References

Beadel 1993c; Beadel *et al.* 1999a; Beattie 2011; Crisp *et al.* 1990; Owen 1994a; Wildland Consultants 2006g.

STATE HIGHWAY 2

Site Number [1] 182
Grid Reference (NZMG) E2874924 N6342919
Local Authority Ōpōtiki District Council
Ecological District Taneatua (and part Opotiki)
Protection Status Unprotected
Site Area 14.6 ha
Altitudinal Range 0-13 m asl
Geology-Landform Type Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Sea rush tussockland.	Intertidal flats
Palustrine	*Juncus* spp. tussockland[2]. (Beadel 1993c)	Wetland

Vegetation and Indigenous Flora

Bolboschoenus caldwellii (considered to be regionally uncommon) is present.

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon), pied stilt and North Island fernbird (both At Risk-Declining) recorded in 1990 (Owen 1994a). Banded rail, North Island fernbird and pied shag (Threatened-Nationally Vulnerable) were recorded in 2010 (Beattie 2011).

The streams that flow through this site provide fish habitat and passage for migratory fish including longfin eel, redfin bully, inanaga (all At Risk-Declining), common bully, and shortfin eel (Bloxham 2007).

Condition/Pressures

In 1990, stock access, inorganic rubbish dumping, and agricultural run-off were recorded as issues (Owen 1994a). Stock intrusion, litter, and sea couch were recorded in 2010 (Beattie 2011). The site is bounded by roads and pastoral land.

Key Site Features

This moderately large site contains typical estuarine and wetland vegetation in the Ōhiwa Harbour, but is notable for the presence of a regionally uncommon plant species. There are records of one Threatened and three At Risk bird species.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M

[1] Identified as SVHZ-147 in Wildland Consultants 2006g and as State Highway 2 (Overflow Bridge) (Site Number 30) in Beattie 2011.

[2] Dominated by rushes, including sea rush, *J. effusus* and *J. edgariae*.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Pied shag (Threatened-Nationally Vulnerable) North Island fernbird (At Risk-Declining) Pied stilt (At Risk-Declining) (1990) Banded rail (At Risk-Naturally Uncommon)
ii		
iii		
iv		
v		Regionally Significant
vi		Unprotected
11(b)		
i	✓	Sea rush tussockland and *Juncus* spp. tussockland.
ii		
iii	✓	Sea rush tussockland
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		State Highway 2 is a moderate-sized area of predominantly indigenous estuarine wetland that is adversely affected by domestic stock. It is not among the largest or highest quality examples of its type so its values are consistent with Policy 11(b).

Notes

Identified as a Category 4 Recommended Area for Protection (RAP) in the Taneatua Ecological District Protected Natural Areas Programme report (Beadel *et al.* 1999a).

This area is identified by Beattie (2011) as providing 'moderate' habitat quality for marshbirds: "Large area and good amount of rail sign and fernbird numbers but stock are having a large impact and a number of other disturbances are present".

The ecological quality of this site would improve rapidly if the harbour margins were fenced to exclude stock.

References

Beadel 1993c; Beadel *et al.* 1999a; Beattie 2011; Owen 1994a; Wildland Consultants 1999a; Wildland Consultants 2006g.

RUATUNA ROAD EMBAYMENT

Site Number [1]	181
Grid Reference (NZMG)	E2874845 N6343456
Local Authority	Ōpōtiki District Council
Ecological District	Taneatua
Protection Status	Unprotected
Site Area	2.5 ha
Altitudinal Range	0-10 m asl
Geology-Landform Type	Estuarine

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Estuarine wetland. (Beattie 2011)	Intertidal flat

Vegetation and Indigenous Flora

A botanical survey of the site has not been undertaken.

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon), North Island weka (Threatened-Nationally Vulnerable), black shag (At Risk-Naturally Uncommon), and North Island fernbird (At Risk-Declining) were recorded in 2010 (Beattie 2011).

The streams that flow through this site provide fish habitat and passage for migratory fish including longfin eel (At Risk-Declining) and shortfin eel (Bloxham 2007).

Condition/Pressures

Beattie (2011) identified pest plants (e.g. sea couch, wattle, privet), drainage, infrequent stock intrusion and farm run-off as threats to the wetland.

Key Site Features

This is a small estuarine wetland separated from the harbour by Ruatuna Road. It provides habitat for one Threatened and three At Risk bird species.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	L
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

[1] Identified as Ruatuna Road Embayment (Site Number 31) in Beattie 2011.

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** North Island weka (Threatened-Nationally Vulnerable) North Island fernbird (At Risk-Declining) Banded rail (At Risk-Naturally Uncommon) Black shag (At Risk-Naturally Uncommon)
ii	✓	Weka (Vulnerable)
iii		
iv		
v		Locally Significant.
vi		Unprotected.
11(b)		
i	✓	Estuarine vegetation
ii		
iii	✓	Estuarine vegetation
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Ruatuna Road Embayment is consistent with Policy 11(b) because it is a small example of estuarine wetland where three 'At Risk' species have been recorded.

Notes This area is identified by Beattie (2011) as providing 'moderate' habitat quality for marshbirds: "Small, low habitat diversity, dairy shed in close proximity, tidal access limited, prone to edge effect and impacted on by pests, but numerous birds recorded, well fenced and large areas of rushland vegetation in good condition".

References

Beattie 2011

PATAUA ISLAND SCIENTIFIC RESERVE AND EXTENSION

Site Number [1]	176
Grid Reference (NZMG)	E2874011 N6343865
Local Authority	Ōpōtiki District Council
Ecological District	Taneatua
Protection Status	Protected (Department of Conservation, Pataua Island Scientific Reserve) and unprotected parts
Site Area	30.6 ha
Altitudinal Range	0-20 m asl
Geology-Landform Type	Estuarine, Sedimentary coast hinterland

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Kanuka-rewarewa forest.	Hillslope
Terrestrial	Mamaku treefernland.	Hillslope
Terrestrial	*Coprosma* spp.-*Olearia solandri/Machaerina* sedge-shrubland.	Hillslope
Estuarine	Sea rush-oioi-sea couch-*Schoenoplectus pungens*-rushland.	Intertidal flat
Estuarine	Mangrove shrubland. (Clarkson and Regnier 1989; Beadel 1993c)	Intertidal flat

Vegetation and Indigenous Flora

Pimelea tomentosa (Threatened-Nationally Vulnerable), *Carex lambertiana, Olearia solandri*, and *Lophomyrtus bullata* (all considered to be regionally uncommon) are present. *Austrostipa stipoides* (another regionally uncommon species) occurs in the reserve and reaches its southern limit of distribution on the eastern side of the North Island here (Beadel 1993c).

Mangroves are also near their southern limit of distribution on the eastern side of the North Island here.

An interesting record is *Hebe parviflora*, as this species (while not being rare or uncommon) is known from only one other estuary margin wetland within the Bay of Plenty (Tunanui Stream Inlet, also in Ōhiwa Harbour).

Indigenous Fauna

Common field, water and forest bird species, including international migrants such as lesser knots and bar-tailed godwits (Wildland Consultants 1999a). Banded rail (At Risk-Naturally Uncommon) were recorded here in 1990 (Owen 1994a) and in 2010 (Beattie 2011), and variable oystercatcher (At Risk-Recovering) was recorded in 2010 (Beattie 2011).

Other Threatened or At Risk species of avifauna which may utilise this site include Australasian bittern (Threatened-Nationally Endangered, spotless crake (At Risk-Relict) and North Island fernbird (At Risk-Declining).

Mangrove communities are important as a nursery for invertebrates and fish, and as a feeding ground for birds.

Condition/Pressures

In the mid-1980s stock had access to mudflats from the mainland (Clarkson and Regnier 1989). Continued stock access rubbish, and weeds (pampas,

[1] Identified as SVHZ-149 in Wildland Consultants 2006g and as Pataua Island Scenic Reserve (Site Number 32) in Beattie 2011.

wattle, Japanese honeysuckle, grey and crack willow) were recorded in 1990 (Owen 1994a). Rubbish was still an issue in 2010, but it appears that the site is now fenced to stock (Beattie 2011). Weed control was carried out by a contractor in 2012 and included control of an individual hawthorn, wattle, ginger and gorse (A. Kirk, Department of Conservation, pers. comm. 2012).

Key Site Features

The vegetation of Pataua Island and surrounding intertidal flats is of national significance (Beadel 1994a). Two At Risk bird species have been recorded at this site, and several other Threatened or At Risk bird species may use the site (there are records of six Threatened and four At Risk bird species around Ōhiwa Harbour). One Threatened and four regionally uncommon plant species are present at this site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	H
	3.5	M
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	H
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	H
	3.12	H
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** *Pimelea tomentosa* (Threatened-Nationally Vulnerable) **Avifauna:** Banded rail (At Risk-Naturally Uncommon) Variable oystercatcher (At Risk-Recovering)
ii		
iii	✓	High quality sequence of vegetation types from estuarine flats to terrestrial forest.
iv		
v	✓	Nationally Significant
vi	✓	Partially protected (Pataua Island Scientific Reserve).
Policy Met:		11(a)
Justification:		Pataua Island Scientific Reserve and Extension comprises a high quality

Policy	Criteria Met	Explanation
		example of a threatened vegetation sequence that extends from intertidal flats to terrestrial forest. It provides habitat for Threatened and At Risk flora and avifauna and is recognised as being nationally significant. Most of the site is protected as a Scientific Reserve. For these reasons it is consistent with Policy 11(a).

Notes

It contains one Threatened and four regionally uncommon plant species, two species at their distributional limits, and one not found in other estuarine wetlands.

This area is identified by Beattie (2011) as providing 'high' habitat quality for marshbirds: "Outstanding area of habitat by islands with a high number of birds, plant community diversity and good plant cover but the remainder of the site mainly consists of dead mangroves with very little shellfish life which would be poor habitat, although still used by banded rail. This area would also act as a buffer for pests and weeds".

References

Beadel 1993c&d; Beadel 1994a; Beadel 1995a; Beadel *et al.* 1999a; Beattie 2011; Clarkson and Regnier 1989; Owen 1994a; Rasch 1989b; Wildland Consultants 1999a; Wildland Consultants 2006g.

RUATUNA ROAD

Site Number [1] 174
Grid Reference (NZMG) E2873619 N6344518
Local Authority Ōpōtiki District Council
Ecological District Taneatua
Protection Status Unprotected
Site Area 3.4 ha
Altitudinal Range 0 m asl
Geology-Landform Type Estuarine

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Estuarine wetland.	Intertidal flat
Estuarine	Mangrove shrubland. (Beattie 2011)	Intertidal flat

Vegetation and Indigenous Flora A botanical survey of the site has not been undertaken.

Indigenous Fauna Banded rail (At Risk-Naturally Uncommon), and North Island fernbird (At Risk-Declining) were recorded in 2010 (Beattie 2011).

Condition/Pressures Beattie (2011) identified litter, pest plants (e.g. sea couch, wattle, privet, blackberry, pampas, wild ginger, and bamboo), domestic pets, and recreational use as threats to this site.

Key Site Features This site comprises typical Ōhiwa Harbour estuarine vegetation and provides habitat for two At Risk bird species.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	L
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.
** H = High, M = Medium, L = Low.

Significance Level: Local

[1] Identified as Ruatuna Road (Site Number 33) in Beattie 2011.

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** North Island fernbird (At Risk-Declining) Banded rail (At Risk-Naturally Uncommon)
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Mangroves, "rushland".
ii		
iii	✓	Mangrove shrubland.
iv	N/A	
v		
vi	✓	The stream mouth may be a migratory pathway for indigenous freshwater fish.
Policy Met:		11(b)
Justification:		Ruatuna Road is probably consistent with Policy 11(b) because, from study of aerial photographs, it appears to comprise estuarine wetland. Beattie (2011) recorded mangroves, "rushland", "reedland" and cleared oioi and raupo. The stream mouth may be a migratory pathway for indigenous species of freshwater fish, and the site provides habitat for two At Risk bird species.

Notes This area is identified by Beattie (2011) as providing 'moderate' habitat quality for marshbirds: "A thin strip between harbour and dwellings, most of which is constantly inhabited".

References Beattie 2011

STIPA

Site Number [1] 173
Grid Reference (NZMG) E2873416 N6344987
Local Authority Ōpōtiki District Council
Ecological District Taneatua
Protection Status Unprotected
Site Area 1.8 ha
Altitudinal Range 0-17 m asl
Geology-Landform Type Estuarine

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Manuka scrub.	Intertidal flat
Estuarine	Sea rush tussockland.	Intertidal flat
Estuarine	*Austrostipa stipoides/Selliera radicans*-sea couch tussockland.	Intertidal flat
Estuarine	*Samolus repens* herbfield.	Intertidal flat
Estuarine	Glasswort herbfield.	Intertidal flat
Terrestrial	Estuary margin vegetation. (Beadel 1993c)	Dune mound

Vegetation and Indigenous Flora

Austrostipa stipoides[2] reaches its southern limit on the east coast of the North Island in Ōhiwa Harbour (Beadel *et al.* 1999a).

Indigenous Fauna

North Island fernbird (At Risk-Declining) were recorded at this site in 1990 (Owen 1994a) and again in 2010 (Beattie 2011). Banded rail (At Risk-Naturally Uncommon) and variable oystercatcher (At Risk-Recovering) were also recorded in 2010 (Beattie 2011).

Condition/Pressures

Stormwater drains, litter, adventive weeds and human intrusion are all issues recorded in 2010 (Beattie 2011). The landward portions of the site are bounded by residential properties.

Key Site Features

This small site contains one of the largest known populations of Austrostipa stipoides in the Ōhiwa Harbour and also contains good quality examples of saline herbfield (Beadel *et al.* 1999a). Three At Risk bird species have been recorded here.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	M
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M

[1] Identified as SVHZ-150 in Wildland Consultants 2006g and as Ruatuna Road Inlet (Site Number 34) in Beattie 2011.

[2] The scientific name of this species has changed from *Stipa stipoides* to *Austrostipa stipoides* since this site was first identified.

Criterion*	RPS Number*	Ranking**
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** North Island fernbird (At Risk-Declining) Banded rail (At Risk-Naturally Uncommon) Variable oystercatcher (At Risk-Recovering)
ii		
iii	✓	*Austrostipa stipoides* reaches its southeastern limit in Ōhiwa Harbour.
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Manuka scrub, sea rush tussockland, *Austrostipa stipoides/Selliera radicans*-sea couch tussockland, and estuarine herbfields.
ii		
iii	✓	Sea rush tussockland, *Austrostipa stipoides/Selliera radicans*-sea couch tussockland, and estuarine herbfields
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Stipa is a relatively small site but it is an example of estuarine wetland vegetation that includes *Austrostipa stipoides*, a species which reaches its southern limit of distribution in Ōhiwa Harbour, and is also habitat for three At Risk bird species. However, it is not a large or high quality example of its type so its values are consistent with Policy 11(b).

Notes

Identified as a Category 3 Recommended Area for Protection (RAP) in the Taneatua Ecological District Protected Natural Areas Programme report (Beadel *et al.* 1999a).

This site is identified by Beattie (2011) as providing 'moderate' habitat quality for marshbirds: "A number of modifications present".

References

Beadel 1993c; Beadel *et al.* 1996; Beattie 2011; Owen 1994a; Wildland Consultants 1999a; Wildland Consultants 2006g.

HOKIANGA ISLAND

Site Number [1]	171
Grid Reference (NZMG)	E2872965 N6345367
Local Authority	Ōpōtiki District Council
Ecological District	Taneatua
Protection Status	Unprotected
Site Area	12.5 ha
Altitudinal Range	0-15 m asl
Geology-Landform Type	Estuarine, Sedimentary coast hinterland

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Mangrove scrub.	Intertidal flat
Estuarine	Mangrove/sea rush rush-shrubland.	Intertidal flat
Estuarine	Estuarine margin vegetation.	Intertidal flat
Terrestrial	Pohutukawa forest.	Hillslopes, Island
Terrestrial	Indigenous forest and scrub. (Beadel 1993c)	Hillslopes, Island

Vegetation and Indigenous Flora No significant species recorded.

Indigenous Fauna No significant species recorded.

Condition/Pressures Vegetation on the island is a mix of indigenous forest and scrub with patches of grassland that are grazed periodically. There are small buildings on the island that appear to be used as short-term accommodation.

Key Site Features Hokianga Island contains one of the best examples of wetland vegetation around a shell-sandspit in Ōhiwa Harbour (Beadel 1993c).

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	L
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

[1] Identified as SVHZ-151 in Wildland Consultants 2006g.

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Unprotected
vi		Locally Significant
11(b)		
i	✓	Mangrove, sea rush, estuarine margin vegetation, pohutukawa forest and other Indigenous forest and scrub.
ii		
iii	✓	Mangrove, sea rush, estuarine margin vegetation, and pohutukawa forest.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Hokianga Island is consistent with Policy 11(b) because it comprises indigenous vegetation and habitat types. Several of those types are confined to the coastal environment.

Notes

Identified as a Category 4 Recommended Area for Protection (RAP) in the Taneatua Ecological District Protected Natural Areas Programme report (Beadel *et al.* 1999a).

Hokianga Island is of high cultural significance to Māori.

References

Beadel 1993c; Beadel *et al.* 1999a; Wildland Consultants 2006g.

MOTUOTU ISLAND NATURE RESERVE

Site Number [1]	172
Grid Reference (NZMG)	E2873024 N6346553
Local Authority	Ōpōtiki District Council
Ecological District	Taneatua
Protection Status	Protected (Department of Conservation, Motuotu Island Nature Reserve)
Site Area	70.2 ha
Altitudinal Range	0-7 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa/*Olearia solandri*-manuka forest and shrubland.	Sandspit
Terrestrial	Manuka scrub.	Sandspit
Estuarine	Mangrove scrub and shrubland.	Intertidal flat
Estuarine	Sea rush tussockland.	Intertidal flat
Estuarine	Mangrove mudflat.	Intertidal flat
Estuarine	Open water.	Intertidal flat
	(Clarkson and Regnier 1989; Beadel 1993c)	

Vegetation and Indigenous Flora

These mangrove stands are close to the southern limit of distribution of mangrove communities. *Austrostipa stipoides* (a regionally uncommon species) also occurs in the reserve. *A. stipoides* reaches its southern limit of distribution on the eastern side of the North Island in Ōhiwa Harbour (Beadel 1995a). The site includes some of the largest individual mangroves in the Ōhiwa Harbour (Clarkson and Regnier 1989). *Olearia solandri* (a regionally uncommon plant species) is present at this site.

Indigenous Fauna

Common field, forest and wader bird species, including international migrants such as lesser knots and bar-tailed godwits (Wildland Consultants 1999a). It is a moderately important roost site for shorebirds (Owen *et al.* 2006).

Banded rail (At Risk-Naturally Uncommon) and North Island fernbird (At Risk-Declining) were recorded here in 1990 (Owen 1994a) and again in 2010 (Beattie 2011). New Zealand fairy tern (Threatened-Nationally Critical) were recorded here in 2010 (Beattie (2011).

The Ōhiwa Harbour SSWI site (of which Motuotu is a part) is an area of outstanding wildlife value. Important bird species include white heron (Threatened-Nationally Critical); Australasian bittern (Threatened-Nationally Endangered); reef heron, Caspian tern (both Threatened-Nationally Vulnerable); banded rail, spotless crake (At Risk-Relict) and North Island fernbird. The harbour is also a breeding ground for northern New Zealand dotterel, and banded dotterel (both Threatened-Nationally Vulnerable) is also present (Rasch 1989b).

Condition/Pressures

Litter and pest plants (gorse and sea couch) are issues (Beattie 2011). The site may also be subject to erosion or accretion caused by tides, currents, and wind. A rapid inspection of the island April 2012, including placing 20 tracking tunnels for two nights resulted 70% tracking of mice and 10% of rats (A. Kirk, Department of Conservation, pers. comm. 2012). Gorse, wattle

[1] Identified as SVHZ-152 in Wildland Consultants 2006g and as Motuotu Nature Reserve (Site Number 40) in Beattie 2011.

and occasional pampas were observed (ibid.).

Key Site Features

Motuotu Island contains good quality, representative examples of the estuarine vegetation of Ōhiwa Harbour (Beadel 1995a), protected as nature reserve. This site contains one of the best examples of mangrove stands in the Ōhiwa Harbour (Beadel *et al.* 1999a). *Austrostipa stipoides* and mangrove occur near their southern limits of distribution. This site supports two regionally uncommon plant species. There are records of seven Threatened and three At Risk bird species in or near this site. It is uncertain whether all species are present at this site. The site also hosts international migratory wader bird species.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	M
	3.5	M
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	H
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** New Zealand fairy tern (Threatened-Nationally Critical) Banded rail (At Risk-Naturally Uncommon) North Island fernbird (At Risk-Declining) **Provides Habitat For:** White heron (Threatened-Nationally Endangered) Australasian bittern (Threatened-Nationally Endangered) Banded dotterel (Threatened-Nationally Vulnerable) Northern New Zealand dotterel (Threatened-Nationally Vulnerable) Reef heron (Threatened-Nationally Vulnerable) Caspian tern (Threatened-Nationally Vulnerable) Spotless crake (At Risk-Relict)
ii	✓	Fairy tern (Vulnerable)
iii	✓	Relatively large, good quality examples of estuarine vegetation, including one of the best stands of mangrove in Ōhiwa harbour.

Policy	Criteria Met	Explanation
iv	✓	*Austrostipa stipoides* reaches its southeastern limit in Ōhiwa Harbour.
v	✓	Nationally Significant
vi	✓	Protected (Motuotu Island Nature Reserve, Department of Conservation)
Policy Met:		11(a)
Justification:		Motuotu Island is a relatively large, good quality example of estuarine vegetation that is habitat for At Risk avifauna species, and a plant species which reaches its southern limit in Ōhiwa Harbour. It is regarded as being of national significance and is legally protected as a nature reserve. For these reasons its values are consistent with Policy 11(a).

Notes

This reserve was assigned an 'exceptional' botanical conservation rank by Beadel (1995a).

This area is identified by Beattie (2011) as providing 'high' habitat quality for marshbirds: "The area is isolated and the dense surrounding mangroves mean human influence is minimal".

References

Beadel 1993c; Beadel 1995a; Beadel *et al.* 1999a; Beattie 2011; Clarkson and Regnier 1989; Owen 1994a; Rasch 1989b; Owen *et al.* 2006; Wildland Consultants 1999a; Wildland Consultants 2006g.

PUKERURU

Site Number [1]	175
Grid Reference (NZMG)	E2873870 N6345625
Local Authority	Ōpōtiki District Council
Ecological District	Taneatua
Protection Status	Unprotected
Site Area	4.3 ha
Altitudinal Range	1-20 m asl
Geology-Landform Type	Estuarine, Low gradient alluvium

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Grey willow forest.	Wetland
Palustrine	Manuka scrub.	Wetland
Palustrine	Grey willow/manuka scrub.	Wetland
Estuarine	Sea rush tussockland.	Intertidal flat
Estuarine	Oioi rushland. (Beadel 1993c)	Intertidal flat

Vegetation and Indigenous Flora

Austroderia toetoe was recorded at this site, a native grass which is uncommon around Ōhiwa (Beadel *et al.* 1999a).

Indigenous Fauna

North Island fernbird (At Risk-Declining) recorded in 1990 (Owen 1994a) were again recorded in 2010 (Beattie 2011). Banded rail (At Risk-Naturally Uncommon) were also recorded in 2010 (Beattie (2011).

Condition/Pressures

In 1990 weeds such as pampas, wattle, gorse, and blackberry were recorded (Owen 1994a). Weed issues, including saltwater paspalum, were recorded again in 2010 (Beattie 2011).

Key Site Features

This site comprises a small enclosed bay with saltmarsh and manuka scrub, which are in relatively good condition and contiguous with a freshwater wetland (Beadel *et al.* 1999a). The site contains a locally uncommon plant species, and there are two At Risk marshbird species present.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M

[1] Identified as SVHZ-153 in Wildland Consultants 2006g and as Pukeruru Point Inlet (Site Number 28) in Beattie 2011.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** North Island fernbird (At Risk-Declining) Banded rail (At Risk-Naturally Uncommon)
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Manuka scrub, sea rush tussockland, and oioi rushland.
ii		
iii	✓	Sea rush tussockland, and oioi rushland.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Pukeruru is consistent with Policy 11(b) because it is a small example of estuarine and palustrine wetland that comprises predominantly indigenous species. It is a habitat for two At Risk avifauna species.

Notes

Identified as a Category 4 Recommended Area for Protection (RAP) in the Taneatua Ecological District Protected Natural Areas Programme report (Beadel *et al.* 1999a).

This area is identified by Beattie (2011) as providing 'high' habitat quality for marshbirds: "Very healthy fernbird population (based on the number of sightings and no surrounding dwellings). The rail population is likely to be restricted due to limited food availability (few snails were observed) and limited habitat availability (there is a limited range of marginal scrub and mangroves are not present in several areas where oioi grades straight to water)".

References

Beadel 1993c; Beadel *et al.* 1999a; Beattie 2011; Owen 1994a; Wildland Consultants 1999a; Wildland Consultants 2006g.

ŌHIWA SCENIC RESERVE AND SURROUNDS

Site Number [1]	178
Grid Reference (NZMG)	E2874131 N6346183
Local Authority	Ōpōtiki District Council
Ecological District	Taneatua
Protection Status	Protected (Department of Conservation, Ōhiwa Scenic Reserve) and unprotected parts
Site Area	17.5 ha
Altitudinal Range	4-40 m asl
Geology-Landform Type	Estuarine, Sedimentary coast hinterland

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa forest.	Hillslope.
Terrestrial	Pohutukawa/kanuka-mamaku forest.	Hillslope.
Terrestrial	Rewarewa-black wattle-kamahi forest.	Hillslope.
Terrestrial	Mamaku-silver fern treefernland.	Hillslope.
Estuarine	Mangrove/sea rush rush-shrubland.	Intertidal flat.
Estuarine	Sea rush tussockland.	Intertidal flat.
Estuarine	Oioi rushland. (Clarkson and Regnier 1989; Beadel 1993c)	Intertidal flat.

Vegetation and Indigenous Flora

No significant species have been recorded.

Indigenous Fauna

North Island fernbird (At Risk-Declining) and banded rail (At Risk-Naturally Uncommon) were recorded in 1990 (Owen 1994a) and again in 2010 (Beattie 2011). Australasian bittern (Threatened-Nationally Endangered) prints, North Island weka (Threatened-Nationally Vulnerable), and variable oystercatcher (At Risk-Recovering) were observed in 2010 (Beattie 2011).

Condition/Pressures

Tidal flow is at present impeded by the causeway across the mouth of the inlet (Wildland Consultants 1999a, Beattie 2011). Black wattle occurs locally in Ōhiwa Scenic Reserve and blackberry is locally common. Ginger was controlled in the reserve in 2012, and woolly nightshade was reported as being present but was not found (A. Kirk, Department of Conservation, pers. comm. 2012).

Key Site Features

This site includes a good quality, moderately-sized example of pohutukawa forest (a regionally and nationally under-represented vegetation type) contiguous with saltmarsh (Beadel *et al.* 1999a), forming a regionally uncommon ecological sequence. It provides habitat for two Threatened and three At Risk bird species.

[1] Identified as SVHZ-154 in Wildland Consultants 2006g and as Ōhiwa Scenic Reserve Inlet (Site Number 36) in Beattie 2011.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Australasian bittern (Threatened-Nationally Endangered) North Island weka (Threatened-Nationally Vulnerable) North Island fernbird (At Risk-Declining) Banded rail (At Risk-Naturally Uncommon) Variable oystercatcher (At Risk-Recovering)
ii	✓	Australasian bittern (Endangered) Weka (Vulnerable)
iii		
iv		
v		Regionally Significant
vi		Partially protected (Ōhiwa Scenic Reserve, Department of Conservation)
11(b)		
i	✓	Pohutukawa forest, rewarewa-black wattle-kamahi forest, mamaku-silver fern treefernland, mangroves, sea rush, and oioi.
ii		
iii	✓	Estuarine wetlands of mangroves, sea rush, and oioi.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Ōhiwa Scenic Reserve and Surrounds is not a particularly large or high quality site, but it comprises indigenous vegetation that is a habitat for several Threatened and At Risk avifauna species, so its values are consistent with Policy 11(b). Approximately one quarter of the site is legally protected.

Notes

The unprotected part of the site was identified as a Category 3 Recommended Area for Protection (RAP) in the Taneatua Ecological District Protected Natural Areas Programme report (Beadel *et al.* 1999a).

This area is identified by Beattie (2011) as providing 'moderate' habitat quality for marshbirds: "Dwellings, picnic area and road are impacting on area, and hail damage has reduced mangrove cover for rail. Drainage has been modified by road construction. This site was the only location where North Island weka were observed during the survey".

References

Beadel 1993c&d; Beadel *et al.* 1999a; Beattie 2011; Clarkson and Regnier 1989; Owen 1994a; Wildland Consultants 1999a; Wildland Consultants 2006g.

WHANGAKOPIKOPIKO ISLAND

Site Number [1]	180
Grid Reference (NZMG)	E2874363 N6347503
Local Authority	Ōpōtiki District Council
Ecological District	Taneatua
Protection Status	Protected (Department of Conservation, Whangakopikopiko Wildlife Refuge Reserve) and unprotected parts
Site Area	15.6 ha
Altitudinal Range	0 m asl
Geology-Landform Type	Estuarine, Sand

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Sea rush tussockland.	Intertidal flat
Estuarine	Sea rush-oioi/*Selliera radicans*-*Samolus repens* tussockland.	Intertidal flat
Estuarine	*Samolus repens* herbfield.	Intertidal flat
Terrestrial	Manuka shrubland.	Dune and beach sands
Terrestrial	Sea couch-lupin-blackberry-bracken-pohuehue-Yorkshire fog grassland.	Dune and beach sands
Terrestrial	(Kanuka)/sea couch-lupin-blackberry-bracken-pohuehue-Yorkshire fog grassland. (Beadel *et al.* 1999c)	Dune and beach sands

Vegetation and Indigenous Flora

Kunzea 'Thornton' (classed as Threatened-Nationally Vulnerable) is present. One of only two sites that this species occurs at. New Zealand spinach (At Risk-Naturally Uncommon) was recorded on the island in 1996 but was not recorded in 2011 (Wildland Consultants 2011b). Pingao (At Risk-Relict), and sand tussock (At Risk-Declining) were both recorded in 2011 (ibid.). *Olearia solandri*, a regionally uncommon species is present at this site. *Austrostipa stipoides* which reaches its southern limit of distribution on the east coast of the North Island, in Ōhiwa Harbour, was recorded in 2011 (ibid.). This is the only record of sand tussock in the Taneatua Ecological District.

Indigenous Fauna

North Island fernbird (At Risk-Declining) and variable oystercatcher (At Risk-Recovering) were present in 1990 (Owen 1994a) and again in 2010 (Beattie 2011). The dunes are a nesting area for approximately 4 pairs of northern New Zealand dotterel (Threatened-Nationally Vulnerable) (BOPRC 2012), and site is a high tide shorebird roost of moderate importance (Owen *et al.* 2006). Australasian bittern (Threatened-Nationally Endangered), banded rail (At Risk-Naturally Uncommon), red-billed gull (Threatened-Nationally Vulnerable), northern New Zealand dotterel, royal spoonbill (At Risk-Naturally Uncommon), and pied stilt (At Risk-Declining) were also noted in 2010 (Beattie 2011). Black-billed gull (Threatened-Nationally Endangered), red-billed gull (Threatened-Nationally Vulnerable), North Island fernbird (At Risk-Declining), variable oystercatcher (At Risk-Recovering), and banded rail (At Risk-Naturally Uncommon) all breed on the Island (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

The vegetation on the higher parts of the island is highly modified and is dominated by adventive species (i.e. sea couch-lupin-blackberry-bracken-

[1] Identitifed as SVHZ-155 in Wildland Consultants 2006g and as Whangakopikopiko Wildlife Refuge Reserve (Site Number 41) in Beattie 2011.

pohuehue-Yorkshire fog grassland). A few emergent, windshorn Thornton kanuka (3-4 m tall) remain at the western end of the island. Pampas, gorse, lupin, agapanthus, tree privet, hawthorn and blackberry were controlled in 2012 (A. Kirk, Department of Conservation, pers. comm. 2012). Rats, occasional rabbits, and black-backed gulls are controlled (ibid.).

Key Site Features

Whangakopikopiko Island is formed of accumulated sand. The wetland vegetation around the margins is of relatively good quality and includes some of the larger areas of low herbfields in the harbour, (i.e. *Samolus repens* and *Selliera radicans* herbfields). Indigenous species will form the dominant cover on the island if it is left undisturbed (i.e. no fires or clearing of vegetation) (Beadel *et al.* 1999c). One Threatened, three At Risk, two regionally uncommon plant species, one of which reaches its southern limit, are present. This site is regionally important as a breeding area for northern New Zealand dotterel (Threatened). There are records of four Threatened and five At Risk bird species, and the site is used as a high tide roost by migratory wader species.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	M
	3.5	M
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	M
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** Thornton kanuka (Threatened-Nationally Vulnerable) Sand tussock (At Risk-Declining) Pingao (At Risk-Relict) New Zealand spinach (At Risk-Naturally Uncommon) **Avifauna:** Australasian bittern (Threatened-Nationally Endangered) Black-billed gull (Threatened-Nationally Endangered) Northern New Zealand dotterel (Threatened-Nationally Vulnerable)

Policy	Criteria Met	Explanation
		Red-billed gull (Threatened-Nationally Vulnerable) North Island fernbird (At Risk-Declining) Pied stilt (At Risk-Declining) Banded rail (At Risk-Naturally Uncommon) Royal spoonbill (At Risk-Naturally Uncommon) Variable oystercatcher (At Risk-Recovering)
ii	✓	Australasian bittern (Endangered) Black-billed gull (Endangered) New Zealand dotterel (Endangered)
iii	✓	High quality example of estuarine vegetation that includes one the largest herbfields in Ōhiwa Harbour.
iv	✓	Thornton kanuka is endemic to Whakatāne Ecological Region.
v		Regionally Significant
vi		Partially protected (Whangakopikopiko Wildlife Refuge Reserve, Department of Conservation)
Policy Met:		11(a)
Justification:		Whangakopikopiko Island is consistent with Policy 11(a) because it is a good quality example of estuarine vegetation that includes one of the largest areas of herbfield in Ōhiwa Harbour, and is habitat for a suite of Threatened and At Risk avifauna. In addition, it is a breeding site for northern New Zealand dotterel (Threatened-Nationally Vulnerable). Most of the site is legally protected.

Notes

The unprotected parts to the southeast of the reserve were identified as a Category 3 Recommended Area for Protection (RAP) in the Taneatua Ecological District Protected Natural Areas Programme report (Beadel *et al.* 1999a).

This area is identified by Beattie (2011) as providing high quality habitat for marshbirds: "A unique conservation area that holds a good population of fernbird and provides breeding habitat for New Zealand dotterel and other shorebirds. A dedicated care group looks after the island, there is commitment from Department of Conservation, and the island is isolated from pests and people. A rare stand of Thornton kānuka is present, and the site is large in size, legally protected and isolated from many potential threats".

References

Beadel 1993c; Beattie 2011; Owen 1994a; Owen *et al.*2006; Wildland Consultants 2006g; Wildland Consultants 2011b; BOPRC 2012.

UAWHAIPATA ISLAND[1]

Site Number [2] 184
Grid Reference (NZMG) E2874909 N6347076
Local Authority Ōpōtiki District Council
Ecological District Taneatua
Protection Status Unprotected
Site Area 0.6 ha
Altitudinal Range 0 m asl
Geology-Landform Type Estuarine, Sand

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Sea rush-*Machaerina juncea*-sea couch-oioi grass-rushland.	Intertidal flat
Terrestrial	Pohutukawa/*Olearia solandri*-manuka shrubland.	Dune, beach sands
Estuarine	Sea rush tussockland (minor areas).	Intertidal flat
Estuarine	*Machaerina juncea* sedgeland (minor area).	Intertidal flat
Estuarine	Mangrove mudflat. (Beadel 1993c)	Intertidal flat

Vegetation and Indigenous Flora

Olearia solandri (a regionally uncommon plant species) occurs at this site.

Indigenous Fauna

Island margins are used as a high tide roost by waders, marsh birds recorded in 1990 (Owen 1994a). A moderately important roost site for shorebirds (Owen *et al.* 2006).

North Island fernbird (At Risk-Declining) and variable oystercatcher (At Risk-Recovering) recorded in 2010 (Beattie 2011).

Condition/Pressures

Weeds of concern include blackberry (Owen 1994a), gorse, lupin, pampas, and sea couch (Beattie 2011). The site is an island, which affords it some protection from direct, human-induced impacts.

Key Site Features

This small island contains a relatively good quality example of indigenous vegetation, grading from saltmarsh to pohutukawa/*Olearia solandri*-manuka shrubland (Beadel *et al.* 1999a). One regionally uncommon plant species has been recorded here. Some weed pressures have been recorded. The site is used as a high tide roost by migratory wader bird species, and habitat for two At Risk bird species.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	M
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M

[1] Formally known as 'Island Near Whangakopikopiko Island'.
[2] Identified as SVHZ-156 in Wildland Consultants 2006g and as Ōhiwa Loop Road Unnamed Island (Site Number 429) in Beattie 2011.

Criterion*	RPS Number*	Ranking**
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** North Island fernbird (At Risk-Declining) Variable oystercatcher (At Risk-Recovering)
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Estuarine wetlands and pohutukawa/*Olearia solandri*-manuka shrubland.
ii		
iii	✓	Estuarine wetlands and pohutukawa/*Olearia solandri*-manuka shrubland.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		This site is consistent with Policy 11(b) because it is a small site that includes indigenous, coastal vegetation types and it is used as a high tide roost by wading birds, including Threatened and At Risk species.

Notes

Identified as a Category 3 Recommended Area for Protection (RAP) in the Taneatua Ecological District Protected Natural Areas Programme report (Beadel *et al.* 1999a).

This area is identified by Beattie (2011) as providing 'high' habitat quality for marshbirds: "Very small in size and dominated by adventives".

References

Beadel 1993c; Beattie 2011; Owen 1994a; Owen *et al.* 2006; Wildland Consultants 1999a; Wildland Consultants 2006g.

ŌHIWA LOOP ROAD SALTMARSH

Site Number [1] 179
Grid Reference (NZMG) E2874373 N6346798
Local Authority Ōpōtiki District Council
Ecological District Taneatua
Protection Status Unprotected
Site Area 2.2 ha
Altitudinal Range 0-7 m asl
Geology-Landform Type Estuarine

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Manuka shrubland.	Intertidal flat
Estuarine	Manuka-*Olearia solandri* shrubland.	Intertidal flat
Estuarine	Oioi rushland.	Intertidal flat
Estuarine	Sea rush tussockland.	Intertidal flat
Estuarine	Estuary margin vegetation. (Beadel 1993c)	Intertidal flat

Vegetation and Indigenous Flora *Olearia solandri* (a regionally uncommon plant species) occurs at this site.

Indigenous Fauna Banded rail (At Risk-Naturally Uncommon) and North Island fernbird (At Risk-Declining) were recorded in 1990 (Owen 1994a). Banded rail and long-tailed cuckoo (At Risk-Naturally Uncommon) were recorded in 2010 (Beattie 2011).

Condition/Pressures Domestic rubbish dumping, stock access, pampas, and alterations to the natural shoreline were recorded in 1990 (Owen 1994a). Litter, adventive weeds and stock access remained issues in 2010 (Beattie 2011). A hail storm in 2009 reduced the mangrove population (ibid.).

Key Site Features This small site contains a typical local example of intertidal vegetation types. One regionally uncommon plant species and three At Risk bird species have been recorded here.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	M
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M

[1] Identified as SVHZ-157 in Wildland Consultants 2006g and as Ōhiwa Loop Road Spit (Site Number 37) in Beattie 2011.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** North Island fernbird (At Risk-Declining) (1990) Banded rail (At Risk-Naturally Uncommon) Long-tailed cuckoo (At Risk-Naturally Uncommon)
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Manuka shrubland, manuka-*Olearia solandri* shrubland, and estuarine wetland vegetation.
ii		
iii	✓	Manuka shrubland, manuka-*Olearia solandri* shrubland, and estuarine wetland vegetation.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Ōhiwa Loop Road Saltmarsh is consistent with Policy 11(b) because it is an area of indigenous, coastal vegetation that is a habitat of three At Risk bird species. However, it is too small (*c.*1.6 ha) to be consistent with Policy 11(a).

Notes This area is identified by Beattie (2011) as providing habitat of 'moderate' quality for marshbirds: "Very narrow margin of rushes between harbour and residential area. Very little mangroves remaining after hail storm in 2009".

References Beadel 1993c; Beattie 2011; Owen 1994a; Wildland Consultants 2006g.

REEVES ROAD WETLANDS

Site Number [1]	183
Grid Reference (NZMG)	E2874873 N6346050
Local Authority	Ōpōtiki District Council
Ecological District	Taneatua
Protection Status	Protected (Department of Conservation, Ōhiwa Harbour Marginal Strip) and unprotected parts
Site Area	4.8 ha
Altitudinal Range	4-20 m asl
Geology-Landform Type	Estuarine

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Mangrove mudflat.	Intertidal flat
Estuarine	Mangrove/*Schoenoplectus pungens* shrubland.	Intertidal flat
Estuarine	Mangrove scrub.	Intertidal flat
Estuarine	*Schoenoplectus pungens* sedgeland.	Intertidal flat
Estuarine	Sea rush tussockland.	Intertidal flat
Estuarine/Palustrine	Estuary margin vegetation. (Beadel 1993c)	Intertidal flat/wetland

Vegetation and Indigenous Flora

No significant species noted.

Indigenous Fauna

Banded rail (At Risk-Naturally Uncommon) and North Island fernbird (At Risk-Declining) were recorded here in 1990 (Owen 1994a). Banded rail, Australasian bittern (Threatened-Nationally Endangered) and long-tailed cuckoo (At Risk-Naturally Uncommon) were recorded here in 2010 (Beattie 2011).

The streams that flow through this site will provide fish habitat and passage for migratory fish including longfin eel, inanga (both At Risk-Declining), bandede kōkopu, giant bully, and common bully (Bloxham 2007).

Condition/Pressures

In 1990, stock access, and weeds such as wattle, pampas, gorse, wild ginger, and blackberry were recorded (Owen 1994a). Stock access and weed issues remained issues in 2010 (Beattie 2011). This site is cut off from the harbour by Reeves Road.

Key Site Features

This small site is a typical local example of intertidal vegetation types. Along with the suite of pressures common around Ōhiwa Harbour site, this site has been adversely affected by road construction. One Threatened and three At Risk bird species have been recorded here.

[1] Identified as SVHZ-158 in Wildland Consultants 2006g and as Reeves Road Inlet (Site Number 38) in Beattie 2011.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna** Australasian bittern (Threatened-Nationally Endangered) North Island fernbird (At Risk-Declining) (1990) Banded rail (At Risk-Naturally Uncommon) Long-tailed cuckoo (At Risk-Naturally Uncommon)
ii	✓	Australasian bittern (Endangered)
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Mangrove scrub and shrubland, mudflat, *Schoenoplectus pungens* sedgeland, and sea rush tussockland.
ii		
iii	✓	Mangrove scrub and shrubland, mudflat, *Schoenoplectus pungens* sedgeland, and sea rush tussockland.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Reeves Road Wetland is consistent with Policy 11(b) because it is a small example of a coastal ecosystem type and is habitat for Threatened and At Risk avifauna species.

Notes This area is identified by Beattie (2011) as providing habitat of 'moderate' quality for marshbirds: "This site is highly modified around edges with only a narrow margin of rushes and two sides bordered by roads".

References Beadel 1993c; Beattie 2011; Owen 1994a; Wildland Consultants 2006g.

ŌHIWA SPIT

Site Number [1]	188
Grid Reference (NZMG)	E2875155 N6348655
Local Authority	Ōpōtiki District Council
Ecological District	Taneatua (and part Opotiki)
Protection Status	Protected (Department of Conservation, Conservation Area - Old Town of Ōhiwa, Local Purpose Esplanade Reserves and QEII covenants) and unprotected parts
Site Area	32.7 ha
Altitudinal Range	0-8 m asl
Geology-Landform Type	Sand

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial/Estuarine	Spinifex, pampas, lupin, oioi, *Ficinia nodosa* and gorse.	Dune and beach sands
Terrestrial/Marine	Sandfield.	Dune and beach sands
Terrestrial	Pampas-lupin-gorse/spinifex-sea couch shrubland.	Dune and beach sands
Terrestrial	*Carex pumila* sandfield.	Dune and beach sands
Estuarine	(Sea rush)/*Selliera radicans*-*Carex pumila*-*Isolepis cernua*-arrow grass herbfield.	Dune and beach sands
	(Beadel 1993c; Wildland Consultants 1999a)	

Vegetation and Indigenous Flora

No significant species noted.

Indigenous Fauna

Common field and coastal bird species, including waders (Wildland Consultants 1999a). New Zealand fairy tern (Threatened-Nationally Critical) are a very rare visitor. Roosting northern New Zealand dotterel (breeding) (Threatened-Nationally Vulnerable), wrybill, reef heron, Caspian tern, banded dotterel (all Threatened-Nationally Vulnerable); white-fronted tern (At Risk-Declining), and North Island fernbird (At Risk-Declining). Many international migrant waders roost here during summer months, e.g. lesser knot, pacific golden plover, whimbrel and bar-tailed godwit (OSNZ 2006). This spit is one of two principal spring tide shorebird roosts in Ōhiwa Harbour for northern New Zealand dotterel and banded dotterel, variable oystercatcher (At Risk-Recovering) and arctic migrants (Dowding and Moore 2006; Owen *et al.* 2006). Red-billed gull (Threatened-Nationally Vulnerable), pied shag (Threatened-Nationally Vulnerable), little shag (At Risk-Naturally Uncommon), black shag (At Risk-Naturally Uncommon), little black shag (At Risk-Naturally Uncommon), and black-billed gull (Threatened-Nationally Endangered) are also present (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Pampas, lupin and gorse are present in relatively high densities. Sea couch is also present. Physical damage by recreational users is also a problem (Wildland Consultants 1999a). The spit faces natural processes of erosion and accretion (Owen *et al.* 2006).

Key Site Features

Ōhiwa Spit comprises indigenous coastal vegetation of moderate quality, which is degraded by human activity and relatively high pest plant densities. It is of regional significance as a relatively large example of a nationally under-

[1] Identified as SVHZ-159 in Wildland Consultants Contact Report 1345.

represented habitat. There are current records of nine Threatened and six At Risk bird species. It is an important site for a range of migratory waders.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	M
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** New Zealand fairy tern (Threatened-Nationally Critical) Banded dotterel (Threatened-Nationally Vulnerable) Black-billed gull (Threatened-Nationally Vulnerable) Caspian tern (Threatened-Nationally Vulnerable) Northern New Zealand dotterel (Threatened-Nationally Vulnerable) Pied shag (Threatened-Nationally Vulnerable) Red-billed gull (Threatened-Nationally Vulnerable) Reef heron (Threatened-Nationally Vulnerable) Wrybill (Threatened-Nationally Vulnerable) North Island fernbird (At Risk-Declining) White-fronted tern (At Risk-Declining) Black shag (At Risk-Naturally Uncommon) Little black shag (At Risk-Naturally Uncommon) Little shag (At Risk-Naturally Uncommon) Variable oystercatcher (At Risk-Recovering)
ii	✓	Black-billed gull (Endangered) New Zealand dotterel (Endangered) Fairy tern (Vulnerable) Wrybill (Vulnerable)
iii	✓	High quality spring high tide roost that is breeding site for New Zealand dotterel. Best example of its type in Taneatua Ecological District.
iv		
v		Regionally Significant

Policy	Criteria Met	Explanation
vi		Partially protected (Stewardship Area and local purpose reserves)
Policy Met:		11(a)
Justification:		Ōhiwa Spit is consistent with Policy 11(a) because it is one of two principal spring tide roosts in Ōhiwa Harbour and it is a habitat for a large suite of Threatened and At Risk avifauna. New Zealand dotterel (Threatened-Nationally Vulnerable) breed at the site. Only a small proportion of the site is legally protected.

Notes This reserve was given a botanical conservation rank of moderate by Beadel (1995a).

References Beadel 1993c; Beadel 1995a; Dowding and Moore 2006; Wildland Consultants 1999a; OSNZ 2006; Owen *et al.*2006; Wildland Consultants 2006g.

8.4 Ōpōtiki Ecological District

The coastal zone of the Ōpōtiki Ecological District comprises recent coastal alluvial plains and terraces with Pleistocene marine sandstone headlands. Coastal sand dunes which line the coast in most places are dissected by the Waiōtahe, Waioweka and Otara Rivers and the Tirohanga Stream. Small estuaries occur near the mouths of these rivers, the largest being the Waiōtahe Estuary.

Indigenous vegetation in Ōpōtiki Ecological District is now restricted to a few highly modified remnants. In the past the Waiōtahe, Otara and Waioweka flood plains would have supported kahikatea forest (with pukatea and local maire tawake) and freshwater wetlands, but there is now extensive farmland. Estuarine wetlands dominated by sea rush and oioi, and freshwater raupo wetlands would have been more extensive. The coastal dune system would have been dominated by native sand-binders but today adventive species are common in many places, with only limited areas of spinifex and pingao. Pohutukawa, puriri, and karaka would have dominated the hillslopes with small areas of wetland in valley floors.

Northern New Zealand dotterel (Threatened-Nationally Vulnerable) breed at several coastal sites within this Ecological District, and a range of shorebird and marsh bird species are present, some of which are classified as Threatened. The Waioweka River estuary and Waiōtahe River estuary contain inanga (whitebait, At Risk-Declining) spawning areas.

Table 13: Threatened and notable species in the coastal bioclimatic zone of Ōpōtiki Ecological District.

Scientific Name	Common Name	Threat Classification/ Significance[1]
BIRDS		
Threatened		
Egretta alba modesta	white heron	Nationally Critical
Botaurus poiciloptilus	Australasian bittern	Nationally Endangered
Charadrius obscurus aquilonius	northern New Zealand dotterel	Nationally Vulnerable
Charadrius bicinctus bicinctus	banded dotterel	Nationally Vulnerable
Egretta sacra sacra	reef heron	Nationally Vulnerable
Gallirallus australis greyi	North Island weka	Nationally Vulnerable
Larus novaehollandiae scopulinus	red-billed gull	Nationally Vulnerable
Phalacrocorax varius varius	pied shag	Nationally Vulnerable
Sterna caspia	Caspian tern	Nationally Vulnerable
At Risk		
Bowdleria punctata vealeae	North Island fernbird	Declining
Himantopus himantopus leucocephalus	pied stilt	Declining
Porzana pusilla affinis	marsh crake	Relict
Gallirallus philippensis assimilis	banded rail	Naturally Uncommon
Phalacrocorax carbo novaehollandiae	black shag	Naturally Uncommon
Phalacrocorax melanoleucos brevirostris	little shag	Naturally Uncommon
Phalacrocorax sulcirostris	little black shag	Naturally Uncommon
Haematopus unicolor	variable oystercatcher	Recovering
VASCULAR PLANTS		
At Risk		
Ficinia spiralis	pingao	Relict
Tetragonia tetragonioides	New Zealand spinach, kokihi	Naturally Uncommon
Planted		
Euphorbia glauca	New Zealand spurge	Declining

Scientific Name	Common Name	Threat Classification/ Significance[1]
Other Notable Species		
Avicennia marina subsp. *australasica*[2]	mangrove	Distributional Limit (past)
Austrostipa stipoides		Regionally Uncommon
Olearia solandri		Regionally Uncommon
FRESHWATER FISH		
At Risk		
Anguilla dieffenbachii	longfin eel	Declining
Cheimarrichthys fosteri	torrentfish	Declining
Galaxias argenteus	giant kōkopu	Declining
Galaxias brevipinnis	kōaro	Declining
Galaxias maculatus[3]	inanga	Declining
Galaxias postvectis	shortjaw kōkopu	Declining
Gobiomorphus hubbsi	bluegill bully	Declining
Gobiomorphus huttoni	redfin bully	Declining

Notes

[1] Threat classifications and regionally significant evaluations follow de Lange *et al.* 2009, Miskelly *et al.* 2008; Beadel 2009.

[2] Mangroves were present in the estuary until at least 1945, but are now gone.

[3] Spawning sites in several estuaries.

RUATUNA

Site Number [1] 185
Grid Reference (NZMG) E2875100 N6343883
Local Authority Ōpōtiki District Council
Ecological District Opotiki (and part Taneatua)
Protection Status Unprotected
Site Area 7.8 ha
Altitudinal Range 9-80 m asl
Geology-Landform Type Sedimentary coast hinterland

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Kahikatea-black beech forest.	Hillslope
Terrestrial	Pole kahikatea forest.	Alluvial terrace
Terrestrial	Kahikatea-pukatea forest.	Hillslope
Terrestrial	Pukatea-tawa-hard beech-puriri forest.	Hillslope
Terrestrial	Puriri-pukatea-tawa forest.	Hillslope
	(Beadel *et al.* 1999a; Beadel 2003)	

Vegetation and Indigenous Flora No Threatened species were found during a detailed botanical survey (Beadel 2003). However, the occurrence of black beech within the coastal bioclimatic zone is notable.

Indigenous Fauna Kereru use these remnants (Beadel 2003), as well as common forest and field birds.

Condition/Pressures Problem weeds include Japanese honeysuckle, barberry, blackberry, hawthorn, selaginella, black wattle, and privet (Beadel 2003). Subdivision and residential development (on what was formerly farmland) are underway between these remnants. Some areas have been fenced and grazing stock has been excluded for over 10 years (Beadel 2003).

Key Site Features Ruatuna contains small, fragmented remnants of coastal forest (including black beech, hard beech, puriri, kahikatea, and pukatea) that is under-represented in protected areas within the Bay of Plenty coastal zone (Beadel *et al.* 1999a).

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	M
	3.5	L
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	M

[1] Identified as SVHZ-148 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Regionally Significant
vi		Unprotected
11(b)		
i	✓	Kahikatea-black beech forest, kahikatea forest, kahikatea-pukatea forest, pukatea-tawa-hard beech-puriri forest, and puriri-pukatea-tawa forest.
ii		
iii	✓	Forests with pohutukawa and puriri are largely confined to the coastal environment.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Ruatuna is consistent with Policy 11(b) because it comprises indigenous vegetation, including types which are largely confined to the coastal environment.

Notes Identified as a Category 3 Recommended Area for Protection (RAP) in the Taneatua Ecological District Protected Natural Areas Programme report (Beadel *et al.* 1999a).

References Beadel *et al.* 1999a; Owen 1994a; Wildland Consultants 1999a; Beadel 2003; Wildland Consultants 2006g.

ONEKAWA

Site Number [1]	189
Grid Reference (NZMG)	E2875999 N6348053
Local Authority	Ōpōtiki District Council
Ecological District	Ōpōtiki (and part Taneatua)
Protection Status	Protected (QEII covenants) and unprotected parts
Site Area	33.5 ha
Altitudinal Range	6-100 m asl
Geology-Landform Type	Sedimentary coast hinterland

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa-puriri forest.	Hillslope
Terrestrial	(Pohutukawa)/gorse scrub.	Hillslope
Terrestrial	Pohutukawa treeland and forest.	Hillslope
Terrestrial	Manuka-gorse scrub.	Hillslope
Palustrine	Raupo reedland.	Artificial pond
Terrestrial	Secondary scrub and forest.	Hillslope
Terrestrial	Mamaku-(pohutukawa)/kawakawa-taupata-gorse scrub.	Hillslope
Terrestrial	(Pohutukawa)/mamaku-mahoe/kawakawa forest. (Wildland Consultants 1999a, Wildland Consultants 2006g)	Hillslope

Vegetation and Indigenous Flora

No significant species were recorded.

Indigenous Fauna

North Island weka (Threatened-Nationally Vulnerable) has been heard recently (A. Kirk, Department of Conservation, pers. comm. 2012). There is a grey-faced petrel breeding colony at the site (K. Owen, Department of Conservation, pers. comm. 2012). Common forest and coastal birds are present.

Condition/Pressures

Some areas continue to be grazed. Other areas have recently had stock excluded and surrounding pasture is being colonised by manuka-gorse scrub, and there has been some planting. In 2006 Bay of Plenty Regional Council laid poison for possums and rats in the Ōhiwa Reserve.

Key Site Features

Onekawa is a moderate-sized example of coastal forest, which is under-represented in the reserve system in the Taneatua Ecological District. One Threatened bird species has been heard at this site.

[1] Identified as SVHZ-161 in Wildland Consultants 2006g and, a south-western portion, as Ōhiwa Domain (Site Number 44) in Beattie 2011.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	L
	3.10	L
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** North Island weka (Threatened-Nationally Vulnerable)
ii	✓	Weka (Vulnerable)
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Pohutukawa-puriri forest, pohutukawa treeland and forest, manuka scrub, raupo reedland, and indigenous secondary scrub.
ii		
iii	✓	Pohutukawa-puriri forest and pohutukawa treeland and forest.
iv	N/A	
v		
vi	✓	Onekawa may provide a corridor between Ōhiwa Spit, Bryans Beach A, and Waiōtahe Spit.
Policy Met:		11(b)
Justification:		Onekawa is consistent with Policy 11(b) because it is an area of predominantly indigenous vegetation of moderate quality that includes habitat types which are largely confined to the coastal environment. It is part of a discontinuous corridor of indigenous habitats that extends from Ōhiwa Spit to Waiōtahe Estuary. North Island weka (Threatened-Nationally Vulnerable) has recently been recorded at the site.

Notes Identified as a Category 3 Recommended Area for Protection (RAP) in the Taneatua Ecological District Protected Natural Areas Programme report

(Beadel *et al.* 1999a).

A small, southwestern portion of this site is identified by Beattie (2011) as providing habitat of 'moderate' quality for marshbirds: "Very little diversity of habitat is present in the wetland area and altered drainage".

References

Beadel *et al.* 1999a; Wildland Consultants 1999a; Wildland Consultants 2006g.

OSCAR REEVE SCENIC RESERVE AND EXTENSION

Site Number [1]	190
Grid Reference (NZMG)	E2876148 N6346842
Local Authority	Ōpōtiki District Council
Ecological District	Ōpōtiki (and part Taneatua)
Protection Status	Protected (Department of Conservation, Oscar Reeve Scenic Reserve) and unprotected parts
Site Area	18.5 ha
Altitudinal Range	20-96 m asl
Geology-Landform Type	Sedimentary coast hinterland

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa-tawa forest.	Hillslope
Terrestrial	Pohutukawa-puriri-mangeao-rewarewa forest (black wattle common throughout).	Hillslope
Terrestrial	Pohutukawa-puriri-rewarewa-tawa/kohekohe forest.	Hillslope
Terrestrial	Black beech forest.	Ridge
Terrestrial	Hard beech forest.	Ridge
Terrestrial	Black wattle-pohutukawa-brush wattle-silver poplar treeland.	Hillslope
Palustrine	*Carex geminata*-raupo-blackberry reed-sedgeland. (Clarkson and Regnier 1989; Wildland Consultants 1999a)	Wetland

Vegetation and Indigenous Flora

Pimelea tomentosa (Threatened-Nationally Vulnerable) has been recorded within the Scenic Reserve (Clarkson and Regnier 1989).

The vegetation comprises an interesting and distinctive mixture of pohutukawa, puriri, hard beech and black beech (Wildland Consultants 1999a). The hard beech and black beech dominant forest types are locally rare (i.e. in Ōpōtiki District) and are not found in any other Department of Conservation reserves in the Ōpōtiki District (Beadel 1995a).

Indigenous Fauna

Kereru and a range of common forest bird species were recorded in the early 1990s (Beadel *et al.* 1999a).

Condition/Pressures

Within the reserve in late 1980s, there was a moderate to low density of possums and rabbits, old man's beard was present on the eastern boundary, and there were several other problem weed species (Clarkson and Regnier 1989). Most of the same weed species are present today (e.g. black wattle, silver wattle, blackberry, tall fescue, and pampas) but old man's beard has been eradicated from the site. Pampas, tradescantia, woolly nightshade, ginger, wattle, willow and arum lily treated in 2012 as part of an ongoing weed control programme (A. Kirk, Department of Conservation, pers. comm. 2012).

The unprotected forest remnants within this site are fenced off from surrounding farmland but were still being grazed in 1999 (Wildland Consultants 1999a). That may no longer be the case.

[1] Identified as SVHZ-160 in Wildland Consultants 2006g.

Key Site Features This site is notable for its regionally distinctive mixture of pohutukawa, puriri, hard beech, and black beech forest types. One Threatened plant species has been recorded here.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	H
	3.5	M
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** *Pimelea tomentosa* (Threatened-Nationally Vulnerable) (1989)
ii		
iii	✓	Includes forest types that are rare in Ōpōtiki District.
iv		
v		Regionally Significant
vi	✓	Partially protected (Oscar Reeve Scenic Reserve)
Policy Met:		11(a)
Justification:		The values of Oscar Reeve Scenic Reserve and Extension are consistent with Policy 11(a) because several distinctive vegetation types are present that are rare in Ōpōtiki Ecological District, and most of the site is legally protected as a scenic reserve.

Notes The unprotected western and southern remnants were identified as a Category 3 Recommended Area for Protection (RAP) in the Taneatua Ecological District Protected Natural Areas Programme report (Beadel *et al.* 1999a).

References Clarkson and Regnier 1989; Beadel 1995a; Wildland Consultants 1999a; Beadel *et al.* 1999a; Wildland Consultants 2006g.

BRYANS BEACH B

Site Number [1]	191
Grid Reference (NZMG)	E2876305 N6348604
Local Authority	Ōpōtiki District Council
Ecological District	Ōpōtiki
Protection Status	Protected (QEII covenants and Foreshore Local Purpose Reserve[2]) and unprotected parts
Site Area	6.7 ha
Altitudinal Range	0-96 m asl
Geology-Landform Type	Sedimentary coast hinterland
HVES Number	97

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa forest (40%) ⇔ pohutukawa treeland (60%). (Wildland Consultants 1999a)	Hillslope, cliff and terrace.

Vegetation and Indigenous Flora No significant species recorded (Wildland Consultants 1999a).

Indigenous Fauna North Island weka (Threatened-Nationally Vulnerable) heard in 2011 (A. Kirk, Department of Conservation, pers. comm. 2012). Common field and coastal birds (Wildland Consultants 1999a).

Condition/Pressures Damage from recreational users, spread of aggressive weeds (especially kikuyu grass, which suppresses regeneration) and possums are the main threats. The southern margin of the site is bounded by pastoral land.

Key Site Features This site is one of the two best remnants of coastal pohutukawa forest in the Ōpōtiki Ecological District and was given an conservation rank of "Outstanding" in a district-wide study in 1991 (Walls 1991). It also contains a nationally significant geological site. However, given its small size, the pressure from pest plants and recreational beach goers using this site are relatively high. One Threatened bird species has been heard at this site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	M
	3.5	M
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	M

[1] Identified as SVHZ-162 in Wildland Consultants Contract Repott 1345.
[2] This reserve is not managed for conservation purposes.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** North Island weka (Threatened-Nationally Vulnerable)
ii	✓	Weka (Vulnerable)
iii	✓	The best example of pohutukawa forest in Ōpōtiki Ecological District.
iv		
v		Locally Significant
vi		Biodiversity values at the site are not formally protected but part of the site is a local purpose reserve.
Policy Met:		11(a)
Justification:		Bryan's Beach B is consistent with Policy 11(a) because it is one of the two best examples of pohutukawa forest in Ōpōtiki Ecological District and North Island weka, a threatened species, have recently been recorded.

Notes

Coastal cliffs on site are best examples of mid-Pleistocene tephra exposures in eastern Bay of Plenty - nationally important geological features (Kenny and Hayward 1996).

Identified by Beadel *et al.* (1999b) as a Category 1 Natural Heritage Site (large remnant in western part of site only). Vegetation ranked as of District significance in Beadel (1994a).

This site also has high scenic value and includes a major pa site (Wildland Consultants 1999a).

References

Beadel 1994a; Kenny and Hayward 1996; Rasch 1989b; Walls 1991; Wildland Consultants 1999a; Wildland Consultants 2006g.

LOONEY'S REMNANTS (Part)[1]

Site Number [2]	187
Grid Reference (NZMG)	E2875963 N6345999
Local Authority	Ōpōtiki District Council
Ecological District	Ōpōtiki (and part Taneatua)
Protection Status	Unprotected
Site Area	17.4 ha
Altitudinal Range	20-108 m asl
Geology-Landform Type	Sedimentary coast hinterland

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Tawa-(puriri)-(mangeao)-(pohutukawa) forest.	Hillslope, gully
Terrestrial	Puriri-(tawa)-(mangeao) forest.	Hillslope, ridge
Terrestrial	Tawa-(puriri)-(pohutukawa) forest (65%) ⇔ broadleaf species scrub (35%). (Wildland Consultants 2006g and Wildland Consultants 1999a)	Hillslope, ridge

Vegetation and Indigenous Flora No significant species recorded (Wildland Consultants 1999a).

Indigenous Fauna Kereru, and common forest and field birds (Wildland Consultants 1999a).

Condition/Pressures In 1999, none of these remnants were fenced and all areas were grazed by cattle or deer. The larger remnants had a moderate quality understorey in their central, less accessible sections. There were a few weeds beneath the intact native canopy, but brush wattle was becoming prominent in some of the more open areas (Wildland Consultants 1999a). In 2006, Mr Looney confirmed that the areas remain unfenced and grazed but there is no intention to clear them.

Key Site Features This site contains small examples of moderate quality coastal forest and small representative examples of puriri-dominated forest in the coastal zone of the Ōpōtiki Ecological District (Wildland Consultants 1999a). Ongoing grazing represents the major pressure on the natural character of the site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	M

[1] Part of Looney's Remnants occurs outside the 'coastal environment' study area (i.e. further than 1 km inland of MHWS).

[2] Identified as SVHZ-163 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Tawa and puriri-dominant forest (65% of site, also with a pohutukawa component), broadleaf species scrub (35%).
ii		
iii		
iv	N/A	
v		
vi	✓	Forms part of a discontinuous habitat corridor connecting Ōhiwa Harbour with natural areas in the Waiōtahe Valley.
Policy Met:		11(b)
Justification:		Looney's Remnants (Part) contains small examples of moderate quality coastal forest and small representative examples of puriri-dominated forest in the coastal zone of the Ōpōtiki Ecological District. It is consistent with Policy 11(b) and not 11(a) because it is somewhat fragmented and modified by grazing around the margins.

References Wildland Consultants 1999a; Wildland Consultants 2006g.

ONEKAWA FOREST REMNANTS

Site Number [1]	193
Grid Reference (NZMG)	E2876768 N6347320
Local Authority	Ōpōtiki District Council
Ecological District	Ōpōtiki
Protection Status	Unprotected
Site Area	26.2 ha
Altitudinal Range	20-100 m asl
Geology-Landform Type	Sedimentary coast hinterland
HVES Number	100

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Tawa-puriri-pohutukawa forest.	Hillslope and gully.
Terrestrial	Black beech-tawa-kohekohe forest.	Hillslope and gully.
Terrestrial	Pohutukawa/tawa forest.	Hillslope and gully.
	(Wildland Consultants 1999a)	

Vegetation and Indigenous Flora No significant species recorded. Black beech forest is a rare forest type in the Ōpōtiki Ecological District (Wildland Consultants 1999a).

Indigenous Fauna North Island weka (Threatened-Nationally Vulnerable) heard recently (A. Kirk, Department of Conservation, pers. comm. 2012). Kereru, and common field and forest birds (Wildland Consultants 1999a).

Condition/Pressures Grazing by domestic stock, possums and rabbits have been noted (Wildland Consultants 1999a).

Key Site Features The site comprises regionally distinctive forest types including pohutukawa and black beech. It is of moderate size, but is fragmented and subject to grazing pressure. One Threatened bird species has been heard at this site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	M
	3.5	M
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

[1] Identified as SVHZ-164 in Wildland Consultants 2006g.

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** North Island weka (Threatened-Nationally Vulnerable)
ii	✓	Weka (Vulnerable)
iii	✓	One of only a few examples in the region of coastal pohutukawa and black beech forest.
iv		
v		Regionally Significant
vi		Unprotected
Policy Met:		11(a)
Justification:		Onekawa Forest Remnants is consistent with Policy 11(a) because, though the site is not large and has been modified by stock grazing, there are only a few examples of pohutukawa-black beech forest in the Region. North Island weka, a Threatened species, has been heard in this site in recent years.

References Beadel 1994a; Wildland Consultants 1999a; Wildland Consultants 2006g.

BRYANS BEACH A

Site Number [1]	192
Grid Reference (NZMG)	E2876828 N6348187
Local Authority	Ōpōtiki District Council
Ecological District	Ōpōtiki
Protection Status	Protected (QEII covenant) and unprotected parts
Site Area	39.2 ha
Altitudinal Range	4-98 m asl
Geology-Landform Type	Sedimentary coast hinterland

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Tawa-puriri-(pohutukawa) forest.	Terrace, cliff.
Terrestrial	(Pohutukawa)/mahoe-kamahi-mamaku shrubland.	Terrace, cliff.
Terrestrial	Pohutukawa forest.	Terrace, cliff.
Terrestrial	(Pohutukawa)-(ngaio)-(karaka)-(puriri)-(adventive tree species)/gorse-(broadleaf species) scrub. (Wildland Consultants 1999a)	Hillslope, terrace and cliff.

Vegetation and Indigenous Flora

No significant species recorded (Wildland Consultants 1999a).

Indigenous Fauna

North Island weka (Threatened-Nationally Vulnerable) heard in 2011 (A. Kirk, Department of Conservation, pers. comm. 2012). Common field and coastal bird species (Wildland Consultants 1999a).

Condition/Pressures

The site has a high fire risk due to the presence of gorse (a flammable species) and its close proximity to human occupation (Wildland Consultants 1999a). Other threats include domestic pets predating wildlife, exotic trees planted by residents becoming naturalised (e.g. *Banksia integrifolia*, loquat, Moreton Bay fig (*Ficus macrophylla*), Tasmanian blackwood (*Acacia melanoxylon*)) and non-ecosourced native plantings affecting local genetic stock (e.g. variegated pohutukawa, tarata, ngaio).

Key Site Features

This site comprises a moderate-sized example of pohutukawa forest, along with other coastal forest types. The mixed indigenous-exotic forest types present at the site are likely to develop into indigenous forest over time (Wildland Consultants 1999a). This site has high scenic value. One Threatened bird species has been heard at this site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	L
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M

[1] Identified as SVHZ-165 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Ecological Context	3.9	M
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	North Island weka (Threatened-Nationally Vulnerable)
ii	✓	Weka (Vulnerable)
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Tawa-puriri-(pohutukawa) forest, (pohutukawa)/mahoe-kamahi-mamaku shrubland, and pohutukawa forest.
ii		
iii	✓	Pohutukawa forest is largely confined to the coastal environment.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Bryan's Beach A is consistent with Policy 11(b) because it comprises predominantly indigenous vegetation of a type that is largely confined to the coastal environment. In addition, it includes mixed indigenous-exotic vegetation that is likely to develop over time into indigenous forest. North Island weka, a threatened species, were recorded in the area in 2011.

References Wildland Consultants 1999a; Wildland Consultants 2006g.

WAIŌTAHE ESTUARY

Site Number [1]	195
Grid Reference (NZMG)	E2878265 N6347783
Local Authority	Ōpōtiki District Council
Ecological District	Ōpōtiki
Protection Status	Protected (Department of Conservation, Waiōtahe Spit Historic Reserve and Waiōtahe Estuary Scenic Reserve) and unprotected parts
Site Area	112.4 ha
Altitudinal Range	0-19 m asl
Geology-Landform Type	Estuarine, Sand, Low gradient alluvium
HVES Number	98

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Oioi-sea rush tussockland (50%) ⇔ oioi rushland (30%) ⇔ sea rush tussockland (20%).	Intertidal flat
Estuarine	Estuarine mudflats and open water.	Intertidal flat
Terrestrial	(Spinifex) sandfield (15%) ⇔ sandfield (85%).	Sand dune
Estuarine/Palustrine	Raupo-*Machaerina articulata* reedland (15%) ⇔ open water (85%).	Intertidal flat/wetland
Marine	Worm field.	Subtidal channel
Marine	Worm field.	Intertidal flat
Marine	Cockle bed.	Intertidal flat
Marine	Pipi bed.	Subtidal channel
	(Wildland Consultants 1999a; S. Park, BOPRC, pers. comm. 2006; Wildland Consultants 2006g).	

Vegetation and Indigenous Flora

Olearia solandri (not recorded elsewhere in the Ecological District and considered to be regionally uncommon) and pingao (At Risk-Relict) (Wildland Consultants 1999a) have been recorded at the site.

'Where the Waiōtahe River enters the estuary are two small mangroves, the only remnants of the former mangrove forests of the estuary (Daniel 1984). These, and the population in the Waiaua Estuary, are at the south-eastern extreme of the range of mangroves in New Zealand' (Walls 1991).

A few mangroves and tussocks of *Austrostipa stipoides* (considered to be Regionally Common) are present in the saltmarsh areas at the base of the spit (Beadel 2001b). Both these species are near their southern and eastern limits of distribution on the east coast of the North Island. This is the eastern limit of distribution for *Austrostipa stipoides*.

Indigenous Fauna

'The estuarine mudflats are habitat for birds, several fish species and numerous invertebrates, including shellfish. Whitebait spawn in the seawater/ freshwater wedge where the river and streams enter the estuary' (Walls 1991).

Common coastal birds are present, including shags and waders. Important bird species include northern New Zealand dotterel (Threatened-Nationally Vulnerable), reef heron (Threatened-Nationally Vulnerable); banded rail (At Risk-Naturally Uncommon) and North Island fernbird (At Risk-Declining). This natural area includes SSWI Site No. 7 (moderate-high rank) (Rasch 1989b). Variable oystercatcher (At Risk-Recovering), pied shag (Threatened-

[1] Identified as SVHZ-166 in Wildland Consultants 2006g.

Nationally Vulnerable), little shag (At Risk-Naturally Uncommon), and black shag (At Risk-Naturally Uncommon) are present (K. Owen, Department of Conservation, pers. comm. 2012).

Waiōtahe River is a habitat and migratory pathway of indigenous species of freshwater fish including torrentfish, inanga, longfin eel, redfin bully, (all of which are At Risk-Declining), shortfin eel, giant bully, and common bully (Environment Bay of Plenty 2008).

Condition/Pressures

The estuary is surrounded by dairy farms and areas being subdivided for residential housing. Siltation and eutrophication are likely to be issues. Department of Conservation is encouraging a local care group to control saltwater paspalam as part of a BOPRC Biodiversity Site management plan (A. Kirk, Department of Conservation, pers. comm. 2012). There is occasional gorse, tree privet, Japanese walnut, and pampas on the estuary margin, which is controlled annually (ibid.).

Key Site Features

This large, estuarine site contains good quality, representative examples of estuarine wetland and dune communities that are characteristic of the Ōpōtiki Ecological District. These are the best examples of these vegetation types in Ōpōtiki Ecological District (Beadel 1994a). Intensive neighbouring land use ranks as the most significant pressure operating on the estuary environment. One At Risk plant species (pingao) and two regionally uncommon plant species (*Olearia solandri* and *Austrostipa stipoides*) are present. A range of wader bird species are known from this site, including three Threatened and five At Risk species and the river is a habitat and migratory pathway of indigenous species of freshwater fish.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	M
	3.5	H
	3.6	H
Diversity and Pattern	3.7	H
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	H
	3.12	H
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** Pingao (At Risk-Relict) **Avifauna:** Northern New Zealand dotterel (Threatened-Nationally Vulnerable) Pied shag (Threatened-Nationally Vulnerable) Reef heron (Threatened-Nationally Vulnerable) North Island fernbird (At Risk-Declining) Banded rail (At Risk-Naturally Uncommon) Black shag (At Risk-Naturally Uncommon) Little shag (At Risk-Naturally Uncommon) Variable oystercatcher (At Risk-Recovering) **Fish:** Inanga (At Risk-Declining) Longfin eel (At Risk-Declining) Redfin bully (At Risk-Declining) Torrentfish (At Risk-Declining)
ii	✓	New Zealand dotterel (Endangered)
iii	✓	High quality estuarine wetlands.
iv	✓	*Austrostipa stipoides* at eastern limit of distribution.
v		Regionally Significant
vi		Unprotected
Policy Met:		11(a)
Justification:		Waiōtahe Estuary is consistent with Policy 11(a) because it contains the best examples of estuarine vegetation types in Ōpōtiki Ecological District - these are threatened and originally rare coastal ecosystem types. One At Risk plant species, eight Threatened or At Risk bird species, and at least one At Risk fish species (inanga, including spawning areas) are present. *Austrostipa stipoides* reaches its eastern limit of distribution in the estuary and there are historic records of mangrove at its distributional limit.

Notes

This site was given an 'outstanding' conservation rank by Walls (1991), which is equivalent to nationally significant or outstanding within the Ecological District. The vegetation of the estuary was ranked as regionally significant in Beadel (1994a).

References

Beadel 1994a; Beadel 1994b; Beadel 2001b; Daniel 1984; Environment Bay of Plenty 2008; Rasch 1989b; Walls 1991; Wildland Consultants 1999a; Wildland Consultants 2006g.

WAIŌTAHE SPIT

Site Number [1]	194
Grid Reference (NZMG)	E2878281 N6348301
Local Authority	Ōpōtiki District Council
Ecological District	Ōpōtiki
Protection Status	Protected (Department of Conservation, Waiōtahe Spit Scenic Reserves and Waiōtahe Spit Historic Reserves) and unprotected parts
Site Area	35.9 ha
Altitudinal Range	0-18 m asl
Geology-Landform Type	Sand
HVES Number	98

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa forest.	Sand dune
Terrestrial	Bracken-sea couch-ripgut brome fern-grassland.	Sand dune
Terrestrial	Mamaku-mahoe treefernland.	Sand dune
Estuarine	Raupo-*Machaerina articulata* reedland.	Intertidal flat
Estuarine	Sea rush tussockland.	Intertidal flat
Terrestrial	(Spinifex) sandfield.	Sand dune
	(Clarkson and Regnier 1989)	

Vegetation and Indigenous Flora

New Zealand spinach (At Risk-Naturally Uncommon) (Wildland Consultants 1999a) and *Oxalis rubens* (regionally uncommon) are present at this site. A few plants of pingao (At Risk-Relict) were planted at Waiōtahe Spit in the early 1990s; this species would have occurred here naturally in the past (Beadel 1994a).

Indigenous Fauna

The end of the sandspit is the main shorebird roost in the estuary (K. Owen, Department of Conservation, pers. comm. 2010). Important bird species include breeding northern New Zealand dotterel (four pairs, Bridson 2003), reef heron (both Threatened-Nationally Vulnerable), banded rail (At Risk-Naturally Uncommon), and North Island fernbird (At Risk-Declining). Variable oystercatcher (At Risk-Recovering) also roost and breed at this site (K. Owen, Department of Conservation, pers. comm. 2010, BOPRC 2012). Pied shag (Threatened-Nationally Vulnerable) have also been recorded (Richard Gillies, Wildland Consultants, pers. obs. 2010). This natural area includes SSWI Site No. 7 (moderate-high rank) from Rasch (1989b) in Clarkson and Regnier (1989).

Condition/Pressures

There are numerous introduced vascular plant species, i.e. 71 species listed in Beadel (2001b). Iceplant (eastern end), cape ivy, tradescantia, montbretia, ginger, willow, green goddess, pampas, Formosan lily, moth plant, wild grape, gorse, hawthorn, Sydney Golden wattle, acacia, briar rose, broom, brush wattle, Japanese walnut, tree privet and lupin were controlled in 2012 (A. Kirk, Department of Conservation, pers. comm. 2012). Several years of weed work have been undertaken at this site. Cats, mustelids, possums and rodents are present. Department of Conservation and community groups trap mustelids, cats, rats and hedgehogs during northern New Zealand dotterel breeding season. Rabbits have been controlled in recent years by Coast Care with no sign of reinfestation at present (ibid.).

[1] Identified as SVHZ-167 in Wildland Consultants 2006g.

Animal pests include rabbits, dogs and mustelids (Department of Conservation 1995). Recreational activities such as horse riding, motor bikes, and motor vehicles have damaged the fragile dune structure and caused accelerated erosion. Breeding shorebirds e.g. northern New Zealand dotterel are vulnerable to all these types of disturbance.

Key Site Features

This site is one of the largest undeveloped sandspits in the Bay of Plenty Region and contains the best examples of these vegetation types remaining in the Ōpōtiki Ecological District (Beadel 1994a). Two At Risk and one regionally uncommon plant species are present, including pingao which has been reintroduced. The spit supports high numbers of breeding northern New Zealand dotterel (Threatened), while there are records of two other Threatened bird species and three At Risk bird species, as well as migratory waders.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	M
	3.5	H
	3.6	H
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	H
	3.12	M
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** New Zealand spinach (At Risk-Naturally Uncommon) Pingao (At Risk-Relict) (planted) **Fauna:** Northern New Zealand dotterel (Threatened-Nationally Vulnerable) Reef heron (Threatened-Nationally Vulnerable) Pied shag (Threatened-Nationally Vulnerable) Banded rail (At Risk-Naturally Uncommon) North Island fernbird (At Risk-Declining) Variable oystercatcher (At Risk-Recovering)
ii	✓	New Zealand dotterel (Endangered)
iii	✓	High quality sandspit ecosystem that is an important bird roost in the estuary and an important breeding site for northern New Zealand dotterel. Variable

Policy	Criteria Met	Explanation
		oystercatcher also breed here.
iv		
v		Regionally Significant
vi	✓	Partially protected (Waiōtahe Spit Scenic and Historic Reserves, Department of Conservation)
Policy Met:		11(a)
Justification:		Waiōtahe Spit is consistent with Policy 11(a) because it contains the best examples of sand spit vegetation types remaining in the Ōpōtiki Ecological District and it is a habitat for several Threatened and At Risk species. Two At Risk plant species (including a reintroduced species), and three Threatened and three At Risk bird species are present and the spit supports several breeding northern New Zealand dotterel. Almost the entire site is legally protected.

Notes

Ranked by Beadel *et al.* (1999b) as a Category 1 Natural Heritage Site, and ranked 'very high' for botanical conservation values by Shaw (1988a).

'Waiōtahe Spit is one of the few, largely undeveloped sandspits under Crown control in the Ōpōtiki Ecological District and supports a variety of interesting coastal and wetland species. This natural area contains a reasonably well-preserved pa site which has good cover of pohutukawa forest affording some protection from onshore winds' (Clarkson and Regnier 1989).

References

Beadel 1994a; Beadel 2001b; Bridson 2003; Clarkson and Regnier 1989; Department of Conservation 1995; Owen *et al.* 2006; Rasch 1989b; Shaw 1988a; Walls 1991; Wildland Consultants 2006g; BOPRC 2012.

LOWER PAERATA RIDGE (PART)[1]

Site Number [2] 196
Grid Reference (NZMG) E2878874 N6346502
Local Authority Ōpōtiki District Council
Ecological District Ōpōtiki
Protection Status Unprotected
Site Area 4.6 ha
Altitudinal Range 19-80 m asl
Geology-Landform Type Sedimentary coast hinterland

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa/broad-leaved scrub and forest.	Hillslope, gully
Terrestrial	Tawa-puriri-(rewarewa)-(mangeao) forest. (Wildland Consultants 1999a)	Hillslope, gully

Vegetation and Indigenous Flora No significant species have been recorded (Wildland Consultants 1999a).

Indigenous Fauna Kereru and common forest and field birds (Wildland Consultants 1999a).

Condition/Pressures This is a very fragmented site which has been extensively grazed in the past. Weed species are common along margins and on tracks. Problem species include gorse, pampas and radiata pine. The area surrounding the remnants has been subdivided for lifestyle blocks (Wildland Consultants 1999a). From comparison of current and historical aerial photographs, it is apparent that vegetation clearance has occurred in past decade.

Key Site Features This small site contains examples of pohutukawa/broadleaved species and tawa-puriri forest in moderate condition that would have once been widespread in the Ōpōtiki Ecological District (Wildland Consultants 1999a). The natural character of the site has been affected by fragmentation, weeds and previous grazing.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M

[1] Part of Lower Paerata Ridge occurs outside the 'coastal environment' study area (i.e. further than 1 km inland of MHWS).
[2] Identified as SVHZ-168 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Pohutukawa/broad-leaved scrub and forest, and forest dominated by tawa and puriri.
ii		
iii	✓	Pohutukawa scrub is largely confined to the coastal environment.
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Lower Paerata Ridge (Part) is consistent with Policy 11(b) because albeit small, fragmented and modified, it is an example of indigenous vegetation and comprises an ecosystem type that is largely confined to the coastal environment. In addition, it is an example of a vegetation type that would have once been widespread in the Ōpōtiki Ecological District.

References Wildland Consultants 1999a; Wildland Consultants 2006g.

WAIŌTAHE BEACH

Site Number [1]	198
Grid Reference (NZMG)	E2880922 N6348039
Local Authority	Ōpōtiki District Council
Ecological District	Ōpōtiki
Protection Status	Unprotected
Site Area	15.0 ha
Altitudinal Range	0-60 m asl
Geology-Landform Type	Sand, Sedimentary coast hinterland
HVES Number	99

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Puriri-pohutukawa-(radiata pine)-(macrocarpa)-(maritime pine)/mahoe-kawakawa-(kamahi)-(mamaku) forest.	Hillslope, gully
Terrestrial	Mahoe-mamaku scrub and forest.	Hillslope
Terrestrial	Pohutukawa/pasture-gorse-pampas-(radiata pine)-(maritime pine)-(macrocarpa) forest.	Sand dune, cliff, terrace
Terrestrial	Pohutukawa/pasture spp.-(ngaio)-(bracken)-(taupata) forest.	Sand dune, cliff, terrace
Terrestrial/Marine	Sandfield. (Wildland Consultants 2006g and Wildland Consultants 1999a)	Dune and beach sands

Vegetation and Indigenous Flora

No significant species have been recorded.

Indigenous Fauna

Two pairs of northern New Zealand dotterel (Threatened-Nationally Vulnerable) were breeding here over 2002-3 (Bridson 2003). Variable oystercatcher (At Risk-Recovering) is present (K. Owen, Department of Conservation, pers. comm. 2012). The site is dissected by a stream mouth which will provide passage for indigenous freshwater fish species (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Past disturbance from tracking, land clearance, firewood cutting and grazing has opened up the margins of some of the remnants included in this site and allowed adventive weeds to invade. Problem weeds include tradescantia, agapanthus, brush wattle, barberry, gorse, pampas, macrocarpa, maritime pine, and radiata pine (Beadel *et al.* 1999, Wildland Consultants 2006f).

Local community traps mustelids, cats, rats and hedgehogs during northern New Zealand dotterel breeding season (Bridson 2003).

Key Site Features

The large pohutukawa stands present at this site are regionally significant. The site also contains a nationally important geological feature. A wide range of weed species exert pressure on this long, narrow site. Threatened northern New Zealand dotterel breed here in small numbers.

[1] Identified as SVHZ-169 in Wildland Consultants 2006g.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	H
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	H
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Northern New Zealand dotterel (Threatened-Nationally Vulnerable) Variable oystercatcher (At Risk-Recovering)
ii	✓	New Zealand dotterel (Endangered)
iii		
iv		
v		Regionally Significant
vi		Unprotected
11(b)		
i	✓	Pohutukawa-dominant forest
ii	✓	Breeding site for at least two pairs of northern New Zealand dotterel
iii	✓	Pohutukawa-dominant forest
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Waiōtahe Beach meets some of the criteria for Policy 11(a), including the presence of a Threatened bird species, and its pohutukawa stands are regarded as regionally significant. However, it is more consistent with Policy 11(b) because a wide range of weed species exert pressure on this long narrow site.

Notes Coastal cliffs on site are best examples of mid-Pleistocene tephra exposures in eastern Bay of Plenty - nationally important geological features (Kenny and Hayward 1996).

References Beadel 1994a; Beadel *et al.* 1999; Bridson 2003; Walls 1991; Kenny and Hayward 1996; Wildland Consultants 1999a; Wildland Consultants 2006g; Wildland Consultants 2006f.

HUNTRESS CREEK

Site Number [1]	199
Grid Reference (NZMG)	E2885086 N6347136
Local Authority	Ōpōtiki District Council
Ecological District	Ōpōtiki
Protection Status	Protected (DOC, Huntress Creek Conservation Area) and unprotected parts
Site Area	50.3 ha
Altitudinal Range	0-19 m asl
Geology-Landform Type	Sand
HVES Number	109

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Rank pasture (20%)⇔pohuehue-blackberry vineland (35%)⇔bracken fernland (10%)⇔ boxthorn-gorse-(barberry) scrub (35%).	Sand dune
Terrestrial	Rank pasture.	Sand dune
Palustrine	Saltmarsh ribbonwood-harakeke shrubland (50%) ⇔*Baumea articulata-Bolboschoenus fluviatilis*-sea rush-oioi-*Cyperus ustulatus* sedge-reedland (35%) ⇔raupo reedland (5%).	Wetland
Estuarine	*Bolboschoenus fluviatilis* sedgeland (32%)⇔oioi rushland (28%)⇔sea rush tussockland (4%)⇔	Intertidal flat
Estuarine	*Baumea juncea-Samolus repens* herb-sedgeland (3%)⇔oioi-pohuehue vine-sedgeland (3%)⇔open water (30%).	Estuary, intertidal flat
Estuarine	Open water and mud flats (92%)⇔(saltmarsh ribbonwood)/sea rush-oioi reedland (3%)⇔rank pasture (5%)⇔raupo reedland (+).	Estuary, intertidal flat
Estuarine	(Saltmarsh ribbonwood)/*Bolboschoenus fluviatilis*-(oioi)-(sea rush) reedland.	Intertidal flat
Terrestrial	Spinifex-(kikuyu grass)-grassland (55%)⇔kikuyu grass-pohuehue grassland (45%).	Sand dune
Terrestrial	Sandfield.	Sand dune
Terrestrial	Inkweed grassland.	Sand dune
Terrestrial	Lupin shrubland.	Sand dune
Marine	Worm field.	Subtidal channel
Marine	Worm field.	Intertidal flat
Marine	Cockle bed.	Intertidal flat
Marine	Pipi bed.	Subtidal channel
	(Wildland Consultants 2006g; Wildland Consultants1999a; S. Park, BOPRC, pers. comm. 2006).	

Vegetation and Indigenous Flora

Mangroves were present in the estuary until at least 1945 (Daniel 1984), but were not found during a survey in 1999 (Wildland Consultants 1999a). *Olearia solandri*, a regionally uncommon species, was recorded by Walls (1998).

Indigenous Fauna

This site provides a variety of aquatic environments, from freshwater riverine to marine, and is therefore a valuable habitat for native wading birds, fish and invertebrates.

[1] Identified within SVHZ-170 (Waioweka Estuary) in Wildland Consultants 2006g.

Common coastal and wetland bird species including waders are present, and there are nesting/breeding grounds for variable oystercatcher (At Risk-Recovering), Australasian harrier and black-backed gull. Threatened bird species recorded here include Australasian bittern (Threatened-Nationally Endangered); North Island fernbird (At Risk-Declining), marsh crake (At Risk-Relict) and banded rail (At Risk-Naturally Uncommon) (Wildland Consultants 1999a).

Banded dotterel (Threatened-Nationally Vulnerable), pied shag (Threatened-Nationally Vulnerable), black shag (At Risk-Naturally Uncommon), little black shag (At Risk-Naturally Uncommon), and little shag (At Risk-Naturally Uncommon) are present (K. Owen, Department of Conservation, pers. comm. 2012).

This site is adjacent to Waioweka River which is a habitat and migratory pathway of indigenous species of freshwater fish including torrentfish, inanga, longfin eel, redfin bully, bluegill bully, kōaro, shortjaw kōkopu (all of which are At Risk-Declining), banded kōkopu, shortfin eel, giant bully, common smelt, and common bully (Environment Bay of Plenty 2008), and giant kōkopu (At Risk-Declining) (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

This site has a very high density of invasive weed species including tree privet, boxthorn, barberry, lupin, kikuyu grass, moth plant, wild rose, sheep's sorrel, tall fescue, cocksfoot, ryegrass, Yorkshire fog, ragwort, wild broom, and blackberry (Wildland Consultants 1999a). Woolly nightshade, boxthorn and gorse within Huntress Creek Conservation Area were controlled in 2012 (A. Kirk, Department of Conservation, pers. comm. 2012). Rabbit control also occurred in 2012, to protect restoration planting. Greatest threat here is vehicle and motorbike damage (ibid.).

DOC has trapped mustelids, cats, rats and hedgehogs here during the northern New Zealand dotterel breeding season since 1994. The local decline in northern New Zealand dotterel numbers may be related to spit erosion reducing available nesting areas (Bridson 2003 - see 'Hikuwai Beach').

Key Site Features

This large natural area is of regional significance because it contains a diverse range of estuarine, sand dune, and wetland vegetation. It also provides habitat for three Threatened, seven At Risk, and several other wading bird species, and a regionally uncommon plant species. The adjacent river is also a habitat, migratory pathway, and spawning site for indigenous freshwater fish species. Most of the site is subject to pressures that affect the composition of vegetation communities.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	M
	3.5	L
	3.6	H
Diversity and Pattern	3.7	H
Naturalness	3.8	L

Criterion*	RPS Number*	Ranking**
Ecological Context	3.9	M
	3.10	H
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Australasian bittern (Threatened-Nationally Endangered) Banded dotterel (Threatened-Nationally Vulnerable) Pied shag (Threatened-Nationally Vulnerable) North Island fernbird (At Risk-Declining) Variable oystercatcher (At Risk-Recovering) Marsh crake (At Risk-Relict) Banded rail (At Risk-Naturally Uncommon) Black shag (At Risk-Naturally Uncommon) Little black shag (At Risk-Naturally Uncommon) Little shag (At Risk-Naturally Uncommon) **Fish:** Bluegill bully (At Risk-Declining) Giant kōkopu (At Risk-Declining) Inanga (At Risk-Declining) Kōaro (At Risk-Declining) Redfin bully (At Risk-Declining) Shortjaw kōkopu Torrentfish (At Risk-Declining)
ii	✓	Northern New Zealand dotterel (Endangered) Australasian bittern (Endangered) Giant kōkopu (Vulnerable)
iii		
iv		
v		Regionally Significant
vi		Partially protected (Huntress Creek Conservation Area)
11(b)		
i	✓	Spinifex grassland and sea rush-oioi tussockland.
ii		
iii	✓	Spinifex grassland and sea rush-oioi tussockland.
iv	N/A	
v	✓	The adjacent estuary is a migratory pathway for indigenous freshwater fish.
vi		
Policy Met:		11(a)
Justification:		Huntress Creek meets several Policy 11(a) criteria, including presence of three Threatened bird species, seven At Risk bird species, and several At Risk fish species (inanga, as well as inanga spawning areas). It contains a

Policy	Criteria Met	Explanation
		representative range of estuarine, freshwater wetland and sand dune vegetation and habitat types.

Notes Identified by Beadel *et al.* (1999b) as a Category 1 Natural Heritage Site. The Estuary is a popular whitebaiting location.

References Beadel 1994a; Beadel *et al.* 1999b; Bridson 2003; Daniel 1984; DOC 1995; Environment Bay of Plenty 2008; Mitchell 1990; Owen *et al.* 2006; Walls 1991; Wildland Consultants 1999a; Wildland Consultants 2006g.

WAIOWEKA ESTUARY (PART)[1]

Site Number [2] 200
Grid Reference (NZMG) E2885086 N6347136
Local Authority Ōpōtiki District Council
Ecological District Ōpōtiki
Protection Status Protected (Waioweka Local Purpose Reserves; Waioweka River Control Reserve) and unprotected parts
Site Area 152.8 ha
Altitudinal Range 0-19 m asl
Geology-Landform Type Estuarine, Sand, Low gradient alluvium
HVES Number 109

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Rank pasture (20%)⇔pohuehue-blackberry vineland (35%)⇔bracken fernland (10%)⇔ boxthorn-gorse-(barberry) scrub (35%).	Sand dune
Terrestrial	Rank pasture.	Sand dune
Palustrine	Saltmarsh ribbonwood-harakeke shrubland (50%) ⇔*Machaerina articulata-Bolboschoenus fluviatilis*-sea rush-oioi-*Cyperus ustulatus* sedge-reedland (35%) ⇔raupo reedland (5%).	Wetland
Estuarine	*Bolboschoenus fluviatilis* sedgeland (32%)⇔oioi rushland (28%)⇔sea rush tussockland (4%)⇔ *Machaerina juncea-Samolus repens* herb-sedgeland (3%)⇔oioi-pohuehue vine-sedgeland (3%)⇔open water (30%).	Intertidal flat
Estuarine	Open water and mud flats (92%)⇔(saltmarsh ribbonwood)/sea rush-oioi reedland (3%)⇔rank pasture (5%)⇔raupo reedland (1%).	Estuary, intertidal flat
Estuarine	(Saltmarsh ribbonwood)/*Bolboschoenus fluviatilis*-(oioi)-(sea rush) reedland.	Intertidal flat
Terrestrial	Spinifex-(kikuyu grass)-grassland (55%)⇔kikuyu grass-*pohue*hue grassland (45%).	Sand dune
Terrestrial	Crack willow forest and treeland.	Alluvial flat, terrace
Terrestrial	Rank pasture (dominated by tall fescue and Yorkshire fog).	Alluvial flat, terrace
Terrestrial	Blackberry-(*Tradescantia*)-(gorse)-(karamu) vineland.	Alluvial flat, terrace
Estuarine	Sea rush-oioi tussockland.	Alluvial flat, terrace
Terrestrial	Sandfield.	Sand dune
Terrestrial	Inkweed grassland.	Sand dune
Terrestrial	Lupin shrubland.	Sand dune
Terrestrial/Palustrine	Crack willow forest and treeland (40%)⇔tall fescue grassland (40%)⇔blackberry-(tradescantia)-(gorse)-(karamu) vineland.	Alluvial flat
Marine	Worm field.	Subtidal channel
Marine	Worm field.	Intertidal flat
Marine	Cockle bed.	Intertidal flat

[1] Part of Waioweka Estuary occurs outside the 'coastal environment' study area (i.e. further than 1 km inland of MHWS).
[2] Identified as SVHZ-170 in Wildland Consultants 2006g.

Hydrosystem	Vegetation/Habitat Type	Landform
Marine	Pipi bed. (Wildland Consultants 2006g; Wildland Consultants1999a; S. Park, BOPRC, pers. comm. 2006).	Subtidal channel

Vegetation and Indigenous Flora

Mangroves were present in the estuary until at least 1945 (Daniel 1984), but were not found during a survey in 1999 (Wildland Consultants 1999a). *Olearia solandri*, a regionally uncommon species, was recorded by Walls (1998).

Indigenous Fauna

This site provides a variety of aquatic environments, from freshwater riverine to marine, and is therefore a valuable habitat for native wading birds, fish and invertebrates.

Common coastal and wetland bird species including waders are present, and there are nesting/breeding grounds for variable oystercatcher (At Risk-Recovering), Australasian harrier, and black-backed gull.

Banded dotterel (Threatened-Nationally Vulnerable), pied shag (Threatened-Nationally Vulnerable), black shag (At Risk-Naturally Uncommon), little black shag (At Risk-Naturally Uncommon), and little shag (At Risk-Naturally Uncommon) are present (K. Owen, Department of Conservation, pers. comm. 2012).

Numbers of breeding northern New Zealand dotterel (Threatened-Nationally Vulnerable) pairs here have declined from six in 1996 to one in 2003 (Bridson 2003) - see 'Hikuwai Beach'.

The Waiwoeka River is a habitat and migratory pathway of indigenous species of freshwater fish including torrentfish, inanga, longfin eel, redfin bully, bluegill bully, kōaro, shortjaw kōkopu (all of which are At Risk-Declining), banded kōkopu, shortfin eel, giant bully, common smelt, and common bully (Environment Bay of Plenty 2008), and giant kōkopu (At Risk-Declining) (K. Owen, Department of Conservation, pers. comm. 2012). The saltwater/ freshwater zone where the Otara and Waioweka Rivers enter the estuary is an important habitat for whitebait spawning (Walls 1991). Spawning was recorded in 1988, mainly among tidally-inundated tall fescue and Mercer grass (Mitchell 1990).

Condition/Pressures

Cattle and sheep graze most terrestrial vegetation surrounding the Waioweka estuary, penetrating into the marine and freshwater wetlands which form the terrestrial-aquatic interface. Grazing damages indigenous plant communities, allowing the invasion of adventive weed species and affects the vegetation overhanging waterways (whitebait spawning habitat). Stock grazing and trampling were identified as threats to inanga spawning areas in 1988 (Mitchell 1990). Stock may also transport weed propagules. Much of the indigenous vegetation along the estuary margin has been cleared in the past and replaced with exotic pasture or crack willow (Wildland Consultants 1999a).

Proximity to Opotiki township (including the oxidation ponds) and surrounding dairy farming increases the risk of eutrophication (human, animal and fertiliser sources), pesticide run-off, rubbish dumping and sedimentation (Wildland Consultants 1999a).

This site has a very high density of invasive weed species including tree

privet, barberry, lupin, kikuyu grass, moth plant, wild rose, sheep's sorrel, tall fescue, cocksfoot, ryegrass, Yorkshire fog, ragwort, wild broom, and blackberry (Wildland Consultants 1999a).

Key Site Features

This large natural area is of regional significance because it contains a diverse range of estuarine, sand dune, and wetland vegetation. It also provides habitat for three Threatened, four At Risk, and several other wading bird species. The river is also a habitat, migratory pathway, and spawning site for indigenous freshwater fish species. Most of the site is subject to a range of pressures (including pest plants and stock grazing) that affect water quality and the composition of vegetation communities.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	M
	3.5	M
	3.6	H
Diversity and Pattern	3.7	H
Naturalness	3.8	L
Ecological Context	3.9	M
	3.10	H
Viability and Sustainability	3.11	H
	3.12	M
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Banded dotterel (Threatened-Nationally Vulnerable) Northern New Zealand dotterel (Threatened-Nationally Vulnerable) Pied shag (Threatened-Nationally Vulnerable) Variable oystercatcher (At Risk-Recovering) Black shag (At Risk-Naturally Uncommon) Little black shag (At Risk-Naturally Uncommon) Little shag (At Risk-Naturally Uncommon) **Fish:** Bluegill bully (At Risk-Declining) Giant kōkopu (At Risk-Declining) Inanga (At Risk-Declining) Longfin eel (At Risk-Declining) Redfin bully (At Risk-Declining) Torrentfish (At Risk-Declining)

Policy	Criteria Met	Explanation
ii	✓	Northern New Zealand dotterel (Endangered) Australasian bittern (Endangered) Giant kōkopu (Vulnerable)
iii		
iv		
v		Regionally Significant
vi		Partially protected (Huntress Creek Conservation Area; Waioweka Local Purpose Reserves; Waioweka River Control Reserve).
11(b)		
i	✓	Sea rush-oioi tussockland.
ii	✓	The saltwater/freshwater zone where the Otara and Waioweka Rivers enter the estuary is an important habitat for whitebait spawning.
iii	✓	Sea rush-oioi tussockland.
iv	N/A	
v	✓	The estuary is a migratory pathway for indigenous freshwater fish.
vi		
Policy Met:		11(b)
Justification:		Waioweka Estuary (Part) meets several Policy 11(a) criteria, including presence of three Threatened bird species, four At Risk bird species, and one At Risk fish species (inanga, as well as inanga spawning areas). However, although it is relatively large and contains a range of sand dune, estuarine, and freshwater wetland vegetation and habitat types, it is locally modified by stock and weed impacts, and the degree of modification makes it more consistent with Policy 11(b). Other, higher quality estuarine sites in Opotiki Ecological District include Waiōtahe Estuary.

Notes Identified by Beadel *et al.* (1999b) as a Category 1 Natural Heritage Site. The Estuary is a popular whitebaiting location.

References Beadel 1994a; Beadel *et al.* 1999b; Bridson 2003; Daniel 1984; DOC 1995; Environment Bay of Plenty 2008; Mitchell 1990; Owen *et al.* 2006; Walls 1991; Wildland Consultants 1999a; Wildland Consultants 2006g.

HIKUWAI BEACH

Site Number [1]	201
Grid Reference (NZMG)	E2886416 N6347742
Local Authority	Ōpōtiki District Council
Ecological District	Ōpōtiki
Protection Status	Protected (Department of Conservation, Huntress Creek Conservation Area and Hikuwai Beach Local Purpose Reserve) and unprotected parts
Site Area	45.0 ha
Altitudinal Range	0-10 m asl
Geology-Landform Type	Sand

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Lupin-(boxthorn)/rank pasture-(pohuehue)-(inkweed)-(sand) grassland.	Sand dune
Terrestrial	(Boxthorn)/pohuehue-rank pasture vineland.	Sand dune
Terrestrial	Spinifex-(shore bindweed-(kikuyu grass) grassland	Sand dune
Terrestrial	Bracken fernland.	Sand dune
Terrestrial	*Ficinia nodosa*-pohuehue vineland.	Sand dune
Terrestrial	Exotic pasture.	Alluvial plain
	(Wildland Consultants 1999a and current survey)	

Vegetation and Indigenous Flora

No significant species recorded (Wildland Consultants 1999a). New Zealand shore spurge (At Risk-Declining) has been planted in this site.

Indigenous Fauna

Common field and coastal bird species (Wildland Consultants 1999a).

Numbers of breeding northern New Zealand dotterel (Threatened-Nationally Vulnerable) pairs here have declined from six in 1996 to one in 2003 (Bridson 2003) - see 'Waioweka Estuary'. Common field, waterbird and coastal bird species, including pied stilt (At Risk-Declining). Includes SSWI Site No. 26 (potential rank) (Rasch 1989b). Variable oystercatcher (At Risk-Recovering) and North Island weka (Threatened-Nationally Vulnerable) are present (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

The vegetation is relatively degraded and comprises a mixture of indigenous and exotic species. Weeds present the biggest threat to this site. Common, weed species include boxthorn, lupin, blackberry, inkweed, woolly nightshade, gorse and kikuyu grass. Damage from recreational users is also an issue (Wildland Consultants 1999a) and numerous tracks are evident on aerial photographs of the site.

Department of Conservation has trapped mustelids, cats, rats and hedgehogs here during northern New Zealand dotterel breeding season since 1994. The local decline in northern New Zealand dotterel numbers may be related to spit erosion reducing available nesting areas (Bridson 2003 - see 'Waioweka Estuary').

Key Site Features

This is a relatively large site that is substantially modified by weeds and human activity, but has a high restoration potential. The Threatened northern New Zealand dotterel have bred here, but numbers of nesting pairs have

[1] Identified as SVHZ-171 in Wildland Consultants 2006g.

declined recently. It has moderate to high scenic and recreational values (due to its close proximity to Ōpōtiki township).

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	L
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	L
	3.6	H
Diversity and Pattern	3.7	L
Naturalness	3.8	L
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	M
	3.12	L
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** New Zealand shore spurge (At Risk-Declining) (planted) **Avifauna**: Northern New Zealand dotterel (Threatened-Nationally Vulnerable) North Island weka (Threatened-Nationally Vulnerable) Pied stilt (At Risk-Declining) Variable oystercatcher (At Risk-Recovering)
ii	✓	New Zealand dotterel (Endangered) Weka (Vulnerable)
iii		
iv		
v		Locally Significant
vi		Biodiversity values at the site are not formally protected, but part of the site is a local purpose reserve.
11(b)		
i	✓	Spinifex grassland
ii	✓	Breeding site of northern New Zealand dotterel.
iii	✓	Spinifex grassland
iv	N/A	
v		
vi	✓	Links the mouth of Waioweka Estuary to Tirohanga Dunes and Wetland.
Policy Met:		11(b)
Justification:		Hikuwai Beach is a relatively large site that is substantially modified by weeds

Policy	Criteria Met	Explanation
		and human activity. It is consistent with Policy 11(b) because it comprises an ecosystem type that is predominantly indigenous and is confined to the coastal environment. In addition, it is a known breeding site for a Threatened bird species, northern New Zealand dotterel.

Notes This site was not identified as significant vegetation in Beadel (1994a); however Walls (1991) gave it an overall conservation rank of 'high' (and put emphasis on its restoration potential).

References Bridson 2003; Beadel 1994a; Walls 1991; Rasch 1989b; Wildland Consultants 1999a; Wildland Consultants 2006g.

TE MATAU (PART)[1]

Site Number [2]	202
Grid Reference (NZMG)	E2888325 N6347234
Local Authority	Ōpōtiki District Council
Ecological District	Ōpōtiki
Protection Status	Unprotected
Site Area	4.4 ha
Altitudinal Range	18-40 m asl
Geology-Landform Type	Sedimentary coast hinterland

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa-puriri-karaka forest. (Wildland Consultants 1999a)	Steep hillslope

Vegetation and Indigenous Flora No significant species recorded (Wildland Consultants 1999a).

Indigenous Fauna Common field and coastal bird species (Wildland Consultants 1999a).

Condition/Pressures This forest remnant does not appear to be fenced and is probably grazed. Several puriri are showing signs of dieback. There are a few small erosion scars and some tall planted eucalyptus within the site. Several invasive weed species are present, including wild ginger, Chinese privet, tree privet, radiata pine, wattle spp., gorse, blackberry, and barberry.

Key Site Features This is a small area comprising one of the few remaining examples of coastal pohutukawa forest in Ōpōtiki Ecological District (Wildland Consultants 1999a). It is threatened by grazing and weed impacts.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	L
	3.3	L
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	L
	3.10	M
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

[1] Part of Te Matau occurs outside the 'coastal environment' study area (i.e. further than 1 km inland of MHWS).

[2] Identified as SVHZ-172 in Wildland Consultants 2006g.

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Pohutukawa-puriri-karaka forest
ii		
iii	✓	Pohutukawa-puriri-karaka forest
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Te Matau is consistent with Policy 11(b) because it contains a predominantly indigenous coastal vegetation type (pohutukawa-puriri-karaka forest), and is one of a few such examples remaining in Ōpōtiki Ecological District, albeit not the largest or highest quality example.

Notes Identified as coastal vegetation of local significance in Beadel (1994a).

References Beadel 1994a; Wildland Consultants 1999a; Wildland Consultants 2006g.

TIROHANGA DUNES AND WETLAND

Site Number [1]	204
Grid Reference (NZMG)	E2892506 N6348027
Local Authority	Ōpōtiki District Council
Ecological District	Ōpōtiki
Protection Status	Protected (Department of Conservation, Tirohanga Dunes Conservation Area and Tirohanga Recreation Reserve) and unprotected parts
Site Area	61.7 ha
Altitudinal Range	0-15 m asl
Geology-Landform Type	Sand

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Spinifex grassland.	Sand dune
Terrestrial	Lupin-boxthorn/pohuehue-bracken-blackberry-pasture species fern-vineland.	Sand dune
Terrestrial	Gorse-boxthorn scrub.	Sand dune
Terrestrial	(Gorse)/rank pasture-(blackberry) grassland.	Sand dune
Terrestrial	Bracken fernland.	Sand dune
Terrestrial	*Ficinia nodosa*-pohuehue vineland.	Sand dune
Terrestrial	Pohuehue vineland.	Sand dune
Terrestrial	Kikuyu grass grassland.	Sand dune
Palustrine	Raupo reedland.	Wetland
Palustrine	Open water.	Wetland
Palustrine	Pampas tussockland.	Wetland
Palustrine	Grey willow scrub.	Wetland
	(Wildland Consultants 1999a)	

Vegetation and Indigenous Flora

Scattered pohutukawa (Wildland Consultants 1999a). Shore spuge (At Risk-Declining) has been planted in this site.

Indigenous Fauna

One pair of breeding northern New Zealand dotterel (Threatened-Nationally Vulnerable) (Bridson 2003) and variable oystercatcher (At Risk-Recovering) (K. Owen, Department of Conservation, pers. comm. 2010). Common field and coastal bird species. It is likely that this area harbours many native invertebrates and lizards (Walls 1991). Tirohanga Stream is likely to be a habitat and a migratory pathway for a suite of indigenous freshwater fish. North Island weka (Threatened-Nationally Vulnerable) are present (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Grazing by domestic stock, spread of aggressive weed species and recreational damage (both physical and indirect, e.g. by fire) represent the biggest threats to this site.

The wetland is currently in very poor condition (weed infested and eutrophic), and is protected only partially from grazing stock by a single-wire standard fence.

Walls (1991) previously noted a small number of marram plants on the dunes; the site should be regularly inspected for reinvasion as this species can cause dramatic change to foredune areas (Wildland Consultants 1999a).

The local community traps mustelids, cats, rats and hedgehogs during northern New Zealand dotterel breeding season (Bridson 2003).

[1] Identified as SVHZ-173 in Wildland Consultants 2006g.

Within the Tirohanga Dunes Conservation Area, boxthorn, gorse, tree privet, Madeira vine, ice plant, montbretia, Japanese honeysuckle, periwinkle, Formosan lily, poplar, pampas, agapanthus, bamboo, euphorbia, tree mallow, German ivy, banksia, blackberry, velvet groundsel, wilding pine, climbing dock, and willow were controlled in 2012 as part of an ongoing weed control programme throughout the site (A. Kirk, Department of Conservation, pers. comm. 2012). Other weeds present which require control include giant reed grass, yucca, agapanthus, woolly nightshade, kikuyu grass, and marram. Rabbit control has also occurred at this site over the past three years around restoration planting areas (ibid.).

Some vegetation clearance has been undertaken in Tirohanga Dunes Conservation Area in association with construction of the Motū cycle track (A. Kirk, Department of Conservation, pers. comm. 2012).

Key Site Features

North Island weka are present (K. Owen, Department of Conservation, pers. comm. 2012). This site contains sand dune and dune wetland vegetation of moderate to degraded quality. However, these habitats are part of a long sweep of duneland which affords good opportunities for restoration. This long, narrow site is vulnerable to a range of pressures, including pest plants and grazing. Tirohanga is a breeding area for the Threatened northern New Zealand dotterel and the At Risk variable oystercatcher.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	L
	3.5	M
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	L
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	M
	3.12	L
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** New Zealand shore spurge (At Risk-Declining) (planted) **Avifauna:** Northern New Zealand dotterel (Threatened-Nationally Vulnerable)

Policy	Criteria Met	Explanation
		North Island weka (Threatened-Nationally Vulnerable) Variable oystercatcher (At Risk-Recovering)
ii	✓	New Zealand dotterel (Endangered) Weka (Vulnerable)
iii		
iv		
v		Locally Significant
vi	✓	Partially protected (Tirohanga Dunes Conservation Area, Department of Conservation)
11(b)		
i	✓	Spinifex grassland, bracken fernland, pohuehue vineland, and raupo reedland.
ii	✓	Breeding site of northern New Zealand dotterel.
iii	✓	Spinifex grassland and pohuehue vineland.
iv	N/A	
v	✓	Tirohanga Stream is likely to be a migratory pathway for indigenous freshwater fish.
vi	✓	Provides a link between Omaramutu and Hikuwai Beach.
Policy Met:		11(b)
Justification:		Tirohanga Dunes and Wetland is consistent with Policy 11(b) because it provides breeding habitat for Threatened and At Risk bird species (on a small scale that does not meet Policy 11(a)), and contains areas of predominantly indigenous vegetation, mostly on vulnerable sand dune habitats that are restricted to the coastal zone. However, they are not high quality examples of their types, and therefore do not meet Policy 11(a).

Notes

'Despite its highly modified nature, the vegetation on the dunes, especially in the eastern section, retains a strong native element in the pohuehue, bracken and spinifex' (Walls 1991).

Walls (1991) gave both the dunes and wetland conservation ranks of 'high', and emphasized the potential for restoration which the sites afforded. This site also has exceptional scenic, recreational, and cultural (pa and urupa sites) values (Wildland Consultants 1999a). A cycleway has recently been constructed through the dunes.

References

Bridson 2003; Department of Conservation 1995; Owen *et al.* 2006; Walls 1991; Wildland Consultants 1999a; Wildland Consultants 2006g.

TIROHANGA PA

Site Number [1]	203
Grid Reference (NZMG)	E2891348 N6347740
Local Authority	Ōpōtiki District Council
Ecological District	Ōpōtiki
Protection Status	Unprotected
Site Area	9.2 ha
Altitudinal Range	0-40 m asl
Geology-Landform Type	Sand
HVES Number	110

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa/(mahoe)-(karaka)-(kawakawa)-(houpara)-(taupata) forest.	Cliff, steep hillslope
Terrestrial	Pohutukawa treeland.	Cliff, steep hillslope
Terrestrial	Whahariki-New Zealand iceplant-pohuehue flaxland.	Cliff
Palustrine/estuarine	Raupo reedland.	Wetland
Palustrine/estuarine	Oioi-*Machaerina articulata-M. juncea* sedgeland.	Wetland
Palustrine/estuarine	*Bolboschoenus fluviatilis* sedgeland.	Wetland
Palustrine/estuarine	Saltmarsh ribbonwood-(harakeke)/oioi-*Ficinia nodosa*-sea rush shrub-sedgeland. (Wildland Consultants 2006g and Wildland Consultants 1999a)	Wetland

Vegetation and Indigenous Flora

A small population of *Alternanthera denticulata,* a regionally uncommon species, is present in the exotic-dominant grassland adjacent to the wetland.

Indigenous Fauna

Australasian bittern (Threatened-Nationally Endangered), North Island fernbird (At Risk-Declining), marsh crake (At Risk-Relict), banded rail (At Risk-Naturally Uncommon) and common field and coastal bird species were recorded Walls (1991). Fernbird was observed again in 2011 and North Island weka (Threatened-Nationally Vulnerable) were heard.

Condition/Pressures

Pampas is being controlled in parts of the wetland. In 2011, the wetland was in relatively good condition and had not been grazed recently.

Key Site Features

The major feature of this site is the relatively good quality vegetation present, including types which are now largely absent from the coastal zone of the Ōpōtiki Ecological District. The site includes the only example of whahariki-New Zealand iceplant-pohuehue flaxland vegetation in Ōpōtiki Ecological District. Accessible areas have previously been affected by grazing pressure. Two Threatened and three At Risk bird species have been recorded at this site.

[1] Identified as SVHZ-174 in Wildland Consultants 2006g.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	L
	3.5	M
	3.6	H
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	M
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	Australasian bittern (Threatened-Nationally Endangered) (1991) North Island weka (Threatened-Nationally Vulnerable) North Island fernbird (At Risk-Declining) Marsh crake (At Risk-Relict) (1991) Banded rail (At Risk-Naturally Uncommon) (1991)
ii	✓	Australasian bittern (Endangered) Weka (Vulnerable)
iii		
iv		
v		Regionally Significant
vi		Unprotected
Policy Met:		11(b)
Justification:		Tirohanga Pa comprises six small areas of forest and wetlands that are consistent with Policy 11(b). The site also features good quality examples of coastal wetland vegetation. One Threatened and one At Risk bird species recorded from the site in 2011, and a further Threatened and two At Risk bird species were recorded at the site in 1991.

Notes This site includes two areas of outstanding conservation value from Walls (1991). The vegetation was ranked as being of District (wetland area) and Local (pa on headland) significance in Beadel (1994a).

References Beadel 1994a; Walls 1991; Wildland Consultants 1999a; Wildland Consultants 2006g.

OMARUMUTU

Site Number [1]	205
Grid Reference (NZMG)	E2896298 N6348282
Local Authority	Ōpōtiki District Council
Ecological District	Ōpōtiki
Protection Status	Protected (Department of Conservation, Tirohanga Dunes Conservation Area) and unprotected parts
Site Area	57.5 ha
Altitudinal Range	0-15 m asl
Geology-Landform Type	Estuarine, Sand
HVES Number	11

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial/palustrine	(*Juncus effusus*)/pasture grassland⇔raupo reedland (30%)⇔*Eleocharis sphacelata* reedland (10%).	Wetland
Terrestrial	Spinifex-pasture-shore bindweed grassland (80%)⇔sandfield (20%).	Sand dune
Terrestrial	(Lupin)-(ngaio)-(gorse)/pohuehue-pasture-(tall fescue) grass-vineland (55%)⇔sand-spinifex sandfield⇔gorse-*Ficinia nodosa*/pasture (5%).	Sand dune
Terrestrial	Lupin-(boxthorn)/pasture-(pohuehue)-(shore bindweed) shrubland (40%⇔lupin/spinifex grassland (60%).	Sand dune
Terrestrial	Pohuehue-pasture-(shore bindweed) vineland (60%)⇔(lupin)/pasture-(pohuehue)-shore bindweed grassland (25%)⇔(lupin)/ spinifex grassland (15%).	Sand dune
Palustrine	Raupo reedland.	Wetland
Terrestrial	(Boxthorn)-(gorse)/pohuehue-(sea couch) vineland (80%)⇔(lupin)/pasture grassland (10%)⇔exotic iceplant-spinifex herbfield (10%).	Sand dune
Estuarine	Sea rush tussockland (55%)⇔*Bolboschoenus fluviatilis*-(*Schoenoplectus pungens*) sedgeland (40%)⇔mangrove shrubland (5%).	Intertidal flat
Estuarine	Sea rush-oioi tussockland.	Intertidal flat
Estuarine	Open water.	Estuary
Estuarine	Gorse scrub (20%)⇔oioi-sea rush sedgeland (10%)⇔sea couch grassland (60%)⇔bare mud.	Intertidal flat
Estuarine	Spinifex-sea couch grassland (90%)⇔pohuehue-sea couch vineland (10%).	Intertidal flat
Estuarine	Sea rush tussockland (55%)⇔oioi rushland (25%).	Intertidal flat
Terrestrial	Wetland margin planted shrubland (harakeke, ti kouka, taupata, akeake, ngaio, karo).	Sand dune
Estuarine	Saltmarsh ribbonwood/sea rush tussockland. (Wildland Consultants 2006g and Wildland Consultants 1999a)	Intertidal flat

Vegetation and This site includes a large area of sand flats and estuary vegetation at the mouth

[1] Identified as SVHZ-157 in Wildland Consultants 2006g.

Indigenous Flora

of Waiaua River and extends along the sand dunes which line the coast to the Ōpōtiki Ecological District boundary at Ōpape.

This site contains the easternmost population of mangroves in New Zealand (Walls 1991). Pingao (At Risk-Relict) has been planted here (Wildland Consultants 1999a).

Indigenous Fauna

This estuary has significant wildlife values; it is a breeding area for northern New Zealand dotterel (Threatened-Nationally Vulnerable), pied stilts (At Risk-Declining, variable oystercatcher (At Risk-Recovering) and black-backed gulls. Other important waterbird and wader birds include white heron (Threatened-Nationally Critical), Australasian bittern (Threatened-Nationally Endangered), reef heron, Caspian tern and banded dotterel (all Threatened-Nationally Vulnerable) (Wildland Consultants 1999a). North Island weka (Threatened-Nationally Vulnerable) are present (K. Owen, Department of Conservation, pers. comm. 2012). North Island fernbird (At Risk-Declining) and bush falcon (Threatened-Nationally Vulnerable) were also present in the early 1990s (Walls 1991). Numbers of breeding northern New Zealand dotterel pairs here have declined from seven in 1994 to three in 2003 (Bridson 2003).

The Waiaua River is a habitat and a migratory pathway for indigenous species of freshwater fish, including redfin bully, torrentfish, longfin eel, inanga (all of which are At Risk-Declining), common bully, common smelt, shortfin eel, and Cran's bully (Environment bay of Plenty 2008). Spawning of inanga was recorded in 1988, mainly among tidally-inundated exotic grasses such as tall fescue and Mercer grass (Mitchell 1990).

Condition/Pressures

Most of the dunes and dune slack wetlands are heavily browsed and trampled by domestic stock (including inanga spawning areas (Mitchell 1990)) but some areas have been minimally fenced with single wires to prevent cattle from entering saltmarsh. Many weed species are present including gorse, lupin, exotic iceplant, boxthorn, sea couch, tall fescue and other exotic grasses (Wildland Consultants 1999a).

The 'Omarumutu Wetland Enhancement Project' is a joint project between Omarumutu Marae and Bay of Plenty Regional Council and has resulted in the planting of a small area of freshwater wetland margin opposite the marae.

Department of Conservation has trapped mustelids, cats, rats and hedgehogs here during northern New Zealand dotterel breeding season since 1994. The local decline in northern New Zealand dotterel numbers may be related to large changes in sandspit morphology reducing available nesting areas (Bridson 2003).

Key Site Features

A moderately sized area of dune and dune slack wetlands that comprise a variety of vegetation types. Although exotic plant species dominate some areas, pohuehue vineland covers much of the dunes while raupo is dominant within the dune slack wetlands. One plant species reaches its distributional limit in this site, and an At Risk plant species (planted) is also present. Diverse assemblages of fauna are present at this site including six Threatened and two At Risk bird species, and three At Risk fish species. The Waiaua River provides habitat, a migratory pathway, and spawning sites for indigenous species of freshwater fish.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	H
	3.5	M
	3.6	H
Diversity and Pattern	3.7	H
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	H
Viability and Sustainability	3.11	H
	3.12	M
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** Pingao (At Risk-Relict) (planted) **Avifauna:** White heron (Threatened-Nationally Critical) Australasian bittern (Threatened-Nationally Endangered) Banded dotterel (Threatened-Nationally Vulnerable) Bush falcon (Threatened-Nationally Vulnerable) (1991) Caspian tern (Threatened-Nationally Vulnerable) Northern New Zealand dotterel (Threatened-Nationally Vulnerable) North Island weka (Threatened-Nationally Vulnerable) Reef heron (Threatened-Nationally Vulnerable) North Island fernbird (At Risk-Declining) (1991) Pied stilt (At Risk-Declining) Variable oystercatcher (At Risk-Recovering) **Fish:** Inanga (At Risk-Declining) (1990) Longfin eel (At Risk-Declining) Redfin bully (At Risk-Declining) Torrentfish (At Risk-Declining)
ii	✓	New Zealand dotterel (Endangered) Australasian bittern (Endangered) Weka (Vulnerable)
iii	✓	High quality area of estuary, dunes and dune slack wetlands which includes a variety of indigenous vegetation types.
iv	✓	Easternmost population of mangroves.

Policy	Criteria Met	Explanation
v		Regionally Significant
vi		Unprotected
Policy Met:		11(a)
Justification:		Omarumutu is consistent with Policy 11(a) because it is a high quality area of dunes and dune slack wetlands which includes a variety of indigenous vegetation types that are habitat for several Threatened and At Risk species. Threatened and At Risk taxa include shorebirds, wetland birds, raptors, freshwater fish, and one plant species that has been planted at the site. Mangroves reach their eastern limit of distribution at Waiaua Estuary, which is within this site.

Notes

This site includes five sites of outstanding conservation rank, one of high conservation rank, and two of moderate conservation rank and is recognised as having excellent opportunities for restoration (Walls 1991), despite extensive modification. The vegetation of the Waiaua Estuary was ranked as being of District significance in Beadel (1994a). Part of the site was ranked as a Category 1 Natural Heritage Site in Beadel *et al.* (1999b). This natural area includes SSWI Site No. 39 (moderate-high rank) (Rasch 1989b).

References

Beadel 1994a; Beadel *et al.* 1999b; Bridson 2003; Environment Bay of Plenty 2008; Rasch 1989b; Mitchell 1990; NIWA 2006; Walls 1991; Wildland Consultants 1999a; Wildland Consultants 2006g.

ŌPAPE

Site Number [1]	206
Grid Reference (NZMG)	E2898644 N6348252
Local Authority	Ōpōtiki District Council
Ecological District	Ōpōtiki
Protection Status	Unprotected
Site Area	6.6 ha
Altitudinal Range	20-64 m asl
Geology-Landform Type	Sedimentary coast hinterland
HVES Number	115

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Harakeke-raupo-manuka-*Machaerina* spp.-swamp millet shrubland.	Wetland
Palustrine	Ti kouka/manuka-raupo shrubland.	Wetland
Palustrine/Terrestrial	Manuka scrub.	Wetland, hillslope
Terrestrial	Kanuka-whauwhaupaku-rewarewa forest.	Steep hillslope
Terrestrial	Whauwhaupaku-mamaku scrub.	Steep hillslope
Terrestrial	Brush wattle/mamaku forest.	Steep hillslope
	(Wildland Consultants 2006g and Wildland Consultants 1999a)	

Vegetation and Indigenous Flora

No significant species recorded (Wildland Consultants 1999a).

Indigenous Fauna

No specific fauna information. 'Common forest, field and wetland birds' noted in Wildland Consultants (1999a).

Condition/Pressures

This site is heavily infested with brush wattle. Since *c.*2005, earthworks and vegetation disturbance has occurred within the northwestern corner of the site. The steep sides above the wetland prevent the wetland from being accessed by stock, which may explain the persistence of wetland vegetation of moderate quality.

Key Site Features

This small and degraded site contains one of the best remaining freshwater wetlands in the Ōpōtiki Ecological District (Beadel 1994a). However invasive weeds are common in the vegetation around the wetland margins and also encroach into the wetland in places. Earthworks have reduced the size of the site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	L
	3.3	M
	3.4	L
	3.5	L
	3.6	H
Diversity and Pattern	3.7	L

[1] Identified as SVHZ-176 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Naturalness	3.8	M
Ecological Context	3.9	L
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Manuka scrub, indigenous palustrine wetland vegetation, kanuka-whauwhaupaku-rewarewa forest, and whauwhaupaku-mamaku scrub.
ii		
iii		
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Ōpape is consistent with Policy 11(b) because it includes an area of predominantly indigenous palustrine wetland. Wetlands have been greatly reduced in both extent and quality in Ōpōtiki Ecological District. The dryland portions of this site are heavily infested with brush wattle and have been impacted by earthworks and grazing stock.

Notes The vegetation of the Ōpape wetland and surrounding shrubland, scrub and forest was ranked as being of District significance in Beadel (1994a).

References Beadel 1994a; Wildland Consultants 1999a; Wildland Consultants 2006g.

RAUKUMARA
ECOLOGICAL REGION

9. RAUKUMARA ECOLOGICAL REGION

9.1 Overview

The Raukūmara Ecological Region comprises the Motū and Waioweka Ecological Districts. However, the latter Ecological District does not extend into the coastal zone. The Raukūmara Ecological Region is characterised by the steep rugged topography of the Raukūmara Range which "forms a rugged and somewhat irregular mountain spine along the southeast side of the Region. The range separates the catchments of the eastern Bay of Plenty from those of the East Cape area. Its altitude varies from about 1,000 m in the south to its highest point, Mount Hikurangi (1,764 m) in the northeast" (Clarkson *et al.* 1986). The ecological region incorporates the catchments of the Motū and Waioweka Rivers.

The basal geology of the ecological region comprises mainly Jurassic and early Cretaceous greywacke.

9.2 Motū Ecological District

The dominant landform of the Motū Ecological District is the Raukūmara Range which forms a rugged and somewhat irregular mountain spine along the southeast side of the district. From the central mountain range there is a series of generally west to north-trending ridge systems and deep river valleys which extend more or less to the Bay of Plenty coast. Landforms are generally more subdued towards the coast, ending in steep rugged headlands shelved by rock platforms. The greywacke rocks offer high resistance to marine erosion and the coastline is eroding only very slowly (Tortell 1981). Between the headlands are narrow low alluvial terraces and higher old coastal terraces up to 10-50 m asl (more or less continuous between Ōmaio, and Whanarua Bay). They usually have a small scarp where they meet the sea. The coast between headlands is indented, with gravel beaches on the long exposed beaches, as at Tōrere, Hāwai , Maraenui, Ōmaio, and Raukōkore, and finer sand and pebbles in the numerous small secluded bays. There are a number of small islets and rock stacks lying within 100-200 m of the coast, some of which are connected to the mainland by the surrounding wave-cut platforms at low tide (Clarkson *et al.* 1986).

Dense forest would have covered much of the ecological district prior to Māori occupation beginning about 800 years ago, or earlier. Non-forest vegetation would have been restricted to coastal scrub, small wetlands, open riverbeds, subalpine scrub and alpine grassland zones. Coastal forests would have been dominated by pohutukawa, tawa, puriri, kohekohe, and taraire (*Beilschmiedia tarairi*). Elsewhere in New Zealand this species assemblage occurs only in eastern Northland and Coromandel. Today, most of the coastal flats are farmed and forest occurs as small remnants or secondary stands. Forests elsewhere in the coastal environment have also been modified. Secondary communities range from bracken and manuka to tall secondary forest dominated by kanuka, rewarewa, whauwhaupaku, and/or mamaku). Hard beech occurs in association with taraire and rewarewa at two sites.

Coastal scrub on headlands is dominated by koromiko (*Hebe stricta* var. *macroura*), manuka, houpara, and whaririki, with scattered emergent pohutukawa. There are two small populations of *Olearia pachyphylla* (Threatened-Nationally Critical). Freshwater wetlands are dominated by raupo and manuka. Ti kouka, swamp millet, harakeke, and *Carex geminata* occur locally throughout the district in flood channels

and beside small streams. Dominant species in the wetlands at the Raukōkore River mouth are *Juncus microcephalus, Ruppia polycarpa,* saltmarsh ribbonwood, and *Cyperus ustulatus.*

Two species reach their southern limit of distribution in the Motū Ecological District; taraire and *Carmichaelia williamsii* (At Risk-Relict). *Pimelea tomentosa* (Threatened-Nationally Vulnerable) also occurs in district.

Coastal areas of Motū Ecological District provide habitat for several Threatened bird species such as northern New Zealand dotterel, reef heron and Australasian bittern. Longfin eel, giant kōkopu and shortjaw kōkopu (all At Risk-Declining) have been recorded.

Table 14: Threatened and notable species in the coastal bioclimatic zone of Motū Ecological District.

Scientific Name	Common Name	Threat Classification[1]
BIRDS		
Threatened		
Botaurus poiciloptilus	Australasian bittern	Nationally Endangered
Charadrius bicinctus bicinctus	banded dotterel	Nationally Vulnerable
Charadrius obscurus aquilonius	northern New Zealand dotterel	Nationally Vulnerable
Egretta sacra sacra	reef heron	Nationally Vulnerable
Falco novaeseelandiae sensu stricto	bush falcon	Nationally Vulnerable
Gallirallus australis greyi	North Island weka	Nationally Vulnerable
Hydroprogne caspia	Caspian tern	Nationally Vulnerable
Larus novaehollandiae scopulinus	red-billed gull	Nationally Vulnerable
Phalacrocorax varius varius	pied shag	Nationally Vulnerable
At Risk		
Sterna striata striata	white-fronted tern	Declining
Cyanoramphus novaezelandiae novaezelandiae	kākāriki; red-crowned kākāriki	Relict
Porzana tabuensis plumbea	spotless crake	Relict
VASCULAR PLANTS		
Threatened		
Olearia pachyphylla	thick-leaved tree daisy	Nationally Critical
Pimelea tomentosa		Nationally Vulnerable
At Risk		
Scandia rosifolia	kohepiro	Declining
Carmichaelia williamsii		Relict
Crassula mataikona		Naturally Uncommon
Stuckenia pectinata		Naturally Uncommon
Tetragonia tetragonioides		Naturally Uncommon
Other Notable Species		
Beilschmiedia tarairi[2]	taraire	Distributional limit
Metrosideros carminea	akakura	Regionally Uncommon
Ruppia polycarpa		Regionally Uncommon
Sparganium subglobosum	maru, burr reed	Regionally Uncommon
FROG		
At Risk		
Leiopelma hochstetteri	Hochstetter's frog	Declining
FRESHWATER FISH		
At Risk		
Anguilla dieffenbachii	longfin eel	Declining
Cheimarrichthys fosteri	torrentfish	Declining
Galaxias argenteus	giant kōkopu	Declining
Galaxias brevipinnis	kōaro	Declining
Galaxias maculatus	inanga	Declining
Galaxias postvectis	shortjaw kōkopu	Declining
Geotria australis[3]	lamprey	Declining
Gobiomorphus hubbsi	bluegill bully	Declining

Scientific Name	Common Name	Threat Classification[1]
Gobiomorphus huttoni	redfin bully	Declining

Notes

[1] Threat classifications and regionally significant evaluations follow de Lange *et al.* 2009, Miskelly *et al.* 2008; Allibone *et al.* 2010; and Beadel 2009.

[2] Reaches its southern limit of distribution in Motū Ecological District.

[3] One record from Kereu River in 1977 (NIWA 2006).

HAURERE AND ŌPAPE HEADLANDS (PART)[1]

Site Number [2]	207
Grid Reference (NZMG)	E2899956 N6349979
Local Authority	Ōpōtiki District Council
Ecological District	Motu
Protection Status	Protected (Department of Conservation, Oroi Scenic Reserve) and unprotected parts
Site Area	239.6 ha
Altitudinal Range	0-156 m asl
Geology-Landform Type	Greywacke hard coast, Sedimentary coast hinterland
HVES Numbers	197, 198

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa-koromiko-*Olearia pachyphylla*-whaririki scrub.	Cliff
Terrestrial	Whauwhaupaku-mamaku scrub.	Cliff
Terrestrial	Pohutukawa/manuka scrub.	Cliff, steep hillslope
Terrestrial	Bare rock (80%) ⇔ pohutukawa scrub (20%).	Cliff
Terrestrial	Manuka-*Coprosma* spp.-koromiko scrub.	Cliff, ridge and hillslope
Terrestrial	Tawa-pohutukawa-puriri forest.	Hillslope and ridge
Palustrine	Raupo reedland.	Wetland
Terrestrial	Tawa-puriri forest.	Gully
Terrestrial	Kanuka-whauwhaupaku-rewarewa forest.	Hillslope, ridge
Terrestrial	Tawa-rewarewa-puriri forest.	Hillslope
	(Clarkson *et al.* 1986; Wildland Consultants 1999a)	

Vegetation and Indigenous Flora

The only currently known wild population of *Olearia pachyphylla* (Threatened-Nationally Critical) occurs in this site and it is locally common on the steep coastal cliffs. A Department of Conservation survey in 2000 located 1,439 plants (Glaser 2000).

Pimelea tomentosa (Threatened-Nationally Vulnerable) is known from Oroi Scenic Reserve (Wildland Consultants 1999a).

Indigenous Fauna

This site provides habitat for kereru, and common forest, field, wetland and coastal bird species. Bush falcon (Threatened-Nationally Vulnerable) and Australasian bittern (Threatened-Nationally Endangered) have also been reported (Rasch 1989b), as well as longfin eel (At Risk-Declining) (NIWA 2006). North Island weka (Threatened-Nationally Vulnerable) are present (K. Owen, Department of Conservation, pers. comm. 2012). This natural area includes SSWI sites: No. 40 (moderate rank), No. 41 (moderate rank), and No. 39 (potential rank) (Rasch 1989b).

There is an Australasian gannet colony on Haurere Headland (Clarkson *et al.*1986).

Condition/Pressures

Some of this site is grazed by domestic and feral animals, including possum and feral goat (Wildland Consultants 1999a). Gorse competes with *Olearia*

[1] Part of Haurere and Ōpape Headlands occurs outside the 'coastal environment' study area (i.e. further than 1 km inland of MHWS).

[2] Identified as SVHZ-177 and part of SVHZ-178 (Oroi) in Wildland Consultants 2006g.

pachyphylla for habitat on the steep, rocky bluffs where the *Olearia* is mainly found (Glaser 2000). Pampas, poplar, gorse, tradescantia, and ginger are controlled annually within the Oroi Scenic Reserve (A. Kirk, Department of Conservation, pers. comm. 2012).

Key Site Features

This site is nationally significant because it provides habitat for *Olearia pachyphylla* which is not currently known to occur in the wild anywhere else, and contains coastal forest. The comparatively large size of the site increases the viability of the Olearia population and the population. One other Threatened plant species is also found here. This site is also notable as a mainland breeding colony for Australasian gannet.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	H
	3.5	H
	3.6	H
Diversity and Pattern	3.7	H
Naturalness	3.8	H
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	H
	3.12	H
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** *Olearia pachyphylla* (Threatened-Nationally Critical) *Pimelea tomentosa* (Threatened-Nationally Vulnerable) **Avifauna:** Australasian bittern (Threatened-Nationally Endangered) (1989) Bush falcon (Threatened-Nationally Vulnerable) North Island weka (Threatened-Nationally Vulnerable) **Fish:** Longfin eel (At Risk-Declining)
ii	✓	Australasian bittern (Endangered) Weka (Vulnerable)
iii	✓	Coastal forest (including pohutukawa forest) and the only known location of thick-leaved tree daisy.
iv	✓	Only current known wild population of *Olearia pachyphylla*.

Policy	Criteria Met	Explanation
v	✓	Nationally Significant
vi		Partially protected (Oroi Scenic Reserve)
Policy Met:		11(a)
Justification:		Haurere and Ōpape Headlands (Part) meets Policy 11(a) because it supports the only wild population of *Olearia pachyphylla* (thick-leaved tree daisy) (Threatened-Nationally Critical) in New Zealand and includes coastal forest. It includes populations of one other Threatened plant species, two Threatened bird species, and one At Risk freshwater fish species. A small part of the site is legally protected as a scenic reserve.

Notes

This site contains two priority areas for protection within the Motū Ecological District: Ōpape Headland (Priority One and Three) and Haurere Headland (Priority Three) (Clarkson *et al.* 1986). Beadel (1994a) ranked vegetation on the two headlands as nationally significant. This natural area was given a botanical rank of very high by Shaw (1988a).

The Oroi Scenic Reserve is considered to have high scenic and cultural value for Whakatōhea and Ngaitama (Wildland Consultants 1999a).

References

Beadel 1994a; Clarkson *et al.* 1986; Glaser 2000; Lux 2007; Wildland Consultants 1999a; Wildland Consultants 2006g.

OROI (PART)[1]

Site Number [2,,3]	208
Grid Reference (NZMG)	E2900526 N6349508
Local Authority	Ōpōtiki District Council
Ecological District	Motu
Protection Status	Unprotected parts
Site Area	40.9 ha
Altitudinal Range	0-180 m asl
Geology-Landform Type	Sedimentary coast hinterland

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Manuka scrub ⇔ pohutukawa/kamahi-kohuhu treeland.	Hillslope
Terrestrial	Willow-black wattle-manuka/bracken treeland. (Clarkson *et al.* (1986) and Wildland Consultants 1999a)	Hillslope

Vegetation and Indigenous Flora

Pimelea tomentosa (Threatened-Nationally Vulnerable) is known from the nearby Oroi Scenic Reserve (Wildland Consultants 1999a) and may be present in this site. Field survey would be required to determine its presence.

Indigenous Fauna

No information.

Condition/Pressures

Much of this site is grazed by domestic and feral animals, including possum and feral goat. The vegetation types present and the proximity of the site to the highway put it at risk of fire. Continuing pressure to develop coastal areas for farming or housing may also be a threat to this site. Ecological weeds such as willows, black wattle and pampas are well established (Wildland Consultants 1999a).

Key Site Features

Oroi is separated from Haurere and Ōpape Headlands by State Highway 35. This site acts as an ecological linkage between coastal vegetation and large areas of primary forest on the inland ranges (including areas in Raukūmara Conservation Park and Nukutere Nga Whenua Rahui Kawenata) (Wildland Consultants 1999a).

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	L
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	L

[1] Part of Oroi occurs outside the 'coastal environment' study area (i.e. further than 1 km inland of MHWS).
[2] Identified as SVHZ-178 in Wildland Consultants 2006g.
[3] Part of this site identified as SVHZ-178 in Wildland Consultants 2006g is now amalgamated with Haurere and Ōpape Headlands.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Regionally Significant
vi		Unprotected
11(b)		
i	✓	Manuka scrub, pohutukawa treeland
ii		
iii	✓	Pohutukawa treeland is largely confined to the coastal environment.
iv	N/A	
v	✓	Probably a migratory pathway for indigenous species of freshwater fish.
vi	✓	The two parts of the site act as a habitat buffer for Haurere and Ōpape Headlands (Part), as well as functioning as ecological linkages with large areas of primary forest on the inland Raukumura ranges.
Policy Met:		11(b)
Justification:		Oroi (Part) is consistent with Policy 11(b) because of its ecological roles as a buffer and linkage for the high value Haurere and Ōpape Headlands (Part) site, and because the site comprises predominantly indigenous coastal vegetation.

References Beadel 1994a; Clarkson *et al.* 1986; Rasch 1989b; Shaw 1988a; Wildland Consultants 1999a; NIWA 2006; Wildland Consultants 2006g.

TŌRERE RIVER MOUTH

Site Number	209
Grid Reference (NZMG)	E2904423 N6351618
Local Authoruty	Ōpōtiki District Council
Ecological District	Motu
Protection Status	Protected
Site Area	10.8 ha
Altitudinal Range	0 m
Geology-Landform Type	Sand

Hydrosystem	Vegetation/Habitat Type	Landform
Estuarine	Open water.	River channel
Palustrine	Umbrella sedge (*Cyperus eragrostis*)-water speedwell herb-sedgeland.	Gravel beach
Terrestrial	(shore bindweed)-(*Senecio diaschides*) gravelfields.	Gravel beach
Palustrine	Crack willow shrubland.	Wetland
Palustrine	Crack willow-dock-*Juncus articulatus*-Mercer grass shrubland.	Wetland
Palustrine	Mercer grass-*Eleocharis gracilis*-*Schoenoplectus tabernaemontani* grassland.	Beach
Terrestrial	Shinglebeds.	Gravel beach

Vegetation and Indigenous Flora

The site comprises the mouth of Tōrere River and gravelfields. Two plants which are uncommon in the Bay of Plenty Region are present, *Senecio diaschides* and *Alternanthera dentata*. Other indigenous species present included *Persicaria decipiens*, *Myriophyllum propinquum*, and bachelor's button.

Indigenous Fauna

The river mouth is a habitat or migratory pathway for indigenous freshwater fish such as bluegill bully, inanga, longfin eel, torrentfish (all At Risk-Declining) common bully, Cran's bully, and shortfin eel (Environment Bay of Plenty 2008).

Birds seen during a brief field visit in May 2012 included black-backed gull (30), variable oystercatcher (At Risk-Recovering) (2), banded dotterel (Threatened-Nationally Vulnerable) (1), and harrier hawk.

Condition/Pressures

The site is bounded by pasture and it is not known if the river mouth is fenced to exclude stock. Vehicles have access to this area.

Key Site Features

This site is a habitat and migratory pathway for indigenous freshwater fish species, including four At Risk species, and also supports two At Risk bird species.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	L-M
Rarity or Distinctive Features	3.2	M
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	L
Ecological Context	3.9	M
	3.10	L
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Banded dotterel (Threatened-Nationally Vulnerable) Variable oystercatcher (At Risk-Recovering) **Fish:** Bluegill bully (At Risk-Declining) Inanga (At Risk-Declining) Longfin eel (At Risk-Declining) Torrentfish (At Risk-Declining)
ii		
iii	✓	Shingle beach.
iv		
v		
vi		
11(b)		
i		
ii		
iii	✓	Shingle beach; river mouth.
iv	N/A	
v	✓	Tōrere River Mouth is a habitat or migratory pathway for indigenous species of freshwater fish.
vi		
Policy Met:		11(b)
Justification:		Tōrere River Mouth is consistent with Policy 11(b) because it is a habitat and migratory pathway for indigenous species of freshwater fish, two At Risk bird species, and two uncommon plant species.

References Environment Bay of Plenty 2008

TE WHIORAU (PART)[1]

Site Number [2]	210
Grid Reference (NZMG)	E2906258 N6352835
Local Authority	Ōpōtiki District Council
Ecological District	Motu
Protection Status	Protected (Nga Whenua Rāhui Kawenata) and unprotected parts
Site Area	205.8 ha
Altitudinal Range	0-306 m asl
Geology-Landform Type	Sedimentary coast hinterland
HVES Number	117

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Manuka-kanuka scrub ⇔ Kanuka scrub and forest ⇔ Kanuka-whauwhaupaku-rewarewa forest.	Cliff, hillslope, ridge
Terrestrial	Pohutukawa-puriri-tawa forest.	Cliff, hillslope
Terrestrial	Hard beech-tawa-rewarewa forest.	Hillslope, ridge
Terrestrial	Kanuka-whauwhaupaku-rewarewa forest ⇔ Whauwhaupaku-mamaku forest ⇔ Tawa-puriri forest.	Hillslope, ridge
Terrestrial	Kanuka scrub and forest. (Wildland Consultants 1999a)	Hillslope

Vegetation and Indigenous Flora

Taraire reaches its southern limit of distribution in this site (Clarkson *et al.* 1986). Taraire is considered to be a regionally uncommon species.

Indigenous Fauna

Kereru and common forest and field birds including whitehead and tomtit use this site (Wildland Consultants 1999a). Threatened species previously recorded in the wider area (i.e. including inland forest directly adjacent) include bush falcon (Threatened-Nationally Vulnerable) and Hochstetter's frog (At Risk-Declining) (Rasch 1989b), however it is not clear whether these species extend into the coastal bioclimatic zone.

Condition/Pressures

Much of the site is grazed by feral and domestic animals. Feral goat are a significant threat. Further clearance of scrub and shrubland may occur in the future if coastal sites are developed for housing, farming or plantation forestry. Possum are a threat to pohutukawa (Wildland Consultants 1999a).

Key Site Features

Te Whiorau forms part of a large varied tract of indigenous forest and scrub acting as an ecological corridor from the coast to the lowland and submontane forest of the Raukūmara Conservation Park (Wildland Consultants 1999a; Clarkson *et al.* 1986). This site provides habitat for Threatened forest bird species, and contains a regionally uncommon plant species at the limit of its national distribution.

[1] Part of Te Whiorau occurs outside the 'coastal environment' study area (i.e. further than 1 km inland of MHWS).

[2] Identified as SVHZ-179 in Wildland Consultants 2006g.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	H
	3.5	M
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	H
	3.12	H
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	Hochstetter's frog (At Risk-Declining)
ii	✓	Hochstetter's frog (Vulnerable)
iii		
iv	✓	Taraire reaches its southern limit of distribution in this site.
v		Regionally Significant
vi		Unprotected
11(b)		
i	✓	Kanuka-dominant forest and scrub, pohutukawa-puriri dominant forest.
ii		
iii	✓	Pohutukawa-puriri dominant forest.
iv	N/A	
v		
vi	✓	Site is part of an ecological corridor from the coast to lowland-submontane bioclimatic zones in the Raukūmara Ranges.
Policy Met:		11(b)
Justification:		Te Whiorau (Part) is consistent with Policy 11(b). It comprises predominantly secondary indigenous forest and scrub habitats that form part of a coastal-submontane ecological sequence. No Threatened or At Risk species have been recorded from the site, but taraire is at its distributional limit.

Notes The site was first identified as a priority natural area (Category 3) for protection in Clarkson *et al.* (1986), where it was known as 'Tōrere Corridor'. The vegetation at this site was ranked as being of District significance in Beadel (1994a).

References Beadel 1994a; Clarkson *et al.* 1986; Rasch 1989b; Wildland Consultants 1999a; Wildland Consultants 2006g.

HĀWAI-MOTŪ RIVER (PART)[1]

Site Number [2]	212
Grid Reference (NZMG)	E2911168 N6357557
Local Authority	Ōpōtiki District Council
Ecological District	Motu
Protection Status	Unprotected
Site Area	443.9 ha
Altitudinal Range	0-334 m asl
Geology-Landform Type	Greywacke hard coast, Estuarine
HVES Number	118

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa forest and treeland.	Cliff, steep hillslope
Terrestrial	Pohutukawa-puriri-tawa forest.	Cliff, terrace
Terrestrial	Tawa-pohutukawa-puriri forest (80%) ⇔ pasture (20%).	Cliff, terrace
Terrestrial	Kanuka scrub and forest.	Cliff, terrace
Terrestrial	Kanuka-puriri-pohutukawa-(tawa) forest.	Cliff, terrace
Marine	Rockland.	Marine rock stack
Terrestrial	Manuka-*Coprosma* spp.-koromiko scrub.	Cliff
Terrestrial	Kanuka-puriri forest.	Terrace
Terrestrial	Tawa-puriri forest.	Terrace
Terrestrial	Manuka-(pohutukawa)-(exotic grasses) scrub.	Hillslope, ridge
Terrestrial	Manuka scrub ⇔ kanuka-whauwhaupaku-rewarewa scrub.	Cliff, hillslope
Terrestrial	Kanuka-whauwhaupaku-rewarewa scrub and forest.	Hillslope, basin
Terrestrial	Hard beech-tawa-rewarewa forest. (Wildland Consultants 1999a)	Hillslope

Vegetation and Indigenous Flora

This site contains one of the three best examples of pohutukawa puriri forest in the Motū Ecological District, a type much reduced from its former extent. It occurs on a low marine terrace above Te Uritukituki beach (Clarkson *et al.* 1986).

Indigenous Fauna

Kereru and common forest and field birds (Wildland Consultants 1999a) utilise this site. There is a pied shag (Threatened-Nationally Vulnerable) roost at Maraenui bush (Rasch 1989b). Tokaroa Rock, a single stack (20 m high) near Te Uritukituki Beach, supports breeding colonies of white-fronted terns (At Risk-Declining) and red-billed gulls (Threatened-Nationally Vulnerable) (Wildland Consultants 1999a). North Island weka (Threatened-Nationally Vulnerable) present (K. Owen, Department of Conservation, pers. comm. 2012).

Longfin eel (At Risk-Declining) and common smelt have been recorded in the Hāwai River, and it is likely to be a habitat or migratory pathway for other species of freshwater fish.

Condition/Pressures

Vegetation quality is variable. Steep hillslopes, cliffs and a few patches of

[1] Part of Hāwai-Motu River occurs outside the 'coastal environment' study area (i.e. further than 1 km inland of MHWS).

[2] Identified as SVHZ-180 in Wildland Consultants 2006g.

easier terrain are ungrazed, with a good quality understorey. Some less steep sites are grazed at low intensities (Wildland Consultants 1999a). Since 2007 a small area of vegetation on the west side of the highway has been cleared and erosion has affected another portion of the site next to the road (from site inspection and aerial photographs).

Key Site Features

This natural area is a good quality remnant containing a diverse assemblage of mature and successional plant communities. It includes one of the three best examples of pohutukawa-puriri-tawa forest in Motū Ecological District, and the largest example of hard beech-dominant forest in the coastal zone of Motū Ecological District (Wildland Consultants 1999a). The site provides a partial buffer to the nationally significant Houpoto Swamp, which otherwise has exotic plantations around its margins. Grazing pressure appears to be limited. Three Threatened and one At Risk bird species are known from here. The Hāwai River provides habitat and a migratory pathway for indigenous freshwater fish.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	M
	3.5	M
	3.6	M
Diversity and Pattern	3.7	M
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** North Island weka (Threatened-Nationally Vulnerable) Pied shag (Threatened-Nationally Vulnerable) Red-billed gull (Threatened-Nationally Vulnerable) White-fronted tern (At Risk-Declining) **Fish:** Longfin eel (At Risk-Declining)
ii	✓	Weka (Vulnerable)
iii	✓	One of the best examples of pohutukawa-puriri forest in Motū Ecological District.

Policy	Criteria Met	Explanation
iv		
v		Regionally significant
vi		Unprotected
Policy Met:		11(a)
Justification:		Hāwai -Motū River (Part) meets Policy 11(a) because it includes one of the best stands of pohutukawa-puriri forest in Motū Ecological District, and Threatened and At Risk avifauna species have been recorded at the site. In addition, the site contains a diverse assemblage of vegetation and habitat types and is a partial buffer to the adjoining, nationally significant, Houpoto Swamp.

Notes

This site contains two recommended areas for protection in the Motū Ecological District (Te Uritukituki - Priority One and Tokaroa Rock - Priority Two) (Clarkson *et al.* 1986). The pohutukawa-puriri-tawa forest at Te Uritukituki was ranked as nationally significant for vegetation in Beadel (1994a), and there were other areas of vegetation around it ranked at regional and District significance levels. This natural area includes SSWI Site Nos 47 (moderate rank), 49 (moderate rank) and 51 (moderate rank) (Rasch 1989b).

References

Beadel 1994a; Clarkson *et al.* 1986; Rasch 1989b; Wildland Consultants 1999a; Wildland Consultants 2006g.

HOUPOTO SWAMP (PART)[1]

Site Number [2]	211
Grid Reference (NZMG)	E2911988 N6358307
Local Authority	Ōpōtiki District Council
Ecological District	Motu
Protection Status	Unprotected
Site Area	17.2 ha
Altitudinal Range	51-96 m asl
Geology-Landform Type	Sedimentary coast hinterland
HVES Number	119

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Raupo-(*Machaerina rubiginosa*) reedland.	Wetland
Palustrine	Toetoe-*Carex virgata*-swamp millet tussockland.	Wetland
Palustrine	*Schoenoplectus tabernaemontani* sedgeland.	Wetland
Palustrine	*Carex geminata* tussockland.	Wetland
Palustrine	Swamp millet-*Machaerina rubiginosa*-Yorkshire fog grassland.	Wetland
Palustrine	Manuka/*Gleichenia dicarpa* scrub. (Wildland Consultants 1999a)	Wetland

Vegetation and Indigenous Flora

Several wetland species found here are unknown elsewhere in the Motū Ecological District, including the regionally uncommon monocotyledonous herb *Sparganium subglobosum* (Clarkson *et al.* 1986).

Indigenous Fauna

There are 1997, 2004, 2006, and 2012 records of longfin eel (At Risk-Declining) in the Houpoto Swamp (NIWA 2006; K. Owen, Department of Conservation, pers. comm. 2012), therefore this area appears to be an important habitat for this At Risk species.

Common wetland and field birds are present (Wildland Consultants 1999a). Spotless crake (At Risk-Relict) have been found here in the past (Clarkson *et al.* 1986), but were not recorded when last surveyed for wildlife in the mid-1980s (Rasch 1989b). This natural area includes SSWI Site No. 48 (moderate rank) (Rasch 1989b). Redfin bully and inanga (both At Risk-Declining) are also present in the wetland (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Grazing by domestic stock is causing the destruction of vegetation and degrading wildlife habitat. Areas disturbed by grazing are often recolonised by weedy adventive species (Wildland Consultants 1999a). Parts of the site are bounded by plantation exotic forestry, so the site may be vulnerable to disturbance from forestry operations. This is a particular risk in the narrow parts of the site.

Key Site Features

This site is nationally significant. It is part of a large (c.177 ha) intact, fertile palustrine wetland. This is the largest wetland in the Motū Ecological District (Clarkson *et al.* 1986). This site supports a regionally uncommon plant species, one At Risk fish species, and one At Risk marshbird species.

[1] Part of the Houpoto Swamp occurs outside the 'coastal environment' study area (i.e. further than 1 km inland of MHWS).

[2] Identified as SVHZ-181 in Wildland Consultants Contrct Report 1345.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	H
	3.5	H
	3.6	N/A
Diversity and Pattern	3.7	M
Naturalness	3.8	H
Ecological Context	3.9	M
	3.10	H
Viability and Sustainability	3.11	H
	3.12	H
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Spotless crake (At Risk-Naturally Uncommon) (pre-1986) **Fish:** Inanga (At Risk-Declining) Longfin eel (At Risk-Declining) Redfin bully (At Risk-Declining)
ii		
iii	✓	Largest wetland in the Motū Ecological District and of high quality.
iv		
v	✓	Nationally Significant
vi		Unprotected
Policy Met:		11(a)
Justification:		Houpoto Swamp is consistent with Policy 11(a) because it is the largest wetland in the Motū Ecological District, is of high quality, and provides habitat for three At Risk species. In addition, it is a habitat of several plant species which are not found elsewhere in Motū Ecological District, including a regionally uncommon species.

Notes

This site covers 16 ha of wetland in the 'coastal environment' (i.e. up to 1 km inland from coastline), but the entire wetland is approximately 177.5 ha (Clarkson *et al.* 1986). Houpoto Swamp was identified as a Category 1 Priority Area for Protection in Clarkson *et al.* (1986).

References

Beadel 1994a; Clarkson *et al.* 1986; NIWA 2006; Rasch 1989b; Wildland Consultants 1999a; Wildland Consultants 2006g.

MARAENUI WETLAND

Site Number [1] 213
Grid Reference (NZMG) E2913672 N6360742
Local Authority Ōpōtiki District Council
Ecological District Motu
Protection Status Unprotected
Site Area 5.1 ha
Altitudinal Range 0-4 m asl
Geology-Landform Type Sedimentary coast hinterland

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Raupo/*Machaerina articulata* reedland (with scattered rushes and umbrella sedge). (Wildland Consultants 2003l)	Wetland

Vegetation and Indigenous Flora No information on significant species.

Indigenous Fauna No information on significant species.

Condition/Pressures This wetland is dissected by drains which alter the hydrology of the site. Drain cleaning may result in wetland vegetation being smothered with spoil and damaged by vehicles. The dumped spoil may also provide sites for weeds to establish. The site is possibly at risk from grazing as it does not appear to be fenced off from the surrounding pasture. Rabbits were noted during a field visit in 2002 (Wildland Consultants 2003l).

Key Site Features This site contains a freshwater wetland which is complementary to habitats at the Motū River mouth. Coastal wetland habitat has been severely reduced in the Bay of Plenty Region, generally through drainage.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	L
	3.3	M
	3.4	L
	3.5	L
	3.6	H
Diversity and Pattern	3.7	L
Naturalness	3.8	L
Ecological Context	3.9	M
	3.10	L
Viability and Sustainability	3.11	M
	3.12	L
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

[1] Identified as SVHZ-182 in Wildland Consultants 2006g.

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Raupo-*Machaerina* dominant reedland
ii		
iii		
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Maraenui Wetland, as a moderate-sized wetland dominated by indigenous vegetation types, is consistent with Policy 11(b). However there is a lack of information about the site, including the possible presence of Threatened or At Risk species and overall ecological condition. Therefore, it is possible that the site meets additional criteria under Policy 11(a) and/or Policy 11(b).

References Wildland Consultants 2003l; Wildland Consultants 2006g.

MOTU-WAIKAKARIKI RIVER (PART)[1]

Site Number [2]	214
Grid Reference (NZMG)	E2915983 N6363433
Local Authority	Ōpōtiki District Council
Ecological District	Motu
Protection Status	Protected (Department of Conservation, Tokata Scenic Reserve) and unprotected parts
Site Area	817.6 ha
Altitudinal Range	0-289 m asl
Geology-Landform Type	Greywacke hard coast, Alluvium beach
HVES Number	122

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Kanuka scrub, forest and treeland.	Hillslope
Terrestrial	Pohutukawa forest and treeland.	Cliff, terrace
Terrestrial	Manuka scrub⇔manuka-kanuka scrub.	Cliff, hillslope, ridge
Terrestrial	Tawa-pohutukawa-puriri forest.	Hillslope, gully, terrace
Terrestrial	(Pohutukawa)/broadleaved spp. scrub.	Cliff, terrace
Terrestrial	Pohutukawa-puriri-tawa forest.	Terrace, gully
Terrestrial	Whauwhaupaku-manuka scrub.	Hillslope, ridge
Terrestrial	Kanuka scrub⇔whauwhaupaku-mamaku scrub and forest.	Hillslope, ridge
Riverine	Kanuka/treefern forest.	Terrace
Riverine	Pampas tussockland.	Terrace
Riverine	Crack willow treeland.	Terrace
Riverine	Gravelfield and boulderfield.	Terrace and channel
Terrestrial	Pohutukawa-puriri/kohekohe-*Olearia albida* forest.	Steep hillslope, cliff
Terrestrial	Pampas-(pohutukawa)-shore bindweed gravelfield.	Gravel beach
Palustrine	Raupo reedland.	Wetland
Palustrine	Arrow grass-bachelor's button-saltwater paspalum herbfield.	Wetland
Marine	Rockfield.	Marine rock platform
Marine	Sandfield.	Beach sands
	(Wildland Consultants 2006g; Clarkson *et al.* 1986, Wildland Consultants 1999a, Current survey)	

Vegetation and Indigenous Flora

This site is part of a very large area of indigenous vegetation extending beyond the coastal bioclimatic zone into semi-coastal, lowland and submontane bioclimatic zones. The vegetation sequence extends from coastal pohutukawa forest and treeland, pohutukawa, puriri, broadleaved tawa forest (which are included in the present site) to lowland hard beech, tawari, kamahi, and tawheowheo (*Quintinia serrata*) forest on the boundary of Raukūmara Forest Park. The vegetation is more fragmented in the coastal bioclimatic zone than in the rest of the sequence.

Pimelea tomentosa (Threatened-Nationally Vulnerable), *Disphyma australe*, and *Olearia albida* × *O. paniculata* hybrids have been recorded in the Tokata Scenic Reserve (Clarkson and Regnier 1989). *Metrosideros carminea* (regionally uncommon) is present in the reserve. Although the reserve is small

[1] The majority of Motu-Waikakariki River site (see Wildland Consultants 1999a) occurs outside the 'coastal environment' study area (i.e. further than 1 km inland of MHWS).

[2] Identified as SVHZ-183 in Wildland Consultants 2006g.

in area (1.8 ha), it has a relatively diverse flora (107 plant species have been recorded in the reserve, Clarkson and Regnier 1989). There have been no detailed botanical surveys in the other parts of this site.

Senecio diaschides, a regionally uncommon species, is present on the gravelfields.

Indigenous Fauna

The Motū River is one of the largest North Island rivers unaffected by hydroelectric development. The gravel and boulderfields at the river mouth (which are either mobile or stabilised by pampas and crack willow) were known to support breeding northern New Zealand dotterel, breeding banded dotterel and reef heron (all Threatened-Nationally Vulnerable) and variable oystercatcher (At Risk-Recovering) (K. Owen, Department of Conservation, pers. comm. 2010), as well as common wader, waterbird and field birds (Rasch 1989b, ranked 'moderate'). The Motū River mouth is also an important roost for white-fronted tern (At Risk-Declining) with up to 500 recorded at one time during summer (OSNZ 1998). Red-billed gulls (Threatened-Nationally Vulnerable) were also known to breed here (Clarkson *et al.* 1986). Two hundred white-fronted tern were observed in May 2012, along with Caspian tern (Threatened-Nationally Vulnerable), black-backed gull, pied shag (Threatened-Nationally Vulnerable), cattle egret, mallard duck, and pukeko.

The river is a habitat or migratory pathway for inanga, longfin eel, torrentfish, redfin bully, bluegill bully, kōaro, giant kōkopu, shortjaw kōkopu (all of which are At Risk-Declining), common bully, giant bully, shortfin eel, banded kōkopu, and Cran's bully (Environment Bay of Plenty 2008).

The forested areas of this site have high wildlife values and support large populations of common forest birds, including kereru, whitehead and tomtit (Wildland Consultants 1999a). There are mid-1980s records of bush falcon (Threatened-Nationally Vulnerable) and North Island brown kiwi (Threatened-Nationally Vulnerable) (Rasch 1989b), but no recent records are known. Longfin eel and shortjaw kōkopu (both At Risk-Declining) were recorded here in the 1970s (NIWA 2006).

Condition/Pressures

Possums are present and there is a low goat density east of Motū River (Wildland Consultants 1999a).

Pampas is present.

Within Tokata Scenic Reserve there are moderate possum numbers and occasional domestic stock. Rubbish dumping, fires and tracking by recreational users are threats (Department of Conservation 1995).

Key Site Features

This site is a very large coastal forest component of a much larger ecological sequence extending from coastal to sub-montane habitats. The pohutukawa forest elements are large examples of a nationally under-represented vegetation type. As part of a large, representative tract of vegetation which has been identified as one of the two most important corridors from the coast to inland areas in the Motū Ecological District, this site is nationally significant. One Threatened and two regionally uncommon plant species are known from here. There are records of eight Threatened and two At Risk bird species, and an At Risk freshwater fish species. Furthermore, the Motū River is a habitat or migratory pathway for a suite of indigenous freshwater fish, including At Risk species.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	M
	3.5	H
	3.6	N/A
Diversity and Pattern	3.7	H
Naturalness	3.8	H
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	H
	3.12	H
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** *Pimelea tomentosa* (Threatened-Nationally Vulnerable) **Avifauna:** Banded dotterel (Threatened-Nationally Vulnerable) Bush falcon (Threatened-Nationally Vulnerable) (1980s) Caspian tern (Threatened-Nationally Vulnerable) Northern New Zealand dotterel (Threatened-Nationally Vulnerable) North Island brown kiwi (Threatened-Nationally Vulnerable) (1980s) Pied shag (Threatened-Nationally Vulnerable) Red-billed gull (Threatened-Nationally Vulnerable) Reef heron (Threatened-Nationally Vulnerable) White-fronted tern (At Risk-Declining) Variable oystercatcher (At Risk-Recovering) **Fish:** Bluegill bully (At Risk-Declining) Inanga (At Risk-Declining) Kōaro (At Risk-Declining) Longfin eel (At Risk-Declining) Giant kōkopu (At Risk-Declining) Redfin bully (At Risk-Declining) Shortjaw kōkopu (At Risk-Declining) Torrentfish (At Risk-Declining)
ii	✓	New Zealand dotterel (Endangered) Northern brown kiwi (Endangered)

Policy	Criteria Met	Explanation
		Giant kōkopu (Vulnerable) Shortjaw kōkopu (Vulnerable)
iii	✓	Large, high quality, diverse site dominated by indigenous forest (including pohutukawa forest).
iv		
v	✓	Nationally Significant
vi		Unprotected
Policy Met:		11(a)
Justification:		Motu-Waikakariki River (Part) is a large, diverse, high quality site dominated by indigenous forest, including forest types that are typical of the coastal environment, as well as riverine and marine habitats. One Threatened plant species, eight Threatened bird species, two At Risk bird species, and eight At Risk freshwater fish species have been recorded (though some of the records are not recent). These factors make the site consistent with Policy 11(a).

References

Beadel 1994a; Bridson 2003; Clarkson *et al.* 1986; Clarkson and Reginer 1989; Department of Conservation 1995; Environment Bay of Plenty 2008; OSNZ 1998; Owen *et al.* 2006; NIWA 2006; Rasch 1989b; Wildland Consultants 1999a; Wildland Consultants 2006g.

HAPARAPARA RIVER-TE KAHA (PART)[1]

Site Number [2]	215
Grid Reference (NZMG)	E2921263 N6369031
Local Authority	Ōpōtiki District Council
Ecological District	Motu
Protection Status	Unprotected
Site Area	719.2 ha
Altitudinal Range	0-255 m asl
Geology-Landform Type	Greywacke hard coast, Alluvium beaches
HVES Numbers	123, 147, 124

Hydrosystem	Vegetation/Habitat Type	Landform
	Haparapara River Area (southern part of site)	
Terrestrial	Tawa-puriri forest.	Hillslope, terrace
Terrestrial	Pohutukawa forest and treeland.	Cliff, terrace, rocky islet
Terrestrial	Taraire-tawa forest.	Terrace
Terrestrial	Tauhinu scrub.	Alluvial flat, terrace
Riverine	Riverbed (boulderfield, gravelfield, sandfield and open water).	Alluvial flat, beach sands
Terrestrial	Tawa-pohutukawa-puriri forest.	Hillslope
Terrestrial	Manuka scrub.	Hillslope, ridge
Terrestrial	Manuka scrub (80%) ⇔ kanuka scrub and forest (10%) ⇔ whauwhaupaku-mamaku forest (10%).	Hillslope, ridge
Terrestrial	Tawa-kamahi-rewarewa forest.	Hillslope
Terrestrial	Pohutukawa-tawa-puriri forest ⇔ hard beech-tanekaha (*Phyllocladus trichomanoides*)-rewarewa forest.	Hillslope, ridge
Terrestrial	Kanuka forest and scrub.	Hillslope
Terrestrial	Puriri-kanuka-(tawa)-(kohekohe) forest.	Hillslope
Riverine	(Puriri)-(karaka)/pasture treeland.	Terrace
Riverine	Kanuka forest and treeland.	Terrace
Riverine	(Pohuehue)-(*Ficinia nodosa*) gravelfield.	Terrace
Riverine	Pampas-tutu (*Coriaria arborea*) shrub-grassland.	Terrace
Terrestrial	Whauwhaupaku-mamaku scrub.	Steep hillslope
Terrestrial	Kanuka-whauwhaupaku-rewarewa forest.	Steep hillslope
Terrestrial	(Radiata pine)/kanuka-whauwhaupaku-mamaku-(pohutukawa)-(puriri) forest.	Gully
	(Wildland Consultants 2006g and Wildland Consultants 1999a)	
	Te Kaha (northern part of site)	
Terrestrial	Pohutukawa/houpara forest.	Marine island
Terrestrial	Pohutukawa forest and treeland.	Cliff, terrace
Terrestrial	(Pohutukawa)/pasture treeland.	Terrace, cliff
Terrestrial	Pohutukawa-puriri-tawa forest.	Terrace, gully
Terrestrial	Kanuka scrub and forest.	Terrace, gully
Terrestrial	Manuka-(pohutukawa) scrub (70%) ⇔ manuka-(gorse) scrub (30%).	Cliff, hillslope
Terrestrial	Kanuka-whauwhaupaku-mamaku scrub and forest (50%) ⇔ whauwhau-mamaku scrub and forest	Hillslope, terrace

[1] Part of Haparapara River-Te Kaha occurs outside the 'coastal environment' study area (i.e. further than 1 km inland of MHWS).

[2] Identified as SVHZ-184 (Haparapara River) and SVHZ-185 (Te Kaha) in Wildland Consultants 2006g. These two sites have been amalgamated as they are ecologically linked (as per Clarkson *et al.* 1986).

Hydrosystem	Vegetation/Habitat Type	Landform
	(50%).	
	Tawa-puriri forest ⇔ hard beech-pohutukawa forest.	Hillslope, ridge
Riverine	Riverbed and open water.	
Terrestrial	Manuka-*Coprosma* spp.-koromiko scrub ⇔ kanuka scrub.	Alluvial flat Ridge, hillslope, terrace
Terrestrial	Pohutukawa-puriri-tawa forest ⇔ hard beech-pohutukawa forest.	Hillslope
Terrestrial	Manuka scrub.	Ridge, spur
Terrestrial	Whauwhaupaku-mamaku scrub and forest ⇔ kanuka scrub and forest ⇔ manuka-*Coprosma* spp.-koromiko scrub.	Hillslope, ridge
Terrestrial	Kanuka-whauwhaupaku-rewarewa forest (60%) ⇔ Whauwhaupaku-mamaku forest (20%) ⇔ Pohutukawa-puriri-tawa forest (20%).	Hillslope, ridge, terrace
Terrestrial	Manuka-gorse-(pampas) shrubland.	Steep hillslope, scarp
Terrestrial	Brush wattle/manuka-(gorse)-(akeake) forest.	Steep hillslope
Riverine	Crack willow/pasture treeland.	Alluvial flat
Riverine	Pampas tussockland.	Alluvial flat
	(Wildland Consultants 2006g and Wildland Consultants 1999a)	

Vegetation and Indigenous Flora

This site includes one of the only examples of taraire-dominant forest in the Region. Taraire is considered to be regionally uncommon. There are also examples of moderate quality pohutukawa forest (a formerly widespread vegetation type) along the coastline (Wildland Consultants 1999a). No Threatened plant species are known from here, however detailed surveys have not been carried out.

Indigenous Fauna

Common forest, field, wading and coastal bird species have been recorded. In addition, the dunes are a breeding site for banded dotterel (Threatened-Nationally Vulnerable) and variable oystercatcher (At Risk-Recovering) and a roosting site for shorebirds, gulls, herons, terns and waterfowl (K. Owen, Department of Conservation, pers. comm. 2010). The site includes a colony of several hundred pied shag (Threatened-Nationally Vulnerable) (Clarkson *et al.* 1986; Wildland Consultants 1999a). North Island weka (Threatened-Nationally Vulnerable) are present (K. Owen, Department of Conservation, pers. comm. 2012).

The Haparapara River is recognised as an area of outstanding wildlife value, is the only salmonid-free river in the district and one of the few such rivers in New Zealand. It supports populations of At Risk fish species including: shortjaw kōkopu and giant kōkopu (both At Risk-Declining) (Rasch 1989b), and longfin eel (also At Risk-Declining) (NIWA 2006).

The Haparapara River, Puremutahuri Stream, and Kereu River provide habitat and migratory pathways for indigenous freshwater fish. Species recorded in the Hāwai River include shortjaw kōkopu, banded kōkopu, bluegill bully, redfin bully, longfin eel, torrentfish (all of which are At Risk-Declining), shortfin eel, and common bully (Environment Bay of Plenty 2008). Species recorded in the Puremutahuri Stream are bluegill bully, redfin bully, inanga, longfin eel, torrentfish (all of which are At Risk-Declining) and banded kōkopu, In the Kereu River, shortjaw kōkopu, banded kōkopu, bluegill bully, redfin bully, longfin eel, inanga, lamprey, torrentfish (all of which are At Risk-

Declining), Cran's bully, banded kōkopu, shortfin eel, and common bully. Keith Owen also reports kōaro (At Risk-Declining) from the Haparapara catchment. There is also an inanga spawning site in the Haparapara catchment (K. Owen, Department of Conservation, pers. comm. 2012).

Kereu River mouth is a breeding site for banded rail (Threatened-Nationally Vulnerable) and variable oystercatcher (At Risk-Recovering) (K. Owen, Department of Conservation, pers. comm. 2010).

Haparapara River-Te Kaha (Part) is contiguous with a large tract of indigenous vegetation which was ranked being of high wildlife value by Rasch 1989b (SSWI Site Nos 57, 61 and 62). Threatened species which are known from the overall large tract include North Island kākā, bush falcon (both Threatened-Nationally Vulnerable), long-tailed bat (Acutely Threatened-Nationally Vulnerable), Hochstetter's frog (At Risk-Declining), and kākāriki (At Risk-Relict) (Rasch 1989b). Wildland Consultants (1999a) also report North Island weka, whio, and North Island brown kiwi (all Threatened-Nationally Vulnerable) from the general area.

Condition/Pressures

Grazing by domestic stock and firewood collection are threats to this site. Possums, mustelids and feral cats are well established (Wildland Consultants 1999a). Gorse, and pampas are present and it is likely that other weeds are present. Proximity to settlements, recreation use and the flammable nature of much of the vegetation means that future disturbance is probable. Development pressure for farms, forestry or residential properties is a potential threat. Parts of the site are adjacent to exotic plantation forests, so may be vulnerable to disturbance from activities associated with forest management. Parts of the site are very narrow, notably the pohutukawa forest along the coast, and are vulnerable to 'edge effects'.

Key Site Features

This site encompasses a diverse assemblage of coastal forest types extending from coastal pohutukawa-dominant forest, through regenerating kanuka and manuka-dominant communities into primary mixed podocarp-broadleaved forest in the hinterland. It also contains a river mouth of outstanding wildlife value (Wildland Consultants 1999a). This corridor of indigenous vegetation is considered to be ecologically important due to its large size and intactness. It is representative of the ecological character of Motū Ecological District.

The site contains small, narrow examples of pohutukawa forest. Pohutukawa forest was once common in the coastal zone of the Motū Ecological District but has been greatly reduced from its former extent (Wildland Consultants 1999a).

There are past or recent records of At Risk and common freshwater fish species, and a large suite of Threatened and At Risk fauna species. A regionally uncommon plant species is present.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	M
	3.5	H
	3.6	M
Diversity and Pattern	3.7	H
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	H
	3.12	M
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Banded dotterel (Threatened-Nationally Vulnerable) North Island weka (Threatened-Nationally Vulnerable) Pied shag (Threatened-Nationally Vulnerable) Variable oystercatcher (At Risk-Recovering) Banded rail (At Risk-Naturally Uncommon) **Fish:** Bluegill bully (At Risk-Declining) Redfin bully (At Risk-Declining) Giant kōkopu (At Risk-Declining) Inanga (At Risk-Declining) Kōaro (At Risk-Declining) Lamprey (At Risk-Declining) Longfin eel (At Risk-Declining) Shortjaw kōkopu (At Risk-Declining) Torrentfish (At Risk-Declining) **Other:** Hochstetter's frog (At Risk-Declining) Long-tailed bat (Acutely Threatened-Nationally Vulnerable) **Also provides habitat for:** Bush falcon (Threatened-Nationally Vulnerable) North Island brown kiwi (Threatened-Nationally Vulnerable) North Island kākā (Threatened-Nationally Vulnerable) Whio (Threatened-Nationally Vulnerable) Kākāriki (At Risk-Relict)
ii	✓	Northern brown kiwi (Endangered) Giant kōkopu (Vulnerable)

Policy	Criteria Met	Explanation
		New Zealand long-tailed bat (Vulnerable) Shortjaw kōkopu (Vulnerable) Weka (Vulnerable) Hochstetter's frog (Vulnerable)
iii	✓	High quality examples of threatened forest types, including pohutukawa forest and taraire-dominant forest.
iv	✓	Taraire is at its south-eastern distribution limit within this site. Banded rail are a naturally uncommon species.
v		Regionally Significant
vi		Partially protected (Nga Whenua Rahui Kawenata).
Policy Met:		11(a)
Justification:		Haparapara River-Te Kaha (Part) is a large coastal site that stretches along *c*.20 km of coastline. A large suite of Threatened fauna species are present. It provides breeding habitat for several Threatened and At Risk bird species, including a pied shag breeding colony of significant size. Several At Risk fish species are also present. The site contains vulnerable pohutukawa forest, as well as a regionally rare example of taraire-dominant forest. These factors make it consistent with Policy 11(a).

Notes

This site includes Motunui Island, which includes an urupa, and is a Māori reserve managed by a Trust Board (D. Demant, neighbouring landowner, pers. comm. 2006).

Areas of manuka-gorse shrubland in the northern part of the site were included in the site in 1999 (Wildland Consultants 1999a). On slopes too steep for forestry or farming, densely regenerating manuka has increased to a height of 2-3 m and shelters several other regenerating coastal shrub and tree species, including karamu, karamu, hangehange, akepiro, houpara, tauhinu, pohutukawa, mamaku and mapou. Gorse and pampas are more common on the very steep parts of the coastal scarp where disturbance is more frequent; however these areas also support regenerating indigenous species, and are an integral part of the vegetation sequence. If left undisturbed this area is likely to develop into coastal indigenous forest (but may include a component of wilding pines if these are not controlled).

References

Clarkson *et al.* 1986; Environment Bay of Plenty 2008; NIWA 2006; Owen *et al.* 2006; Rasch 1989b; Wildland Consultants 1999a.

WHANARUA (PART)[1]

Site Number [2]	216
Grid Reference (NZMG)	E2931879 N6379881
Local Authority	Ōpōtiki District Council
Ecological District	Motu
Protection Status	Protected (Department of Conservation, Whanarua Bay Scenic Reserve and QEII covenants) and unprotected parts
Site Area	333.1 ha
Altitudinal Range	0-380 m asl
Geology-Landform Type	Greywacke hard coast, Alluvium beach
HVES Number	127, 143

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa forest and treeland.	Cliff, terrace
Terrestrial	Pohutukawa/houpara forest ⇔ houpara-kohuhu forest ⇔ oioi-sea rush sedge and rushland.	Marine island
Terrestrial	Kanuka scrub and forest.	Hillslope, terrace
Terrestrial	Manuka scrub.	Hillslope, terrace
Terrestrial	Tawa-pohutukawa-puriri forest.	Hillslope, terrace
Terrestrial	Pohutukawa/puriri-tawa-karaka forest.	Steep hillslope
Terrestrial	Whauwhaupaku-mamaku-manuka-(radiata pine) scrub.	Steep hillslope
Terrestrial	(Rimu)-(miro)/tawa-kamahi-rewarewa forest.	Steep hillslope
Terrestrial	Hard beech-tawa-rewarewa forest.	Steep hillslope
Terrestrial	Hard beech-(rewarewa) forest.	Steep hillslope
Terrestrial	Unvegetated gravelfield.	Gravel beach
Terrestrial	Pohutukawa-oioi-*Ficinia nodosa*-tall fescue treeland.	Rocky outcrop
Terrestrial	Pohutukawa/gravel forest. (Wildland Consultants 2006g and Wildland Consultants 1999a)	Gravel beach

Vegetation and Indigenous Flora

This site is part of the mostly unprotected Whanarua-Kereu corridor (with a total area of 9,552 ha), which comprises a complete altitudinal sequence of vegetation from the coast to the lowland and montane forests of the interior East Cape region (Clarkson *et al.* 1986).

Carmichaelia williamsii (At Risk-Relict) occurs on coastal cliffs within and around the QEII covenant (Clarkson *et al.* 1986; A. Glaser, Department of Conservation, pers. comm. 2006; N. Willems, Bay of Plenty Regional Council, pers. comm. 2011). This is one of only two known mainland Bay of Plenty populations of this strictly coastal, native broom species. *Scandia rosifolia* (At Risk-Declining) and *Linum monogynum* (regionally uncommon) are present on the coastal cliffs around Maraehako Bay, and *Tetragonia tetragonioides* (At Risk-Naturally Uncommon) is present on the gravel beach here (Sarah Beadel pers. comm. 2012). *Crassula mataikona* (At Risk-Naturally Uncommon) and *Pimelea tomentosa* (Threatened-Nationally Vulnerable) are also present (Paul Cashmore, Department of Conservation, pers. comm. 2012). *Metrosideros carminea* (regionally uncommon) is also present.

[1] Part of Whanarua occurs outside the 'coastal environment' study area (i.e. further than 1 km inland of MHWS).

[2] Identified as SVHZ-186 in Wildland Consultants 2006g.

The Scenic Reserve includes part of one of the three best examples of pohutukawa-puriri-tawa forest and tawa-pohutukawa-puriri forest in Motū Ecological District; and the Motupapaku and Kaimeanui Islands are the best examples of island habitat in the Ecological District (Clarkson *et al.*1986).

Indigenous Fauna

Kereru and common forest, field, and coastal birds have been recorded (Wildland Consultants 1999a). This natural area includes SSWI Site No. 63 - Whanarua Stream (high rank) (Rasch 1989b).

A range of fish and amphibian species are known from the Whanarua Stream and tributaries, including Hochstetter's frog (At Risk-Declining); shortjaw kōkopu, giant kōkopu (both At Risk-Declining), and other galaxiid species (Rasch 1989b). The only recent records for threatened fish species are for shortjaw kōkopu and longfin eel (both At Risk-Declining) (NIWA 2006). In addition, Keith Owen (Department of Conservation) reports torrentfish (At Risk-Declining), inanga (At Risk-Declining), redfin bully (At Risk-Declining), bluegill bully (At Risk-Declining), and kōaro (At Risk-Declining) from Whanarua Stream.

Condition/Pressures

Grazing by domestic stock, firewood collection, and development for farms, forestry or housing are all potential threats. Wilding pines are beginning to establish and there are several other weed infestations (some apparently originating from the residential areas), including *Senecio petasitis*, strawberry dogwood, wild ginger and brush wattle, particularly along margins. Wilding pine and wattle control is occurring in 2012 and ginger is being treated as part of an ongoing annual control programme (A. Kirk, Department of Conservation, pers. comm. 2012). Pampas has spread throughout the northern faces where pine trees were cleared in 2008 (ibid.). Possums, cats, rodents and mustelids are present.

Key Site Features

Whanarua comprises large examples of high quality, representative vegetation, including nationally under-represented vegetation types (including pohutukawa/puriri-tawa-karaka forest, coastal hard beech forest, and pohutukawa forest). Whanarua forms part of one of the key ecological corridors in the Motū Ecological District, which includes an ecological sequence from coastal to submontane habitats. This site is also nationally significant because it provides critical habitat for an At Risk plant (one of only two mainland populations in the Bay of Plenty). As well, one Threatened, three additional At Risk, and two regionally uncommon plant species are present. There are recent or past records of eight At Risk fish species, and one At Risk reptile species.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	H
	3.5	H
	3.6	M
Diversity and Pattern	3.7	H
Naturalness	3.8	M

Criterion*	RPS Number*	Ranking**
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	H
	3.12	H
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** *Pimelea tomentosa* (Threatened-Nationally Vulnerable) *Carmichaelia williamsii* (At Risk-Relict) *Scandia rosifolia* (At Risk-Declining) *Crassula mataikona* (At Risk-Naturally Uncommon) New Zealand spinach (At Risk-Naturally Uncommon) **Fish:** Bluegill bully (At Risk-Declining) Giant kōkopu (At Risk-Declining) (1989) Inanga (At Risk-Declining) Kōaro (At Risk-Declining) Longfin eel (At Risk-Declining) Redfin bully (At Risk-Declining) Shortjaw kōkopu (At Risk Declining) Torrentfish (At Risk-Declining) **Frogs:** Hochstetter's frog (At Risk-Declining) (1993)
ii	✓	Giant kōkopu (Vulnerable) Hochstetter's frog (Vulnerable) Shortjaw kōkopu (Vulnerable)
iii	✓	Includes high quality pohutukawa forest, a threatened ecosystem type.
iv		
v	✓	Nationally Significant
vi		Partially protected (Whanarua Bay Scenic Reserve, QEII Covenants)
Policy Met:		11(a)
Justification:		Whanarua (Part) is consistent with Policy 11(a) because it includes high quality examples of a threatened coastal vegetation type (pohutukawa forest), supports populations of Threatened and At Risk species, and is of national significance. It supports one of only two mainland Bay of Plenty populations of an At Risk coastal plant species (*Carmichaelia williamsii*). In addition, it is part of one of the key ecological corridors in the Motū Ecological District, which includes an ecological sequence from coastal to submontane habitats. A small proportion of the site is legally protected.

References Beadel 1994a; Clarkson *et al.* 1986; NZPCN 2010; Rasch 1989b; Wildland Consultants 1999a; Wildland Consultants 2006g.

WAIMANU (PART)[1]

Site Number [2]	217
Grid Reference (NZMG)	E2935600 N6381279
Local Authority	Ōpōtiki District Council
Ecological District	Motu
Protection Status	Unprotected
Site Area	345.6 ha
Altitudinal Range	0-351 m asl
Geology-Landform Type	Greywacke hard coast

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Manuka-(pohutukawa) scrub.	Cliff, hillslope, ridge
Terrestrial	Tawa-puriri forest.	Hillslope, terrace
Terrestrial	Whauwhaupaku-mamaku scrub and forest.	Hillslope
Terrestrial	Pohutukawa forest and treeland.	Cliff, terrace
Terrestrial	Whauwhaupaku-mamaku scrub ⇔ manuka scrub.	Hillslope
Palustrine	(Crack willow)-(manuka)-(ti kouka)/raupo-*Eleocharis sphacelata-Carex geminata* reedland. (Wildland Consultants 2006g and Wildland Consultants 1999a)	Wetland

Vegetation and Indigenous Flora

No information on significant species.

Indigenous Fauna

Kereru, and common forest and field birds (Wildland Consultants 1999a). No response to audio tapes for spotless crake and fernbird calls (Wildland Consultants 2006g). It is likely that Te Waiti Stream provides migratory fish passage to indigenous species.

Condition/Pressures

Grazing by domestic stock, firewood collection, and development for farms, forestry or residential properties are all potential threats (Wildland Consultants 1999a). Crack willow is present and other weed species are likely to be established within the site. The site is bounded by pastoral land and a small area of exotic plantation forest, and the highway runs through the site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	L
	3.5	H
	3.6	H
Diversity and Pattern	3.7	H
Naturalness	3.8	M

[1] Part of Waimanu occurs outside the 'coastal environment' study area (i.e. further than 1 km inland of MHWS).

[2] Identified as SVHZ-187 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	H
	3.12	M
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Regionally Significant
vi		Unprotected
11(b)		
i	✓	Pohutukawa forest and treeland, tawa-puriri forest, scrub dominated by manuka, whauwhaupaku, and mamaku, and indigenous freshwater wetland
ii		
iii		
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Waimanu (Part) comprises a large area of secondary indigenous dominated vegetation, including vulnerable/nationally reduced habitats such as pohutukawa forest and freshwater wetlands. Overall the site is not the best example of its type within the Region, but has ecological values consistent with Policy 11(b).

Significance Justification

This is a large area of secondary indigenous vegetation which includes pohutukawa forest at various stages of regeneration. Pohutukawa forest was once widespread along the Motū Ecological District coastline. The raupo-dominant wetland at the eastern side of this site is a good quality, representative wetland in Motū Ecological District. This site forms part of an ecological linkage between protected areas at the coast and in the hinterland beyond the coastal bioclimatic zone (Wildland Consultants 1999a).

References

Clarkson *et al.* 1986; Wildland Consultants 1999a; Wildland Consultants 2006g.

RAUKŌKORE RIVER MOUTH (PART)[1]

Site Number [2]	218
Grid Reference (NZMG)	E2939257 N6382297
Local Authority	Ōpōtiki District Council
Ecological District	Motū (river mouth habitats), Pukeamaru (forest remnants to east)
Protection Status	Unprotected
Site Area	278.1 ha
Altitudinal Range	0-70 m asl
Geology-Landform Type	Greywacke hard coast, Alluvium beaches
HVES Number	128

Hydrosystem	Vegetation/Habitat Type	Landform
Riverine	Sandfield, gravelfield, shingle and river channel.	Beach, alluvial flat and sand plain
Terrestrial	Lupin-pohuehue-tauhinu vine-shrubland.	Sand dune, sand plain
Terrestrial	Tauhinu shrubland (with pohuehue).	Gravelfield
Terrestrial	Tauhinu-pohutukawa-pohuehue shrubland.	Gravelfield
Terrestrial	Blackberry vineland.	Sand plain
Palustrine	Raupo reedland.	Dune hollow wetland
Palustrine	Ti kouka treeland.	Dune hollow wetland
Estuarine	Oioi-saltmarsh ribbonwood-(*Cyperus ustulatus*) sedgeland.	Alluvial flat wetland
Palustrine	Harakeke flaxland	Dune hollow wetland
Palustrine	Lagoon.	Dune hollow wetland
Palustrine	Harakeke-raupo flaxland.	Dune hollow wetland
Palustrine	*Juncus microcephalus* rushland.	Dune hollow wetland
Palustrine	*Machaerina articulata* reedland.	Dune hollow wetland
Palustrine	Pasture.	Dune hollow wetland
Terrestrial	Pohutukawa-broadleaved species forest.	Hillslope
Terrestrial	Tawa-taraire-puriri-pohutukawa forest.	Gully, terrace
Terrestrial	Pohutukawa-taraire forest.	Gully, terrace
Terrestrial	Kanuka-pohutukawa-(puriri)-(rewarewa)-(taraire) forest.	Terrace
Terrestrial	Taraire forest.	
Terrestrial	Pohutukawa rockland.	Rock outcrop
Terrestrial	Pohutukawa forest and treeland.	Cliff and sand plain
Terrestrial	Kanuka scrub	Moderate hillslope
Terrestrial	Manuka scrub.	Hillslope
Terrestrial	Tauhinu scrub.	Moderate hillslope
	(Wildland Consultants 2006g and Wildland Consultants 1999a)	

Vegetation and Indigenous Flora

This is one of only two known localities on the Bay of Plenty mainland of *Carmichaelia williamsii* (At Risk-Relict) a native coastal broom species (recorded by Clarkson *et al.* 1986 and still present in 2006 (A. Glaser, Department of Conservation, pers. comm. 2006)).

In the late 1980s the lagoon had a plant assemblage comprising *Ruppia polycarpa* (regionally uncommon) and *Stuckenia pectinata*[1] (At Risk-

[1] Part of Raukōkore River Mouth occurs outside the 'coastal environment' study area (i.e. further than 1 km inland of MHWS).

[2] Identified as SVHZ-188 in Wildland Consultants 2006g.

Naturally Uncommon) which were both uncommon elsewhere in the Motū Ecological District (Regnier *et al.* 1988; Clarkson *et al.* 1986). This is the only example of lagoon vegetation in the Motū Ecological District (Clarkson *et al.*1986).

This is the only known location for taraire (a regionally uncommon species) in Pukeamaru Ecological District, and is also the eastern limit of taraire in New Zealand (Regnier *et al.* 1988). Regnier *et al.* (1988) reported the very small (1 ha) taraire remnant as being in excellent condition, however in 2006 it was observed to be grazed by stock, with little or no understorey, and probably little regeneration of taraire. Taraire forest would probably once have been much more extensive in the area.

Indigenous Fauna

The Raukōkore lagoon, river mouth and lower section of the braided river bed have high wildlife values (Wildland Consultants 1999a). Special features include Caspian tern, small numbers of breeding banded dotterel (both Threatened-Nationally Vulnerable), and a breeding colony of southern black-backed gulls at the Raukōkore River mouth (Clarkson *et al.* 1986; Rasch 1989b). Pied stilt (At Risk-Declining), variable oystercatcher (At Risk-Recovering) and northern New Zealand dotterel (Threatened-Nationally Vulnerable) are also known to breed here (K. Owen, Department of Conservation, pers. comm. 2010).

Freshwater fish which have been recorded in Raukōkore River include redfin bully, torrentfish, inanga (all of which are At Risk-Declining), shortfin eel, and common bully (Environment Bay of Plenty 2008), Other species are also likely to be present in the river or within its catchment. The Raukōkore River mouth is a migratory pathway for indigenous freshwater fish species, including torrentfish, redfin bully, inanga, and longfin eel (all At Risk-Declining).

Includes SSWI Site No. 65 (Raukōkore River Delta Wetland; moderate-high rank) and Site No. 64 (Papatea Swamp; potential rank) (Rasch 1989b).

Condition/Pressures

A major threat to the site is the spread of invasive weeds which alter natural plant communities (e.g. crack willow, blackberry, lupin, and *Juncus microcephalus*). Kikuyu grass is rampant on the terrestrial margins of the river mouth wetlands, suppressing regeneration of all native species. There are also several plants of horticultural origin naturalising in the area, including yucca, agapanthus, and arum lily. Other threats to the area include damage from recreational users, grazing of domestic stock, dumping of old motor vehicles, fire risk from campfires, and dumping of gravel in wetlands during earthworks for road development. The latter is particularly worrying as this lagoon is the only intact example of this landform in the Motū Ecological District (Clarkson *et al.* 1986). The site is bounded by pastoral land and small areas of horticulture.

Key Site Features

Raukōkore Rivermouth is a large site containing a wide range of landforms and indigenous vegetation types, several of which are nationally or regionally under-represented, rare, or distinctive. The natural character of the site is heavily impacted from a range of ongoing pressures, including pest plant and

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[1] Formerly known as *Potamogeton pectinatus.*

recreational use. The site contains two At Risk plant species, and two regionally uncommon plant species, and one species at its limit of distribution. There are records of three Threatened and two At Risk bird species at this site and the river is a habitat or migratory pathway for several At Risk and common species of indigenous freshwater fish.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	H
	3.5	H
	3.6	H
Diversity and Pattern	3.7	H
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	H
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** *Carmichaelia williamsii* (At Risk-Relict) *Stuckenia pectinata* (At Risk-Naturally Uncommon) (1980s) **Avifauna:** Caspian tern (Threatened-Nationally Vulnerable) (2011) Banded dotterel (Threatened-Nationally Vulnerable) (2011) Northern New Zealand dotterel (Threatened-Nationally Vulnerable) Pied stilt (At Risk-Declining) Variable oystercatcher (At Risk-Recovering) **Fish:** Inanga (At Risk-Declining) Lonfin eel (At Risk-Declining) Redfin bully (At Risk-Declining) Torrentfish (At Risk-Declining)
ii	✓	New Zealand dotterel (Endangered)
iii	✓	Includes pohutukawa forest and the only known location of taraire in Pukeamaru Ecological District.
iv	✓	Taraire reaches its southern and eastern distribution limits at Raukōkore.
v	✓	Nationally Significant
vi		Unprotected

Policy	Criteria Met	Explanation
Policy Met:		11(a)
Justification:		Raukōkore Rivermouth (Part) meets several Policy 11(a) criteria because it includes threatened coastal vegetation and habitat types (with one species at its eastern distributional limit), is a habitat of two At Risk plant species, and a breeding site of three Threatened and two At Risk shore bird species. The Raukōkore Lagoon is the only example of its type in Motū Ecological District, but is degraded in places by invasive weeds, grazing, and human activity.

Notes The lower Raukōkore River was identified as a Priority One Area for protection in Clarkson *et al.* (1986).

References Clarkson *et al.*1986; Environment Bay of Plety 2008; Regnier *et al.* 1988; Rasch 1989b; Wildland Consultants 1999a; Wildland Consultants 2006g.

EAST CAPE
ECOLOGICAL REGION

10. EAST CAPE ECOLOGICAL REGION

10.1 Overview

The East Cape Ecological Region comprises Pukeamaru, Waiapu, and Turanga Ecological Districts. It is a diverse region that includes the Pukeamaru Range, the coastal lowlands and hills to the east and south of the Raukūmara Range, and the Gisborne Plains. A feature of the ecological region is the mudstones, sandstones and siltstones which occur throughout. Only the western portion of the Pukeamaru Ecological District is within the Bay of Plenty Region.

10.2 Pukeamaru Ecological District

The Pukeamaru Ecological District is based on the Pukeamaru Range (991 m asl). There are steeply dissected low hills (approximately 100-480 m) of siltstone in the east and west of the district. Low and rolling hill country includes the foothills of the Raukūmara and Pukeamaru Ranges. There are several wide, flat-bottomed river valleys and a series of narrow coastal terraces in the west, north-east, east and throughout the Wharekahika Graben. The rugged, cliffed coastal zone is drained to the west by the Whangaparaoa River, to the north by the Wharekahika and Awatere Rivers, and to the east by the Waiapu River.

Tall forest would have covered much of the district prior to Māori occupation. Non-forest vegetation would have been restricted to sand dunes, coastal scrub, small wetlands and open riverbeds.

Pohutukawa and houpara are common on the coastal cliffs. Puriri, tawa and kohekohe, with or without pohutukawa, are found on coastal hillslopes. Coastal slopes on the Matakaoa Range would have comprised podocarps such as kahikatea, matai (*Prumnopitys taxifolia*), and rimu (*Dacrycarpus cupressinum*) in association with tawa, puriri and pohutukawa. Mangeao, common in tawa and puriri forests, is largely confined to the Matakaoa Range. On unstable sea cliffs and hillslopes, particularly along the coast near Te Araroa, scrub and shrubland species include kanuka, manuka, taupata, karamu, tutu, whauwhaupaku, *Pittosporum ralphii,* kohuhu, tauhinu, and whararikі. Kowhai ngutukaka (*Clianthus puniceus*[1]; Threatened-Nationally Critical) was probably once more common in this vegetation class but now has a very local distribution. *Brachyglottis perdicioides* (At Risk-Naturally Uncommon)[1] also may have been more common but now has a very local distribution.

Freshwater wetlands have been greatly reduced in extent. Species common in the remaining areas include *Carex virgata*, spike sedge (*Eleocharis acuta*), *Eleocharis sphacelata*, *Machaerina rubiginosa*, *M. articulata*, harakeke, swamp coprosma and manuka. Intertidal flats at the Whangaparaoa and Karakatuwhero River mouths are probably close to their original extent and composition and are dominated by *Schoenoplectus pungens, Isolepis cernua,* arrow grass, sea rush, oioi, *Ficinia nodosa* and saltmarsh ribbonwood.

[1] Not known from within the Bay of Plenty Region.

Spinifex, pingao (At Risk-Relict), sand tussock (At Risk-Declining) and *Carex pumila* would once have been common on dunes. However indigenous sand dune communities have been much reduced in extent and, while spinifex is often present, adventive species are now common.

Small populations of Threatened plant species occur in the Bay of Plenty part of this Ecological District: *Carmichaelia williamsii* (At Risk-Relict), *Pimelea tomentosa* (Threatened-Nationally Vulnerable), pingao (At Risk-Relict), and New Zealand spinach (At Risk-Naturally Uncommon).

Table 15: Threatened and notable species in the coastal bioclimatic zone of Pukeamaru Ecological District (Bay of Plenty Region).

Scientific Name	Common Name	Threat Classification/ Significance[1]
BIRDS		
Threatened		
Botaurus poiciloptilus	Australasian bittern	Nationally Endangered
Charadrius bicinctus bicinctus	banded dotterel	Nationally Vulnerable
Charadrius obscurus aquilonius	northern New Zealand dotterel	Nationally Vulnerable
Egretta sacra sacra	reef heron	Nationally Vulnerable
Larus novaehollandiae scopulinus	red-billed gull	Nationally Vulnerable
Phalacrocorax varius varius	pied shag	Nationally Vulnerable
At Risk		
Bowdleria punctata vealeae	North Island fernbird	Declining
Sterna striata striata	white-fronted tern	Declining
Porzana tabuensis plumbea	spotless crake	Relict
Phalacrocorax melanoleucos brevirostris	little shag	Naturally Uncommon
VASCULAR PLANTS		
Threatened		
Pimelea tomentosa		Nationally Vulnerable
At Risk		
Carmichaelia williamsii		Relict
Ficinia spiralis	pingao	Relict
Tetragonia tetragonioides	New Zealand spinach	Naturally Uncommon
Data Deficient		
Pimelea longifolia	taranga	Data Deficient
Other Notable Species		
Lastreopsis velutina		Regionally Uncommon
Lindsaea linearis		Regionally Uncommon
Olearia albida		Regionally Uncommon
FRESHWATER FISH		
At Risk		
Anguilla dieffenbachii	longfin eel	Declining
Cheimarrichthys fosteri	torrentfish	Declining
Galaxias argenteus	giant kōkopu	Declining
Galaxias maculatus[2]	inanga	Declining
Gobiomorphus hubbsi	bluegill bully	Declining
Gobiomorphus huttoni	redfin bully	Declining

Notes

[1] Threat classifications and regionally significant evaluations follow de Lange *et al.* 2009, Miskelly *et al.* 2008; Allibone *et al*. 2010; and Beadel 2009.

[2] Spawning sites on major rivers and estuaries.

WAIOKAHA STREAM CORRIDOR (PART)[1]

Site Number [2]	219
Grid Reference (NZMG)	E2941590 N6384152
Local Authority	Ōpōtiki District Council
Ecological District	Pukeamaru
Protection Status	Unprotected
Site Area	10.9 ha
Altitudinal Range	12-60 m asl
Geology-Landform Type	Greywacke hard coast

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa treeland.	Steep hillslope
Terrestrial	Pohutukawa-puriri-tawa forest.	Steep hillslope, terrace
Terrestrial	Kanuka-broadleaved species forest. (Wildland Consultants 1999a)	Hillslope, terrace.

Vegetation and Indigenous Flora No information on significant species.

Indigenous Fauna Common forest birds present (Wildland Consultants 1999a).

Condition/Pressures The site is relatively narrow and is bounded by pastoral and horticultural land uses. Grazing was recorded in the 1990s (Wildland Consultants 1999a).

Key Site Features This site is locally significant because it contains coastal vegetation which is part of an ecological corridor linking the coast with the hinterland. The pohutukawa-dominated forest is significant because this vegetation type has been greatly reduced in extent in the Pukeamaru Ecological District (Wildland Consultants 1999a). It has high potential for restoration. There is little flora and fauna information available for this site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	L
	3.3	M
	3.4	L
	3.5	L
	3.6	H
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	M

[1] Part of Waiokaha Stream Corridor occurs outside the 'coastal environment' study area (i.e. further than 1 km inland of MHWS).

[2] Identified as SVHZ-189 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Pohutukawa-dominant forest and treeland, kanuka-broadleaved forest.
ii		
iii	✓	Pohutukawa forest is largely confined to the coastal environment.
iv	N/A	
v	✓	Waiokaha Stream is likely to be a migratory pathway for indigenous fish.
vi	✓	Part of a coastal-lowland corridor of regenerating indigenous vegetation through pasture and plantation forest.
Policy Met:		11(b)
Justification:		Waiokaha Stream Corridor (Part) comprises a small, linear remnant of predominantly indigenous forest, scrub, and treeland, including areas of pohutukawa forest, a vulnerable coastal vegetation type that is now much reduced in Pukeamaru Ecological District. The presence of pohutukawa, and its role as part of an ecological corridor, means this site is consistent with Policy 11(b). This assessment is qualified by some uncertainty, as there is little information available for the site.

Notes This site includes the coastal portion of a secondary indigenous vegetation corridor (mainly comprising secondary vegetation) extending *c.*5 km inland along the Waiokaha Stream.

References Regnier *et al.* 1988; Wildland Consultants 1999a; Wildland Consultants 2006g.

TAURANGA STREAM (PART)[1]

Site Number [2]	220
Grid Reference (NZMG)	E2941906 N6384565
Local Authority	Ōpōtiki District Council
Ecological District	Pukeamaru
Protection Status	Unprotected
Site Area	17.5 ha
Altitudinal Range	14-53 m asl
Geology-Landform Type	Greywacke hard coast

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa-puriri forest.	Gully.
Terrestrial	Kanuka-manuka-(broadleaved species) scrub and forest. (Wildland Consultants 1999a)	Gully, terrace.

Vegetation and Indigenous Flora No information on significant species.

Indigenous Fauna Common forest and field birds (Wildland Consultants 1999a). The stream is relatively unmodified and provides native fish habitat. Longfin eel and redfin bully (both At Risk-Declining) are present (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures The site has been grazed and used as a firewood source. Proximity to settlements, recreation use and the flammable nature of much of the vegetation means that future disturbance is probable (Wildland Consultants 1999a). The site is bounded by pastoral and horticultural land uses.

Key Site Features This site is locally significant because it is part of an ecological corridor linking natural areas on the coast with those in surrounding areas, and contains characteristic coastal indigenous vegetation of the Pukeamaru Ecological District. The riparian vegetation provides protection for a small unmodified stream, which may have good quality aquatic habitat, and which provides habitat and a migratory pathway for two At Risk freshwater indigenous fish species. It has high potential for restoration, but requires more detailed survey. There is little flora and fauna information available for this site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	L
	3.3	M
	3.4	L
	3.5	L
	3.6	H
Diversity and Pattern	3.7	L

[1] Part of Tauranga Stream occurs outside the 'coastal environment' study area (i.e. further than 1 km inland of MHWS).

[2] Identified as SVHZ-190 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Fish:** Longfin eel (At Risk-Declining) Redfin bully (At Risk-Declining)
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Pohutukawa-puriri forest, kanuka-manuka-broadleaved scrub and forest.
ii		
iii	✓	Pohutukawa forest is largely confined to the coastal environment.
iv	N/A	
v	✓	Tauranga Stream is a migratory pathway for indigenous freshwater fish.
vi	✓	Part of an ecological corridor linking natural areas on the coast with those in surrounding areas.
Policy Met:		11(b)
Justification:		Tauranga Stream (Part) comprises a small, linear remnant of predominantly indigenous forest, scrub, and treeland, including areas of pohutukawa forest, a threatened coastal vegetation type that is now much reduced in Pukeamaru Ecological District. The presence of pohutukawa forest, and other indigenous vegetation, means this site is consistent with Policy 11(b). The stream is a migratory pathway for indigenous freshwater fish, including At Risk species. This assessment is qualified by some uncertainty, as there is little information available for the site.

Notes This site includes the coastal portion of a secondary indigenous riparian vegetation corridor extending 2 km inland along the Tauranga Stream.

References Regnier *et al.* 1988; Wildland Consultants 1999a; Wildland Consultants 2006g.

WAIHAU POHUTUKAWA REMNANTS

Site Number [1]	221
Grid Reference (NZMG)	E2945142 N6385765
Local Authority	Ōpōtiki District Council
Ecological District	Pukeamaru
Protection Status	Unprotected
Site Area	30.8 ha
Altitudinal Range	0-94 m asl
Geology-Landform Type	Greywacke hard coast

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa forest.	Terrace, cliff
Terrestrial	Pohutukawa-puriri forest and treeland.	Steep hillslope
Terrestrial	Pohutukawa-puriri-kanuka forest. (Wildland Consultants 1999a)	Terrace, gully

Vegetation and Indigenous Flora

This site comprises small examples of pohutukawa forest which increase in canopy species diversity as they extend inland. On gentle terraces adjacent to the beach there is little other than pohutukawa, while on the steep faces of the coastal scarp there is also frequent puriri, and in the larger remnants on top of the older terrace frequent kanuka and occasional rewarewa, kohekohe, karaka, tawa, rimu, and kahikatea also occur in the canopy.

Indigenous Fauna

Common forest birds, including bellbird, North Island fantail and tui heard in 2006. Reef heron (Threatened-Nationally Vulnerable) was present in 2012 (Sarah Beadel pers. observation 2012).

Condition/Pressures

None of these remnants are fenced and the understorey is consequently in poor condition, consisting of grazed pasture. There are extensive areas of Japanese honeysuckle in ungrazed parts of the understorey next to State Highway 35. The remnants are bounded by pastoral land but coastal residential development is occurring around the site.

Key Site Features

This site comprises small examples of pohutukawa forest which increase in canopy species diversity further from the coast. These remnants are part of a representative semi-continuous altitudinal vegetation sequence from coastal to lowland and montane forest, which is one of the largest tracts of forest remaining in the Pukeamaru Ecological District (Regnier *et al.* 1988). Fragmentation and grazing of the understorey are the major pressures operating on this site. One Threatened bird secies is present on the coastal margin. This site is also a regionally significant geological site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	L
	3.3	L
	3.4	L
	3.5	M
	3.6	H
Diversity and Pattern	3.7	L

[1] Identified as SVHZ-191 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	M
	3.12	L
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	Reef heron (Threatened-Nationally Vulnerable)
ii		
iii		
iv		
v		Regionally Significant
vi		Unprotected
11(b)		
i	✓	Pohutukawa and puriri-dominant forest
ii		
iii	✓	Forest dominated by pohutukawa and puriri is largely confined to the coastal environment
iv	N/A	
v		
vi	✓	Provides a link between the open coast and Te Ranginui-Oruaiti-Whangaparaoa (Part) and indigenous vegetation further inland.
Policy Met:		11(b)
Justification:		The Waihau Pohutukawa Remnants contain small, modified examples of pohutukawa forest, a threatened coastal vegetation type, and as such it meets Policy 11(b). One Threatened bird species present. The site is fragmented and is of insufficient ecological condition to be consistent with Policy 11(a).

Notes

This site is part of a Category 1 Priority Area for protection in Regnier *et al.* (1988).

Best preserved sequence of uplifted Quaternary marine terrace along Bay of Plenty-East Cape coast - regionally important (Kenny and Hayward 1996).

References

Kenny and Hayward 1996; Rasch 1989b; Regnier *et al.* 1988; Wildland Consultants 1999a; Wildland Consultants 2006g.

TE RANGINUI-ORUAITI-WHANGAPARAOA-TAPUAEHARURU (PART)[1]

Site Number [2]	223
Grid Reference (NZMG)	E2946563 N6385614
Local Authority	Ōpōtiki District Council
Ecological District	Pukeamaru
Protection Status	Protected (Department of Conservation, Oruaiti Beach Recreation Reserve and Nga Whenua Rahui Kawenata) and unprotected parts
Site Area	321.7 ha
Altitudinal Range	7-121 m asl
Geology-Landform Type	Greywacke hard coast, Sand
HVES Numbers	129, 161, 199, 130

Hydrosystem	Vegetation/Habitat Type	Landform
	Te Ranginui (see A on location map)	
Terrestrial	Tawa-puriri forest.	Terrace, hillslope
Terrestrial	Kanuka forest.	Terrace, hillslope
Terrestrial	Tawa-puriri forest ⇔ hard beech forest.	Terrace, hillslope
Terrestrial	Broadleaved species shrubland and forest.	Hillslope
Terrestrial	Puriri-pohutukawa forest.	Hillslope
	(Wildland Consultants 2006g and Wildland Consultants 1999a)	
	Oruaiti (see B on location map)	
Terrestrial	Pohutukawa/broadleaved species forest.	Steep hillslope
Terrestrial	Tawa-puriri forest.	Steep hillslope
Terrestrial	Tawa-puriri-pohutukawa forest.	Steep hillslope
Terrestrial	Kanuka scrub and forest.	Steep hillslope
Terrestrial	Manuka scrub.	Steep hillslope
Terrestrial	Broadleaf species scrub and forest.	Steep hillslope
Terrestrial	Hard beech forest.	Steep hillslope
	(Regnier *et al.* 1988 and Wildland Consultants 1999a)	
	Whangaparaoa (see C on location map)	
Terrestrial	Pohutukawa-(tawa)/broadleaved species forest	Steep hillslope
Terrestrial	Broadleaved species scrub and forest.	Steep hillslope
Terrestrial	Manuka scrub.	Steep hillslope
	(Regnier *et al.*1988)	
	Tapuaeharuru (see D on location map)	
Terrestrial	Pohutukawa-tawa/broadleaved species forest.	Gully
Terrestrial	Manuka scrub.	Hillslope, terrace
Terrestrial	Tawa-puriri forest.	Gully
Terrestrial	Sandfield.	Beach sands
Terrestrial	Spinifex grassland.	Sand dune
Terrestrial	Pohutukawa treeland.	Sand dune
Terrestrial	Pohutukawa-puriri/nikau/broadleaved species forest.	Steep hillslope, cliff
	(Wildland Consultants 2006g and Wildland Consultants 1999a)	

[1] Part of Te Ranginui-Oruaiti-Whangaparaoa-Tapuawharuru occurs outside the 'coastal environment' study area (i.e. further than 1 km inland of MHWS).

[2] Identified as Te Ranginui (SVHZ-192), Oruaiti (SVHZ-194), Whangaparaoa (SVHZ-196) and Tapuaeharuru (SVHZ-195) in Wildland Consultants 2006g. These four sites have been amalgamated as they are ecologically linked (as per Regnier *et al.* 1988).

Vegetation and Indigenous Flora

This site comprises an extensive tract of indigenous vegetation forming an altitudinal sequence from coastal to lowland forest (Regnier *et al.* 1988). *Pimelea tomentosa* (Threatened-Nationally Vulnerable), *Lindsaea linearis* (regionally uncommon), and *Pimelea longifolia* (Data Deficient) may occur in the post-fire vegetation (e.g. manuka and kanuka scrub) within this site (Regnier *et al.* 1988).

Hard beech forest (present in Oruaiti) is not common in the coastal bioclimatic zone (Regnier *et al.* 1988).

Oruaiti Beach has the best example of spinifex grassland and pohutukawa-dominant forest in the Pukeamaru Ecological District (Regnier *et al.* 1988). Pingao (At Risk-Relict) has been planted on the beach.

Indigenous Fauna

Banded dotterel (Threatened-Nationally Vulnerable) nest along some of the streams (Rasch 1989b). Northern New Zealand dotterel, banded dotterel, and pied shag, all of which are Threatened-Nationally Vulnerable, nest at the mouth of the Whangaparao River (BOPRC 2012). Kereru, and common forest and field birds are present (Wildland Consultants 1999a). This area includes SSWI Site Nos 72 and 73 (potential rank) (Rasch 1989b).

The streams in this site will provide fish habitat and migratory fish passage (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Feral goats, pigs, possums, grazing, subdivision, motor vehicles on dunes and residential development (Wildland Consultants 1999a) are all threats to this site. There is a relatively large infestation of ginger (Wildland Consultants 2006g).

Within Oruaiti Beach Recreation Reserve, pampas has been treated in the past few years and is due for follow up control. Large macrocarpa trees have been drilled and injected with herbicide since 2007, with at least six smaller trees on the roadside boundary yet to be treated. Saltwater paspalam, marram grass, kikuyu, coral tree (Sarah Beadel pers. observation), and scattered blackberry are also present within the reserve. No evidence of rabbits. (source: A. Kirk, Department of Conservation, pers. comm. 2012).

Key Site Features

This site is part of a large (3,640 ha), representative tract of indigenous vegetation in the Pukeamaru Ecological District forming an altitudinal sequence from coastal habitats to lowland forest. This site contains one of the best representative examples of pohutukawa-dominated forest in the Region. It provides habitat for one Threatened, one At Risk (planted), one Data Deficient, and one regionally uncommon plant species. Three Threatened bird species are present.

Parts of this site were identified as a Category 1 Priority Area in Regnier *et al.* (1988) and much of the site was ranked as coastal vegetation of national significance in Beadel (1994a). It contains representative examples of vegetation types that are nationally under-represented or regionally distinctive. A range of pressures common to coastal habitats in the Bay of Plenty east of Ōpōtiki are present, including pest plants and animals.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	H
	3.5	H
	3.6	H
Diversity and Pattern	3.7	H
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	H
	3.12	H
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** Pingao (At Risk-Relict) **Fauna:** Banded dotterel (Threatened-Nationally Vulnerable) (1989) Northern New Zealand dotterel (Threatened-Nationally Vulnerable) Pied shag (Threatened-Nationally Vulnerable)
ii	✓	New Zealand dotterel (Endangered)
iii	✓	Hard beech forest, pohutukawa forest
iv		
v	✓	Nationally Significant
vi		Partially protected (Nga Whenua Rahui Kawenata).
Policy Met:		11(a)
Justification:		Te Ranginui-Oruaiti-Whangaparaoa-Tapuaeharuru (Part) comprises an extensive tract of indigenous vegetation, including the best examples of spinifex grassland and pohutukawa-dominant forest in Pukeamaru Ecological District, and rare examples of coastal hard beech forest. One Threatened plant and four Threatened bird species are present at the site. The site is of national significance and is consistent with Policy 11(a).

Notes

Oruaiti (SVHZ-194) is the best preserved sequence of uplifted Quaternary marine terrace along Bay of Plenty-East Cape coast - regionally important (Kenny and Hayward 1996).

Whangaparaoa (SVHZ-196) is part of a Category 1 Priority Area recommended for protection in the Pukeamaru Ecological District (Regnier *et al.* 1988).

References

Beadel 1994a; Department of Conservation 1995; Kenny and Hayward 1996; Rasch 1989b; Regnier *et al.* 1988; Wildland Consultants 1999a; Wildland Consultants 2006g; BOPRC 2012.

ORUAITI WETLAND

Site Number [1]	222
Grid Reference (NZMG)	E2946563 N6385614
Local Authority	Ōpōtiki District Council
Ecological District	Pukeamaru
Protection Status	Unprotected
Site Area	2.7 ha
Altitudinal Range	7-10 m asl
Geology-Landform Type	Greywacke hard coast

Hydrosystem	Vegetation/Habitat Type	Landform
Palustrine	Raupo-*Ficinia nodosa*-wild ginger-*Cyperus ustulatus* reedland. (Wildland Consultants 2006g)	Wetland

Vegetation and Indigenous Flora No significant species recorded.

Indigenous Fauna No response to spotless crake and fernbird audio tapes at the raupo reedland (Wildland Consultants 2006g).

Condition/Pressures Pampas and wild ginger are encroaching. The site is bounded by the highway, pastoral land, residential properties, and a large area of forest to the south (Te Ranginui-Oruaiti-Whangaparaoa-Tapuaeharuru).

Key Site Features This small wetland is locally significant as an example of coastal palustrine reedland. This vegetation type has been severely reduced in area in the Bay of Plenty through drainage and disturbance. It is contiguous with a large area of indigenous forest (Te Ranginui-Oruaiti-Whangaparaoa-Tapuaeharuru) which increases its long-term viability and its value to wildlife.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	L
Rarity or Distinctive Features	3.2	L
	3.3	M
	3.4	L
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	L
Ecological Context	3.9	H
	3.10	L
Viability and Sustainability	3.11	L
	3.12	L
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

[1] Identified as SVHZ-193 in Wildland Consultants 2006g.

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Raupo-*Ficinia nodosa*-wild ginger-*Cyperus ustulatus* reedland
ii		
iii	✓	Coastal freshwater wetland
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Oruaiti Wetland is relatively small and impacted by ginger and pampas infestations. However, it retains a predominantly indigenous vegetation cover, and as a coastal freshwater wetland it is consistent with Policy 11(b).

References Wildland Consultants 2006g.

WHANGAPARAOA B

Site Number [1]	226
Grid Reference (NZMG)	E2950924 N6389695
Local Authority	Ōpōtiki District Council
Ecological District	Pukeamaru
Protection Status	Unprotected
Site Area	11.6 ha
Altitudinal Range	19-64 m asl
Geology-Landform Type	Greywacke hard coast

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Kanuka forest.	Steep hillslope, cliff
Terrestrial	Pohutukawa-kanuka forest. (Wildland Consultants 2006g and Wildland Consultants 1999a)	Steep hillslope, cliff

Vegetation and Indigenous Flora

Secondary kanuka forest surrounds a small remnant of primary pohutukawa forest on a coastal scarp overlooking the Whangaparaoa dune wetland system. The forest understorey on cliff faces has dense populations of *Machaerina sinclairii* and whaririki (Wildland Consultants 2006g).

Indigenous Fauna

Common field bird species (Wildland Consultants 1999a).

Condition/Pressures

This site is grazed. Numerous adventive species are well established, including exotic grasses, lupin and gorse (Wildland Consultants 1999a). The site is bounded by grazed pasture.

Key Site Features

This site is locally significant because it provides an ecological linkage and buffer to the Whangaparaoa Beach and River Mouth dune wetland system (which is nationally significant). In addition, pohutukawa forest is present. This forest type was formerly widespread in coastal areas of Pukeamaru Ecological District, but has now been greatly reduced in extent (Wildland Consultants 1999a).

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	L
	3.3	L
	3.4	L
	3.5	L
	3.6	N/A
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M

[1] Identified as SVHZ-197 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Kanuka-dominant forest and a small area of pohutukawa forest.
ii		
iii	✓	Pohutukawa forest
iv	N/A	
v		
vi	✓	Ecological buffer to Whangaparaoa Beach and River Mouth and a link to Te Ranginui-Oruaiti-Whangaparaoa (Part).
Policy Met:		11(b)
Justification:		Whangaparaoa B is consistent with Policy 11(b) because it contains remnant pohutukawa forest - albeit grazed and impacted by weed invasion - and acts as a buffer and linkage for the adjacent Whangaparaoa Beach and River Mouth site.

Notes Previously identified as coastal vegetation of local significance in Beadel (1994a). Not part of a recommended area for protection in Regnier *et al.* (1988).

References Beadel 1994a; Regnier *et al.* 1988; Wildland Consultants 1999a; Wildland Consultants 2006g.

WHANGAPARAOA BEACH AND RIVER MOUTH

Site Number [1]	225
Grid Reference (NZMG)	E2950872 N6390454
Local Authority	Ōpōtiki District Council
Ecological District	Pukeamaru
Protection Status	Protected (Department of Conservation, Whangaparaoa Beach Marginal Strip) and unprotected parts
Site Area	159.9 ha
Altitudinal Range	0-20 m asl
Geology-Landform Type	Sand, Alluvium beach, Greywacke hard coast
HVES Numbers	132, 163

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Lupin/Yorkshire fog-Kentucky bluegrass (*Poa pratensis*) grassland (includes patches of blackberry, pohuehue, raupo, *Cyperus ustulatus* and harakeke).	Sand dune, terrace
Palustrine	*Ficinia nodosa* sedgeland.	Wetland
Terrestrial	Spinifex grassland.	Sand dune
Estuarine	Saltmarsh ribbonwood-oioi sedge-shrubland.	Wetland
Estuarine/Riverine	*Schoenoplectus pungens-Isolepis cernua*-arrow grass herb-sedgeland.	Wetland
Estuarine	Sea rush-oioi sedge-rushland.	Wetland
Riverine/Terrestrial	Riverbed and sandfield.	Alluvial flat
Riverine	River channel/(open water).	Alluvial flat
Terrestrial	Sandfield.	Sand dune
Terrestrial	Bracken-(*Ficinia nodosa*)-(wild ginger) fernland.	Sand dune
Terrestrial	Ponga/kawakawa-karamu-Japanese honeysuckle-hangehange shrubland.	Steep hillslope
Terrestrial	Pohutukawa forest.	Steep hillslope, cliff
Palustrine	Open water.	Dune lake
Palustrine	*Eleocharis sphacelata*-raupo-*Machaerina articulata* reedland (60%) ⇔ raupo-*Machaerina articulata* reedland (30%) ⇔ open water (10%).	Wetland
Palustrine	Crack willow forest.	Wetland
Terrestrial	Gravelfield.	Terrace
Terrestrial	Bracken-(*Cyperus ustulatus*)-(pampas)-(ti kouka) fernland.	Sand dune
Palustrine	Raupo-harakeke flax-reedland.	Wetland
Marine	Worm field.	Subtidal channel
Marine	Worm field.	Intertidal flat
	(Wildland Consultants 2006g and Wildland Consultants 1999a)	

Vegetation and Indigenous Flora

New Zealand spinach (At Risk-Naturally Uncommon) is present (Paul Cashmore, Department of Conservation, pers. comm. 2012). Special features include spinifex grassland and two natural plants of pingao (At Risk-Relict) on the sand gravel plain (Regnier *et al.* 1988). Pingao and spinifex have been planted here by Whangaparaoa School, with the assistance of Coast Care (T. Pook pers. comm. 2006).

The dune lake and dune hollow wetlands in the south of the site are good examples of a nationally under-represented habitat type, however they are

[1] Identified as SVHZ-198 in Wildland Consultants 2006g.

being degraded by crack willow invasion (Wildland Consultants 2006g).

Pohutukawa forest is present in the south of the site. This forest type has been greatly reduced in extent within the Pukeamaru Ecological District (Wildland Consultants 1999a).

This site is part of one of the most natural remaining river mouth wetland complexes in the Pukeamaru Ecological District. It contains a diverse assemblage of indigenous saline, coastal, sand dune, and freshwater communities including the best and most extensive areas of saltmarsh vegetation in the Pukeamaru Ecological District. The site also contains the most extensive examples of sea rush-oioi sedge-rushland and *Schoenoplectus pungens-Isolepis cernua*-arrow grass herb-sedgeland and the best example of saltmarsh ribbonwood-oioi sedge-shrubland in Pukeamaru Ecological District.

Indigenous Fauna

A diverse fauna associated with a range of habitats is present. Most notable are three breeding pairs of northern New Zealand dotterel (Threatened-Nationally Vulnerable) (A. Glaser, Department of Conservation, pers. comm. 2006); Australasian bittern (Threatened-Nationally Endangered) (T. Pook pers. comm. 2006); spotless crake (At Risk-Relict) and North Island fernbird (At Risk-Declining) (Regnier *et al.* 1988). Banded dotterel (Threatened-Nationally Vulnerable) are also reported to have bred here in the past (SSWI Site No. 78, Whangaparaoa River Bar - 'high' habitat rank; Rasch 1989b). This site includes SSWI Site No. 76, Waitawake River Mouth (high rank) from Rasch (1989b).

The beach and dune also provide habitat for breeding pied stilt (At Risk-Declining), variable oystercatcher (At Risk-Recovering), pied shag (Threatened-Nationally Vulnerable) and black shag (At Risk-Naturally Uncommon) (K. Owen, Department of Conservation, pers. comm. 2010).

Waitawake Stream has a population of giant kōkopu, longfin eel, bluegill bully (Rasch 1989b) and torrentfish (NIWA 2006) (all At Risk-Declining). Other at risk species present include redfin bully (At Risk-Declining) (K. Owen, Department of Conservation, pers. comm. 2012). There are whitebait (inanga, At Risk-Declining) spawning grounds amongst rushes, sedges, grasses and herbs on the edges of drains within this site (A. Glaser, Department of Conservation, pers. comm. 2006). Fish recorded in the Whagaparaoa River include inanga, torrentfish, longfin eel (all of which are classified at Risk-Declining), Cran's bully, and shortfin eel (Environment Bay of Plenty 2008).

An introduced frog species was heard in the dune lake during the 2006 site visit.

Condition/Pressures

Horses are regularly grazed here. Invasive weeds include lupin, blackberry, exotic grasses, boxthorn wild ginger and Japanese honeysuckle. Crack willow is invading the dune hollow wetland (Wildland Consultants 2006g). Drainage for pastoral agriculture and eutrophication of waterways are also threats to the wetland and river.

In general the wettest sites (estuarine or freshwater) are dominated by indigenous vegetation associations while adventive species are characteristic of drier locations.

Key Site Features

This site is part of one of the most natural remaining river mouth wetland

complexes in the Pukeamaru Ecological District. It contains a diverse assemblage of indigenous saline, coastal, sand dune, and freshwater communities (including nationally and regionally under-represented types). This includes the best and most extensive areas of saltmarsh vegetation in the Pukeamaru Ecological District. The site also contains the most extensive examples of sea rush-oioi sedge-rushland and *Schoenoplectus pungens-Isolepis cernua*-arrow grass herb-sedgeland, and the best example of saltmarsh ribbonwood-oioi sedge-shrubland in Pukeamaru Ecological District (Regnier *et al.* 1988). Four Threatened and five At Risk bird species, and six At Risk fish species, are currently known from the site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	M
	3.5	H
	3.6	H
Diversity and Pattern	3.7	H
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	H
Viability and Sustainability	3.11	H
	3.12	M
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Flora:** Pingao (At Risk-Relict) (1988) New Zealand Spinach (At Risk-Naturally Uncommon)
	✓	**Avifauna:** Australasian bittern (Threatened-Nationally Endangered) Northern New Zealand dotterel (Threatened-Nationally Vulnerable) Banded dotterel (Threatened-Nationally Vulnerable) (2011) Pied shag (Threatened-Nationally Vulnerable) North Island fernbird (At Risk-Declining) (1988) Pied stilt (At Risk-Declining) Variable oystercatcher (At Risk-Recovering) Spotless crake (At Risk-Relict) (1988) Black shag (At Risk-Naturally Uncommon) **Fish:** Bluegill bully (At Risk-Declining) Giant kōkopu (At Risk-Declining) (1989)

Policy	Criteria Met	Explanation
		Inanga (At Risk-Declining) Longfin eel (At Risk-Declining) (1989) Redfin bully (At Risk-Declining) Torrentfish (At Risk-Declining)
ii	✓	Australasian bittern (Endangered) New Zealand dotterel (Endangered) Giant kōkopu (Vulnerable)
iii	✓	High quality examples of originally rare and/or threatened ecosystem types including sand dunes, dune deflation hollows, pohutukawa forest, and estuarine wetlands (including the best saltmarsh in the Ecological District).
iv		
v	✓	Nationally Significant
vi		Unprotected
Policy Met:		11(a)
Justification:		Whangaparaoa Beach and River Mouth meets a number of Policy 11(a) criteria. The site contains the best and most extensive areas of saltmarsh vegetation in the Pukeamaru Ecological District, as well as pohutukawa forest. Naturally uncommon ecosystem types present include sand dunes, dune deflation hollows, and estuaries. The site provides habitat for four Threatened bird species, five At Risk bird species, and six At Risk freshwater fish species.

Notes

This site is part of a Category 1 Priority Area recommended for protection in the Pukeamaru Ecological District (Regnier *et al.* 1988).

The shape of this site has changed since it was mapped in 1999 (Wildland Consultants 1999a) due to natural river mouth fluctuations. More of the river flats are covered in exotic grassland and are now being heavily grazed, therefore they have been excluded.

References

Beadel 1994a; Environment Bay of Plenty 2008; Owen *et al.* 2006; Rasch 1989b; Regnier *et al.* 1988; Wildland Consultants 1999a, NIWA 2006; Wildland Consultants 2006g.

TIKIRAU (CAPE RUNAWAY)

Site Number [1]	227
Grid Reference (NZMG)	E2951236 N6393212
Local Authority	Ōpōtiki District Council
Ecological District	Pukeamaru
Protection Status	Unprotected
Site Area	538.6 ha
Altitudinal Range	0-200 m asl
Geology-Landform Type	Greywacke hard coast

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Tawa-puriri-karaka-kohekohe-nikau forest.	Gully, hillslope
Terrestrial	Tawa-puriri forest.	Cliff and hillslope
Terrestrial	Tawa-(puriri) forest.	Ridge, hillslope and gully
Terrestrial	Pohutukawa-puriri-karaka forest.	Cliff, terrace
Terrestrial	Pohutukawa forest.	Cliff, terrace
Terrestrial	Pohutukawa treeland.	Cliff, hillslope
Terrestrial	Karaka-nikau treeland	Gully
Terrestrial	Kanuka forest and scrub	Hillslope
Terrestrial	(Pohutukawa)/tauhinu-kanuka scrub and shrubland.	Hillslope
Terrestrial	(Tauhinu)/pasture.	Cliff and hillslope
Terrestrial	*Cyperus ustulatus*-iceplant-*Ficinia nodosa* rockland.	Rock platform
Terrestrial	Kikuyu grassland.	Hillslope
Marine	Bare rock (at low tide). (Wildland Consultants 1999a and 2012 field survey from seaward side of site)	Rock platform

Vegetation and Indigenous Flora

A coastal shrub species, *Olearia albida*, which is uncommon in Pukeamaru Ecological District and regionally uncommon in the Bay of Plenty, is common at this site (Regnier *et al.* 1988; Beadel 2009a).

Lastreopsis velutina (also considered to be regionally uncommon) occurs here. It has a limited distribution confined mainly to the Matakaoa Range within the Pukeamaru Ecological District (Regnier *et al.* 1988).

Indigenous Fauna

Numerous coastal, field, and forest bird species use the headland including shags, gulls and kereru. Includes SSWI Site Nos 79 (moderate-high rank) and 80 (moderate rank) (Rasch 1989b). Pied shag (Threatened-Nationally Vulnerable), little shag (At Risk-Naturally Uncommon), and red-billed gull (Threatened-Nationally Vulnerable) use this site (K. Owen, Department of Conservation, pers. comm. 2012).

Condition/Pressures

Much of this site is grazed, but the pasture on the eastern slopes is gradually being colonised by tauhinu. The landward boundary of this site is adjacent to grazed pasture.

Key Site Features

This is a large site with high habitat diversity. Tikirau is a well-defined and distinctive natural area, with the largest tawa-puriri forest remnants in the western half of the Pukeamaru Ecological District. The site has been subjected to extensive grazing pressure. Tikirau supports two regionally

[1] Identified as SVHZ-199 in Wildland Consultants 2006g.

uncommon plant species, but there is little recent information on the biodiversity of the site.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	H
	3.3	H
	3.4	M
	3.5	H
	3.6	H
Diversity and Pattern	3.7	H
Naturalness	3.8	M
Ecological Context	3.9	H
	3.10	M
Viability and Sustainability	3.11	H
	3.12	H
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: National

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Fauna:** Pied shag (Threatened-Nationally Vulnerable) Red-billed gull (Threatened-Nationally Vulnerable) Little shag (At Risk-Naturally Uncommon)
ii		
iii	✓	High quality example of coastal forest.
iv		
v	✓	Nationally Significant
vi		Unprotected
Policy Met:		11(a)
Justification:		Tikirau is a large coastal site with diverse indigenous habitats, including representative examples of pohutukawa-dominant forest and tawa-puriri forest. These factors make it consistent with Policy 11(a). Two Threatened and one At Risk bird species are known to be present, and it is likely that further such species are also present. A site inspection would enable a more detailed description and assessment of this site.

Notes

Mid-Cretaceous pillow lavas and interbedded red limestone on coastal area just north of Whangaparaoa Beach make this a site of regional geological importance (Kenny and Hayward 1996).

This site is part of a Category 2 Priority Area recommended for protection in the Pukeamaru Ecological District (Regnier *et al.* 1988).

References

Regnier *et al.* 1988; Rasch 1989b; Beadel 1994a; Kenny and Hayward 1996; Wildland Consultants 1999a; Wildland Consultants 2006g.

OTARAWHATA ISLAND

Site Number [1] 224
Grid Reference (NZMG) E2950455 N6395460
Local Authority Ōpōtiki District Council
Ecological District Pukeamaru
Protection Status Unprotected
Site Area 1.0 ha
Altitudinal Range 0 m asl
Geology-Landform Type Volcanic hard coast

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial/Marine	Bare rock. (2012 site inspection)	Marine rocky islet

Vegetation and Indigenous Flora No vegetation present.

Indigenous Fauna Otarawhata Island is a roost site for white-fronted tern (At Risk-Declining) (40 birds were seen roosting on the Island in May 2012). Also present were red-billed gull (three birds), black-backed gull (one bird), and pied shag (one bird) (Threatened-Nationally Vulnerable). Regnier *et al.* (1988) (see 'NA 18 Tikirau') stated that Otarawhata Island provided nesting sites for about 150 white-fronted tern (At Risk-Declining) in the mid-1980s, however no evidence of this was seen in May 2012, i.e. there was little guano present and it appeared likely that waves would break over the islands during storm events. Birds may attempt to nest here, and may do so successfully if there are no major storm events during the nesting season.

Condition/Pressures None.

Key Site Features Otarawhata is a very small island. It is a roost site for an At Risk-Declining species, and may be a successful nesting site for this species during some seasons.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	M
	3.3	H
	3.4	M
	3.5	L
	3.6	N/A
Diversity and Pattern	3.7	L
Naturalness	3.8	H
Ecological Context	3.9	M
	3.10	H

[1] Identified as SVHZ-200 in Wildland Consultants 2006g.

Criterion*	RPS Number*	Ranking**
Viability and Sustainability	3.11	H
	3.12	H
	3.13	H

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Regional

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i	✓	**Avifauna:** Pied shag (Threatened-Nationally Vulnerable) Red-billed gull (Threatened-Nationally Vulnerable) White-fronted tern (At Risk-Declining)
ii		
iii		
iv		
v		Regionally Significant
vi		Unprotected
11(b)		
i	✓	Rock stack with bare rock and undescribed vegetation.
ii		
iii	✓	Coastal rockstack
iv	N/A	
v	✓	Roosting site for white-fronted terns.
vi		
Policy Met:		11(b)
Justification:		A roosting site for an At Risk shore bird.

References Regnier *et al.* 1988; Wildland Consultants 2006g.

CAPE RUNAWAY POHUTUKAWA REMNANTS

Site Number [1]	228
Grid Reference (NZMG)	E2954446 N6393636
Local Authority	Ōpōtiki District Council
Ecological District	Pukeamaru
Protection Status	Unprotected
Site Area	14.5 ha
Altitudinal Range	0-70 m asl
Geology-Landform Type	Greywacke hard coast

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Pohutukawa forest. (Wildland Consultants 1999a)	Terrace

Vegetation and Indigenous Flora The site comprises several small remnants of pohutukawa forest on steep coastal hillsides.

Indigenous Fauna Common forest and field birds (Wildland Consultants 1999a).

Condition/Pressures These remnants are all surrounded by pasture and are grazed (Wildland Consultants 1999a). The small sizes of the remnants mean they are vulnerable to 'edge effects'.

Key Site Features These remnants are significant because they are examples of pohutukawa forest, a vegetation type that was formerly widespread in Pukeamaru Ecological District, but which has now been greatly reduced in extent (Wildland Consultants 1999a). Grazing is likely to have significantly modified the natural character of these areas.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	L
	3.3	L
	3.4	M
	3.5	L
	3.6	M
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	L
	3.10	L
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

[1] Identified as SVHZ-201 in Wildland Consultants 2006g.

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Pohutukawa forest
ii		
iii	✓	Pohutukawa forest
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		The Cape Runaway Pohutukawa Remnants are small, fragmented, grazed, and isolated from other natural areas by pasture. Overall their ecological condition is low, but the site is consistent with Policy 11(b) because pohutukawa forest is restricted to the coastal zone and vulnerable to a range of pressures.

Notes Several additional pohutukawa remnants to those mapped in Wildland Consultants (1999a & 2006g) and Regnier *et al.* (1988) were identified and mapped based on 2010 aerial photography.

References Regnier *et al.* 1988; Wildland Consultants 1999a; Wildland Consultants 2006g.

PŌTIKIRUA

Site Number [1]	229
Grid Reference (NZMG)	E2957354 N6393455
Local Authority	Ōpōtiki District Council
Ecological District	Pukeamaru
Protection Status	Unprotected
Site Area	3.8 ha
Altitudinal Range	120-272 m asl
Geology-Landform Type	Greywacke hard coast

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Tawa-kohekohe-pohutukawa-puriri forest. (Regnier *et al.* 1988)	Cliff and terrace.

Vegetation and Indigenous Flora No information on significant species.

Indigenous Fauna Common field birds (Wildland Consultants 1999a).

Condition/Pressures This is a small site that is surrounded by pastoral land. From study of aerial photographs, the site does not appear to be fenced and is probably grazed by domestic stock.

Key Site Features A small example of tawa-kohekohe-pohutukawa-puriri forest which is characteristic of the Bay of Plenty coastal bioclimatic zone.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	H
Rarity or Distinctive Features	3.2	L
	3.3	M
	3.4	H
	3.5	L
	3.6	H
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	L
	3.10	L
Viability and Sustainability	3.11	L
	3.12	M
	3.13	L

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

[1] Identified as SVHZ-202 in Wildland Consultants 2006g.

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
I	✓	Pohutukawa-kohekohe-pohutukawa-puriri forest
ii		
iii	✓	Pohutukawa-dominant forest
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Pōtikirua is small site and its ecological condition is not known. However, the site is consistent with Policy 11(b) because pohutukawa forest is restricted to the coastal zone and is vulnerable to a range of pressures.

Notes This site was previously ranked as locally significant for its vegetation (Beadel 1994a).

References Beadel 1994a; Regnier *et al.* 1988; Wildland Consultants 1999a; Wildland Consultants 2006g.

MAUNGAHIHA

Site Number [1]	230
Grid Reference (NZMG)	E2959394 N6393237
Local Authority	Ōpōtiki District Council
Ecological District	Pukeamaru
Protection Status	Protected (Nga Whenua Rāhui Kawenata) and unprotected parts
Site Area	29.7 ha
Altitudinal Range	56-440 m asl
Geology-Landform Type	Greywacke hard coast

Hydrosystem	Vegetation/Habitat Type	Landform
Terrestrial	Tawa forest.	Cliff, ridge
Terrestrial	Tawa-puriri forest. (Regnier *et al.* 1988)	Cliff

Vegetation and Indigenous Flora No significant species recorded (Wildland Consultants 1999a).

Indigenous Fauna Kereru and common forest birds (Wildland Consultants 1999a).

Condition/Pressures This site is surrounded on three sides by pastoral land. From study of aerial photographs, the site does not appear to be fenced and is probably grazed by domestic stock.

Key Site Features This site contains a small example of tawa forest which is characteristic of the Bay of Plenty coastal bioclimatic zone.

Significance Assessment

Criterion*	RPS Number*	Ranking**
Representativeness	3.1	M
Rarity or Distinctive Features	3.2	H
	3.3	M
	3.4	M
	3.5	L
	3.6	N/A
Diversity and Pattern	3.7	L
Naturalness	3.8	M
Ecological Context	3.9	M
	3.10	M
Viability and Sustainability	3.11	M
	3.12	M
	3.13	M

* Bay of Plenty Regional Policy Statement Assessment Criteria: Appendix F, Set 3. Refer to A3 fold-out page in Appendix 1 of this document for descriptions of criteria and definitions of High, Medium, and Low rankings.

** H = High, M = Medium, L = Low.

Significance Level: Local

[1] Identified as SVHZ-203 in Wildland Consultants 2006g.

Assessment Against Policy 11 of the NZCPS

Policy	Criteria Met	Explanation
11(a)		
i		
ii		
iii		
iv		
v		Locally Significant
vi		Unprotected
11(b)		
i	✓	Tawa and puriri-dominant forest
ii		
iii		
iv	N/A	
v		
vi		
Policy Met:		11(b)
Justification:		Maungahiha is a moderate-sized remnant of indigenous forest on steep slopes. It is consistent with Policy 11(b) because it comprises indigenous vegetation.

Notes This site was previously ranked as locally significant for its vegetation (Beadel 1994a).

References Beadel 1994a; Regnier *et al.* 1988; Wildland Consultants 1999a; Wildland Consultants 2006g.

ACKNOWLEDGMENTS

Thank you to Jo Noble from the Bay of Plenty Regional Council for project instigation and logistical support, and to Tarryn-Lee Winson and Michele Hosking (Bay of Plenty Regional Council) for GIS assistance.

Many thanks to John Heaphy (Department of Conservation, Tauranga Area Office), Anastacia Kirk (Department of Conservation, Ōpōtiki Area Office), Keith Owen (Department of Conservation, Bay of Plenty Conservancy Office) who provided information on indigenous fauna, and Paul Cashmore (Department of Conservation, Bay of Plenty Conservancy Office) who provided information on threatened plants.

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POLICY 11 OF THE NEW ZEALAND COASTAL POLICY STATEMENT (NZCPS) 2010

The New Zealand Coastal Policy Statement (NZCPS) was released in December 2010 and replaces the previous NZCPS (1994). Policies 1 and 11 of the NZCPS 2010 have potential implications for the identification and classification of significant sites in the coastal environment and these two policies are set out below:

Policy 1: Extent and characteristics of the coastal environment:

(1) Recognise that the extent and characteristics of the coastal environment vary from region to region and locality to locality; and the issues that arise may have different effects in different localities.

(2) Recognise that the coastal environment includes:
- (a) the coastal marine area;
- (b) islands within the coastal marine area;
- (c) areas where coastal processes, influences or qualities are significant, including coastal lakes, lagoons, tidal estuaries, saltmarshes, coastal wetlands, and the margins of these;
- (d) areas at risk from coastal hazards;
- (e) coastal vegetation and the habitat of indigenous coastal species including migratory birds;
- (f) elements and features that contribute to the natural character, landscape, visual qualities or amenity values;
- (g) items of cultural and historic heritage in the coastal marine area or on the coast;
- (h) inter-related coastal marine and terrestrial systems, including the intertidal zone; and
- (i) physical resources and built facilities, including infrastructure, that have modified the coastal environment.

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, lagoons, coastal wetlands, dunelands, intertidal zones, rocky reef systems, eelgrass and saltmarsh;
(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.

METHOD FOR ASSESSMENT SITES AGAINST POLICY 11 OF THE NEW ZEALAND COASTAL POLICY STATEMENT (NZCPS)

2837a

METHODS AND PROCESSES FOR REVIEWING BIODIVERSITY SITES IN THE BAY OF PLENTY COASTAL ENVIRONMENT IN RELATION TO THE NEW ZEALAND COASTAL POLICY STATEMENT 2010

[redacted]

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Methods and Processes for Reviewing Biodiversity Sites in the Bay of Plenty Coastal environment in relation to the New Zealand Coastal Policy Statement 2010

Contract Report No. 2837a

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1. INTRODUCTION

In 2010, Bay of Plenty Regional Council commissioned Wildland Consultants Ltd to update the locations, boundaries, ecological information, and classifications of sites of significant indigenous vegetation and significant habitats of indigenous fauna in the coastal environment of the Bay of Plenty Region (Wildland Consultants 2010). At that time the coastal environment was defined as: 'all coastal marine areas, all offshore islands, and the area of land one kilometre inland from mean high water springs, of the Bay of Plenty Region'. Significant sites within that area were classified as being within the 'Coastal Habitat Protection Zone' (88 sites), or as 'Significant Sites in the Coastal Environment' (127 sites).

Subsequent to the above review, the New Zealand Coastal Policy Statement (NZCPS) was released in December 2010. In response, the Bay of Plenty Regional Council re-defined the extent of the coastal environment and commissioned Wildland Consultants to undertake a review of significant sites in the coastal environment and to align site identification and classification with Policy 11 of the NZCPS.

This report provides an overview of biodiversity sites in the coastal environment and their classification and discusses the implications of Policies 1 and 11 of the New Zealand Coastal Policy Statement (2010). A method for aligning the site classifications with the NZCPS is described.

2. SIGNIFICANT SITES DEFINED IN 2010

In 2010, when Wildland Consultants reviewed significant sites, the coastal environment was defined as: 'all coastal marine areas, all offshore islands, and the area of land one kilometre inland from mean high water springs', in the Bay of Plenty Region.

Significant sites within the coastal environment were identified and assessed using the Heritage Criteria in the Regional Policy Statement and were classified as lying within the 'Coastal Habitat Protection Zone' (CHPZ), or were classified as 'Significant Sites in the Coastal Environment' (SSCE). Sites were classified as CHPZ or SSCE on the basis of their relative ecological significance, i.e. 'nationally significant', 'regionally significant, or of district/local significance. Relative significance takes into account factors such as the level of legal protection accorded to a site, the presence of 'Threatened' and/or 'At Risk' taxa, and the size, condition, and representativeness of a site (refer to Appendix 2 for a full explanation).

Sites within the CHPZ include:

- Habitats that are of international or national significance.
- Habitats that are of regional significance and:
  - are particularly good quality representative examples of a key ecosystem type within the relevant ecological district; or

- are the largest and/or best quality examples of indigenous vegetation or habitat or indigenous fauna within the relevant ecological district; or
- are a key site for special features (i.e. key indigenous vegetation types, fauna habitat, threatened species or a species assemblage), and that feature is only represented at a single location, or a very limited number of sites, within the relevant ecological district.

Sites of regional significance that do not qualify as CHPZ are SSCE, and sites of district significance are also SSCE.

In the 2010 study, 215 sites of significance in the coastal environment were identified as CHPZ (88) or SSCE (127).

3. NEW ZEALAND COASTAL POLICY STATEMENT 2010

The New Zealand Coastal Policy Statement (NZCPS) was released in December 2010 and replaces the previous NZCPS (1994). Policies 1 and 11 of the NZCPS 2010 have potential implications for the identification and classification of significant sites in the coastal environment and these two policies are set out below:

Policy 1: Extent and characteristics of the coastal environment:

(1) Recognise that the extent and characteristics of the coastal environment vary from region to region and locality to locality; and the issues that arise may have different effects in different localities.

(2) Recognise that the coastal environment includes:
- (a) the coastal marine area;
- (b) islands within the coastal marine area;
- (c) areas where coastal processes, influences or qualities are significant, including coastal lakes, lagoons, tidal estuaries, saltmarshes, coastal wetlands, and the margins of these;
- (d) areas at risk from coastal hazards;
- (e) coastal vegetation and the habitat of indigenous coastal species including migratory birds;
- (f) elements and features that contribute to the natural character, landscape, visual qualities or amenity values;
- (g) items of cultural and historic heritage in the coastal marine area or on the coast;
- (h) inter-related coastal marine and terrestrial systems, including the intertidal zone; and
- (i) physical resources and built facilities, including infrastructure, that have modified the coastal environment.

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, lagoons, coastal wetlands, dunelands, intertidal zones, rocky reef systems, eelgrass and saltmarsh;
  (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.

4. POTENTIAL IMPLICATIONS OF THE NZCPS 2010

4.1 Policy 1: Extent and characteristics of the coastal environment

Prior to NZCPS 2010 being released, the coastal environment in the Bay of Plenty was defined as: 'all coastal marine areas, all offshore islands, and the area of land one kilometre inland from mean high water springs, of the Bay of Plenty Region'. Bay of Plenty Regional Council has subsequently redefined the extent of the coastal environment to reflect Policy 1 (Boffa Miskell 2011). The 'zone of coastal dominance' is generally narrower than 1km, and the 'zone of coastal influence' is generally much wider than 1km. BOPRC requested that the 'zone of coastal dominance' be used to define the inland extent of the coastal environment. All or parts of 26 CHPZs and 35 SSCEs identified in 2010 study lie inland of the 'zone of coastal dominance' (refer to Table 1 and Appendix 1) but the Bay of Plenty Regional

Council has advised that no sites will be decreased in extent because they all lie within the 'zone of coastal influence' (J. Noble, BOPRC, pers. comm. 2011).

Table 1: Coastal Habitat Protection Zone (CHPZ) sites and Significant Sites in the Coastal Environment (SSCE) delineated in 2010 compared with the 'Zone of Coastal Dominance' (2011).

Type of Site	No. of Sites	All of 2010 Site is Within 2011 Zone of Coastal Dominance	Part of 2010 Site is Within 2011 Zone of Coastal Dominance	All of 2010 Site is Outside of 2011 Zone of Coastal Dominance
CHPZ	88	62	24	2
SSCE	127	92	27	8
Total	**215**	**154**	**51**	**10**

At 16 locations, the 'Zone of Coastal Dominance' extends further inland than the 1 km boundary within which sites were originally identified. These 16 locations range in area from *c.*2 ha to *c.*483 ha, encompassing a total of *c.*758 ha. Parts of these areas may meet criteria in the NZCPS.

4.2 Policy 11: Indigenous biological diversity (biodiversity)

4.2.1. Background

Policy 11 of the NZPCS (2010) requires adverse effects to be avoided at sites that meet the criteria in Policy 11(a) and to "avoid significant adverse effects and avoid, remedy, or mitigate other adverse effects of activities" on sites that meet the criteria in Policy 11(b) (refer to Section 3, above).

To give effect to the NZCPS 2010, the Bay of Plenty Regional Council needs to identify sites that meet the criteria at two levels: in Policy 11(a) and Policy 11(b).

Significant sites in the coastal zone are currently defined as CHPZ or SSCE, so evaluation is required to determine whether these classifications are consistent with Policy 11. This can be achieved by comparing the criteria that were used to assess relative significance (refer to Appendix 2) to the criteria in the NZCPS (relative ecological significance was used as basis for classifying sites as either CHPZ or SSCE, refer to Section 2.2 above).

4.2.2. Comparison of NZCPS Policy 11 criteria and the criteria for CHPZ and SSCE

Table 2 provides a tabulated comparison of the criteria in Policy 11 of the NZCPS (2010) and the criteria used to define CHPZ and SSCE (refer to Appendix 2).

Table 2: Comparison of the criteria in Policies 11(a) and 11(b) of the New Zealand Coastal Policy Statement, with the relative significance criteria used to assess natural areas in the coastal environment of the Bay of Plenty Region and to classify them as either Coastal Habitat Protection Zone (CHPZ) or Significant Sites in the Coastal Environment (SSCE) (Wildland Consultants 2010). Refer to Appendix 2 for definitions of all criteria with the prefix N or R. Relative significance criteria shown in brackets are partially consistent with Policy 11, and those that are entirely consistent are not in brackets.

	Existing Classifications (2010)	CHPZ	SSCE		Notes/Interpretation
	Relative Significance	National	Regional	Local/ District	
NZCPS 2010					
11a	Criteria				
i	Threatened taxa[1]	N12	(R9)		R9 relates only to the "best populations" in an ecological district.
	At Risk taxa[1]		(R9)		R9 relates only to the "best populations" in an ecological district.
ii	Taxa classified as threatened by the IUCN[2]				The IUCN list is a small sub-set of taxa included in New Zealand's threat classification lists.[1]
iii	Threatened ecosystems and vegetation types	N10			
	Naturally rare ecosystems and vegetation types.	(N5, N6, N8)	(R6)		Originally rare ecosystems (as per Williams *et al.* 2006) in the BOP coastal environment include estuaries, rock stacks, and shingle beaches.
iv	Species at distribution limit		(R10)		R10 relates to regionally endemic species.
	Naturally rare species		(R9)		Assume this refers to taxa listed 'At Risk-Naturally Uncommon'[1]. R9 recognises only "the best populations" in an ecological district. This criterion appears to overlap with 11(a)i.
v	Nationally significant community types	N6			
vi	Protected areas	N1,N2	R1, R2, R3		
11b	Criteria				
i	Predominantly indigenous	✓	✓	✓	All CHPZ and SSCE are predominantly indigenous.
ii	Habitat during vulnerable life stages.	N14	R18		
iii	Found only in coastal environment & vulnerable to modification e.g. estuaries, lagoons, coastal wetlands, dunelands, intertidal zones, rocky reef systems, eelgrass and saltmarsh				Intertidal and subtidal areas were included in the original assessment (Wildland Consultants 2006) but, at the request of BOPRC, were not included in the 2010 review.
iv	Important for recreational, commercial, traditional, or cultural purposes	N/A	N/A	N/A	This criterion is beyond the scope of this assessment, which is focussed on ecological features.
v	Migration routes	(N13)			N13 relates only to international migratory species.

	Existing Classifications (2010)	CHPZ	SSCE		Notes/Interpretation
NZCPS 2010	Relative Significance	National	Regional	Local/ District	
					May need to add river/stream mouths because they are migratory routes for some species of freshwater fish.
vi	Ecological corridors		(R11-14)		

[1] As per de Lange *et al.* 2009, Miskelly *et al.* 2008, Allibone *et al.* 2009, Hitchmough *et al.* 2007.
[2] www.iucnredlist.org

Criteria used in 2010 to identify CHPZ and SSCE are not inconsistent with the criteria in Policy 11 of the NZCPS, but some of the NZCPS criteria are only partially met by the relative significance criteria, and there are some omissions (refer to Table 2).

For Policy 11(a), Criteria i, iii and iv are partially met by the relative significance criteria for nationally and regionally significant sites, and Criteria v and vi are included in the relative significance criteria for nationally and regionally significant sites. However, not all regionally significant sites are identified as CHPZ (some are SSCE).

Policy 11(a)ii relates to species that the IUCN have identified as being at risk of global extinction. These species are included in the following IUCN categories: 'Critically Endangered', Endangered', or Vulnerable'. In practice, the IUCN list is a very small subset of the various New Zealand threat classification lists (e.g. de Lange *et al.* 2009, Miskelly *et al.* 2008) so, Criterion 11(a)ii overlaps with Criterion 11(a)i, which is largely addressed by the regional coastal plan.

In relation to Policy 11(b), almost all CHPZ and SSCE meet Criterion i. Criterion ii is met by some nationally significant sites and some regionally significant sites. Criterion iii is not specifically included in the relative significance criteria and, at the request of BOPRC, intertidal and subtidal sites were not included in the most recent assessment of relative significance (Wildland Consultants 2010). However, some intertidal areas were included in the original assessment (Wildland Consultants 2006) and these sites could be reassessed and reinstated. Criterion iv is beyond the scope of an ecological assessment. Criterion v, which relates to migration routes, was partially addressed by the relative significance criteria, but that criterion is concerned only with international migratory species. Criterion vi recognises the importance of ecological corridors, and some of the criteria for regional significance also, implicitly, recognise the importance of corridors.

4.2.3. Findings

From comparison of the criteria used for assessing CHPZs and SSCE in 2010 and Policies 11(a) and 11(b) of the NZCPS, it is apparent that there are some overlaps and some gaps between the criteria sets. It cannot be determined from this analysis whether all CHPZ meet the criteria in Policy 11(a) or if some fit more closely with 11(b), though it is likely that all 'nationally significant' CHPZ sites meet Policy 11(a). Some SSCEs may meet the criteria in Policy 11(a).

Some components of Policy 11 may mean that additional sites may require recognition:

- "Naturally rare" ecosystem types and vegetation types, as specified in Policy 11(a)iii. For example, there may be some offshore rock stacks that meet this criterion.
- Sites where species reach the limit of their distribution - Policy 11(a)iv.
- Intertidal and subtidal areas that meet one or more of the criteria including, specifically, Policy 11(b)iii.
- There are some areas of exotic vegetation that may meet one of more of the NZCPS criteria because, for example, they are used as high tide roosts by threatened species (Policy 11(a)i), or are a component of a migration route (Policy 11(b)v) or ecological corridor (Policy 11(b)vi).
- River and stream mouths that provide a migratory route for freshwater fish - Policy11(b)v.

5. ALIGNMENT OF THE COASTAL PLAN WITH THE NZCPS

5.1 Existing sites in the coastal environment

To enable BOPRC to produce schedules of sites that meet Policy 11(a) and Policy 11(b) it will be necessary to assess each site against the NZCPS criteria and to indicate which criteria are met by each site. An assessment form for this purpose is included in Appendix 3. Ecological information is available that would enable the assessment to be completed for each site (Wildland Consultants 2010) and site visits would probably not be required for most or all sites. A short table could be added to each existing site description, listing the NZCPS criteria met by the site. The table could include the last column of the draft assessment table.

The Department of Conservation is currently preparing a guide to implementing the NZCPS, which may provide additional direction to assist with application of the biological diversity criteria. The guide is not expected to be available for some time and is unlikely to be inconsistent with the assessment criteria presented in Appendix 3.

5.2 Additional sites within the new 'Zone of Coastal Dominance'

The extent of the coastal environment has been re-mapped and redefined as the 'Zone of Coastal Dominance'. At 16 localities, the zone boundary extends further inland than the 1km limit that was used in the original identification of sites. For each of these localities, aerial photographs, and digital maps should be evaluated to identify any additional sites. If it appears that a 'new' site is present, a field inspection may be required to gather site-specific information.

5.3 Other additional sites

A marshbird habitat survey of Ohiwa Harbour (Beattie 2010) identified additional sites that will need to be assessed using the form presented in Appendix 3.

Sites that potentially meet the NZCPS criteria but which are not currently recorded as CHPZ or SSCE could be identified, in the first instance, by using aerial photography and digital maps of landforms and geology. This would be an eminently suitable way of identifying "naturally uncommon" ecosystems (as per NZCPS Policy 11(a)iii). In addition, sand dunes in the Bay of Plenty have already been separately mapped (Wildland Consultants 2008). Actual and potential ecological corridors (NZCPS Policy 11(b)vi) would also become apparent by evaluation of the spatial relationships of natural areas on digital maps. Digital data, including maps and the New Zealand freshwater fish database, could be used to identify migration routes of freshwater fish (NZCPS Policy 11(b)v). Some sites identified using digital data alone may require a field inspection to gather site-specific ecological information, confirm the assessments of significance, and verify the assessment in relation to Policy 11.

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COASTAL HABITAT PROTECTION ZONE (CHPZ) SITES AND SIGNIFICANT SITES IN THE COASTAL ENVIRONMENT (SSCE) DELINEATED IN 2010 (FROM WILDLAND CONSULTANTS 2010) COMPARED WITH THE 'ZONE OF COASTAL DOMINANCE' (2011)

Summary

Type of Site	No. of Sites	All of 2010 Site is Within 2011 Zone of Coastal Dominance[1]	Only Part of 2010 Site is Within 2011 Zone of Coastal Dominance[1]	All of 2010 Site is Outside of 2011 Zone of Coastal Dominance[1]
CHPZ	88	62	24	2
SSCE	127	92	27	8
Total	**215**	**154**	**51**	**10**

Table 1a: CHPZ (88 sites)

Site	Area (ha) Within 2011 Zone of Coastal Dominance[1]	Area (ha) Outside 2011 Zone of Coastal Dominance[1]	Total Area (ha) of Site Identified in Wildland Consultants 2010	All of 2010 Site is Within 2011 Zone of Coastal Dominance[1]	Only Part of 2010 Site is Within 2011 Zone of Coastal Dominance[1]	All of 2010 Site is Outside of 2011 Zone of Coastal Dominance[1]
CHPZ-1	45.07	0.04	45.11		Y	
CHPZ-101	143.64	288.67	432.32		Y	
CHPZ-102		16.06	16.06			Y
CHPZ-103	110.13	591.46	701.59		Y	
CHPZ-105	73.55	260.50	334.05		Y	
CHPZ-107	136.72	20.36	157.07		Y	
CHPZ-109	82.38	231.61	313.99		Y	
CHPZ-11	112.36		112.36	Y		
CHPZ-113	511.57	45.71	557.28		Y	
CHPZ-115	1.01		1.01	Y		
CHPZ-116	4.79		4.79	Y		
CHPZ-117	1327.51		1327.51	Y		
CHPZ-12	237.30		237.30	Y		
CHPZ-122	4.57		4.57	Y		
CHPZ-123	22.42		22.42	Y		
CHPZ-124	170.57		170.57	Y		
CHPZ-125	2.37		2.37	Y		
CHPZ-126	334.86		334.86	Y		
CHPZ-128	87.14		87.14	Y		
CHPZ-129	5.06		5.06	Y		
CHPZ-13	152.24		152.24	Y		
CHPZ-130	2.07		2.07	Y		
CHPZ-131	9.97		9.97	Y		
CHPZ-134	1.90		1.90	Y		
CHPZ-136		1.50	1.50			Y

[1] Including below MHWS.

Site	Area (ha) Within 2011 Zone of Coastal Dominance[1]	Area (ha) Outside 2011 Zone of Coastal Dominance[1]	Total Area (ha) of Site Identified in Wildland Consultants 2010	All of 2010 Site is Within 2011 Zone of Coastal Dominance[1]	Only Part of 2010 Site is Within 2011 Zone of Coastal Dominance[1]	All of 2010 Site is Outside of 2011 Zone of Coastal Dominance[1]
CHPZ-138	265.22		265.22	Y		
CHPZ-14	63.30		63.30	Y		
CHPZ-140	40.52		40.52	Y		
CHPZ-141	4.25		4.25	Y		
CHPZ-142	21.91		21.91	Y		
CHPZ-144	25.49		25.49	Y		
CHPZ-145	5.70		5.70	Y		
CHPZ-157	53.81		53.81	Y		
CHPZ-17	68.30		68.30	Y		
CHPZ-18	55.34		55.34	Y		
CHPZ-19	34.29		34.29	Y		
CHPZ-25	33.42		33.42	Y		
CHPZ-26	42.81		42.81	Y		
CHPZ-27	39.27		39.27	Y		
CHPZ-28	22.27	6.89	29.16		Y	
CHPZ-3	47.57		47.57	Y		
CHPZ-33	62.55	6.80	69.34		Y	
CHPZ-36	29.38		29.38	Y		
CHPZ-37	70.22		70.22	Y		
CHPZ-38	122.37		122.37	Y		
CHPZ-4	45.40		45.40	Y		
CHPZ-40	188.18	145.85	334.03		Y	
CHPZ-41	114.63		114.63	Y		
CHPZ-42	9.78		9.78	Y		
CHPZ-45	33.03		33.03	Y		
CHPZ-46	49.29	37.72	87.01		Y	
CHPZ-48	4.72		4.72	Y		
CHPZ-49	150.82		150.82	Y		
CHPZ-5	17.78		17.78	Y		
CHPZ-50	113.42		113.42	Y		
CHPZ-52	42.25		42.25	Y		
CHPZ-53	26.59		26.59	Y		
CHPZ-54	20.73		20.73	Y		
CHPZ-55	11.55		11.55	Y		
CHPZ-58	12.65		12.65	Y		
CHPZ-59	68.24		68.24	Y		
CHPZ-6	179.73		179.73	Y		
CHPZ-60	97.53	175.53	273.07		Y	
CHPZ-61	346.46	461.74	808.20		Y	
CHPZ-62	156.16	3.62	159.79		Y	
CHPZ-64	16.23		16.23	Y		
CHPZ-65	29.49		29.49	Y		
CHPZ-68	603.75		603.75	Y		
CHPZ-69	48.84		48.84	Y		
CHPZ-7	44.70		44.70	Y		
CHPZ-78	66.71		66.71	Y		
CHPZ-79	65.64		65.64	Y		
CHPZ-8	35.60		35.60	Y		
CHPZ-80	69.55		69.55	Y		
CHPZ-81	46.50		46.50	Y		
CHPZ-82	14.84	5.42	20.26		Y	
CHPZ-86	646.05		646.05	Y		
CHPZ-88	91.62	125.43	217.04		Y	
CHPZ-89	42.95	65.60	108.55		Y	
CHPZ-90	3.46		3.46	Y		

Site	Area (ha) Within 2011 Zone of Coastal Dominance[1]	Area (ha) Outside 2011 Zone of Coastal Dominance[1]	Total Area (ha) of Site Identified in Wildland Consultants 2010	All of 2010 Site is Within 2011 Zone of Coastal Dominance[1]	Only Part of 2010 Site is Within 2011 Zone of Coastal Dominance[1]	All of 2010 Site is Outside of 2011 Zone of Coastal Dominance[1]
CHPZ-91	128.93	59.72	188.65		Y	
CHPZ-92	26.43	109.84	136.27		Y	
CHPZ-93	17.26	11.34	28.60		Y	
CHPZ-94	31.02		31.02	Y		
CHPZ-95	11.78	2.04	13.81		Y	
CHPZ-96	183.85	20.63	204.48		Y	
CHPZ-97	7.45	1.00	8.45		Y	
CHPZ-98	149.70	90.86	240.56		Y	
Grand Total				**62**	**24**	**2**

Table 1b: SSCE (127 sites)

Site	Area (ha) Within 2011 Zone of Coastal Dominance[1] or below MHWS	Area (ha) Outside 2011 Zone of Coastal Dominance[1] or below MHWS	Total Area (ha) of Site Identified in Wildland Consultants 2010	All of 2010 Site is Within 2011 Zone of Coastal Dominance[1] + below MHWS	Only Part of 2010 Site is Within 2011 Zone of Coastal Dominance[1] + below MHWS	All of 2010 Site is Outside of 2011 Zone of Coastal Dominance[1]
SSCE-1	60.58		60.58	Y		
SSCE-10	18.08		18.08	Y		
SSCE-100	2.61		2.61	Y		
SSCE-101	1.65		1.65	Y		
SSCE-102	7.93	2.19	10.13		Y	
SSCE-103		3.93	3.93			Y
SSCE-104		29.57	29.57			Y
SSCE-105	14.77		14.77	Y		
SSCE-106	0.52		0.52	Y		
SSCE-107	2.49		2.49	Y		
SSCE-108	3.74		3.74	Y		
SSCE-109	0.59	2.15	2.74		Y	
SSCE-11	7.08		7.08	Y		
SSCE-110		1.12	1.12			Y
SSCE-111	0.07	9.34	9.42		Y	
SSCE-112	2.26		2.26	Y		
SSCE-114	5.79		5.79	Y		
SSCE-115	6.12		6.12	Y		
SSCE-117	1.56		1.56	Y		
SSCE-118	2.41		2.41	Y		
SSCE-12	1.97		1.97	Y		
SSCE-120	13.54		13.54	Y		
SSCE-121	9.20		9.20	Y		
SSCE-122	0.17	5.17	5.35		Y	
SSCE-123	1.95		1.95	Y		
SSCE-124	15.34		15.34	Y		
SSCE-125	0.38		0.38	Y		

[1] Include below MHWS.

Site	Area (ha) Within 2011 Zone of Coastal Dominance[1] or below MHWS	Area (ha) Outside 2011 Zone of Coastal Dominance[1] or below MHWS	Total Area (ha) of Site Identified in Wildland Consultants 2010	All of 2010 Site is Within 2011 Zone of Coastal Dominance[1] + below MHWS	Only Part of 2010 Site is Within 2011 Zone of Coastal Dominance[1] + below MHWS	All of 2010 Site is Outside of 2011 Zone of Coastal Dominance[1]
SSCE-126	3.45		3.45	Y		
SSCE-127	28.63		28.63	Y		
SSCE-128	61.95		61.95	Y		
SSCE-129	24.67		24.67	Y		
SSCE-13	27.10		27.10	Y		
SSCE-130	1.23		1.23	Y		
SSCE-131	13.49		13.49	Y		
SSCE-132		1.69	1.69			Y
SSCE-133	11.65		11.65	Y		
SSCE-134	10.84	4.61	15.45		Y	
SSCE-135	1.18		1.18	Y		
SSCE-137	62.11	0.22	62.33		Y	
SSCE-138	47.49	2.13	49.62		Y	
SSCE-139	46.00		46.00	Y		
SSCE-14	5.03		5.03	Y		
SSCE-140	0.23		0.23	Y		
SSCE-141	2.28		2.28	Y		
SSCE-142	2.97		2.97	Y		
SSCE-143	73.13		73.13	Y		
SSCE-144	17.35		17.35	Y		
SSCE-145	16.66		16.66	Y		
SSCE-147	12.19		12.19	Y		
SSCE-148	12.19		12.19	Y		
SSCE-149	20.69		20.69	Y		
SSCE-15	11.82		11.82	Y		
SSCE-150	15.52		15.52	Y		
SSCE-151	11.64		11.64	Y		
SSCE-152		3.17	3.17			Y
SSCE-153	39.99		39.99	Y		
SSCE-154	4.88		4.88	Y		
SSCE-155	8.64		8.64	Y		
SSCE-156	100.23		100.23	Y		
SSCE-158	3.76		3.76	Y		
SSCE-159	4.79		4.79	Y		
SSCE-160	2.28		2.28	Y		
SSCE-161	21.49		21.49	Y		
SSCE-162	13.73		13.73	Y		
SSCE-163	2.66	6.44	9.10		Y	
SSCE-164	16.83	0.63	17.46		Y	
SSCE-165		41.32	41.32			Y
SSCE-166	53.21	151.53	204.74		Y	
SSCE-167	25.89	268.89	294.79		Y	
SSCE-168	17.77	15.88	33.65		Y	
SSCE-17	12.06	2.72	14.77		Y	
SSCE-170		3.07	3.07			Y
SSCE-171	9.26		9.26	Y		
SSCE-172	56.77		56.77	Y		
SSCE-173	114.04		114.04	Y		
SSCE-174	1.88		1.88	Y		
SSCE-22	23.39		23.39	Y		
SSCE-24	15.07	0.48	15.55		Y	
SSCE-25	16.60		16.60	Y		
SSCE-27	16.72	3.39	20.11		Y	
SSCE-28	8.37		8.37	Y		
SSCE-29	11.87		11.87	Y		

Site	Area (ha) Within 2011 Zone of Coastal Dominance[1] or below MHWS	Area (ha) Outside 2011 Zone of Coastal Dominance[1] or below MHWS	Total Area (ha) of Site Identified in Wildland Consultants 2010	All of 2010 Site is Within 2011 Zone of Coastal Dominance[1] + below MHWS	Only Part of 2010 Site is Within 2011 Zone of Coastal Dominance[1] + below MHWS	All of 2010 Site is Outside of 2011 Zone of Coastal Dominance[1]
SSCE-30	36.56		36.56	Y		
SSCE-36	13.15		13.15	Y		
SSCE-39	2.16		2.16	Y		
SSCE-40	1.77		1.77	Y		
SSCE-41	3.10		3.10	Y		
SSCE-43	4.31		4.31	Y		
SSCE-44	1.61		1.61	Y		
SSCE-45	0.58		0.58	Y		
SSCE-55	4.59		4.59	Y		
SSCE-57	5.19		5.19	Y		
SSCE-6	10.16	0.57	10.73		Y	
SSCE-61	8.88		8.88	Y		
SSCE-62	8.14	0.58	8.72		Y	
SSCE-64	5.01		5.01	Y		
SSCE-65	6.64		6.64	Y		
SSCE-68	10.15	11.60	21.75		Y	
SSCE-70	69.76		69.76	Y		
SSCE-71	0.73		0.73	Y		
SSCE-72	0.58		0.58	Y		
SSCE-74	2.18		2.18	Y		
SSCE-75	4.43		4.43	Y		
SSCE-76	2.08		2.08	Y		
SSCE-77	5.58		5.58	Y		
SSCE-78	17.84		17.84	Y		
SSCE-79	30.28		30.28	Y		
SSCE-80	6.01		6.01	Y		
SSCE-81	3.12		3.12	Y		
SSCE-82	0.84		0.84	Y		
SSCE-83	42.19		42.19	Y		
SSCE-84	1.62		1.62	Y		
SSCE-85	0.24	4.31	4.56		Y	
SSCE-86	0.15		0.15	Y		
SSCE-87	29.80	3.04	32.84		Y	
SSCE-88	6.27		6.27	Y		
SSCE-89	5.93	11.79	17.72		Y	
SSCE-90	36.93	1.34	38.27		Y	
SSCE-91		6.32	6.32			Y
SSCE-92	16.18	7.45	23.63		Y	
SSCE-93	46.04		46.04	Y		
SSCE-94	0.26	4.18	4.44		Y	
SSCE-95	63.89		63.89	Y		
SSCE-96	0.02	6.54	6.55		Y	
SSCE-97	4.35		4.35	Y		
SSCE-98	3.29	8.70	11.98		Y	
SSCE-99	1.68	16.68	18.35		Y	
Grand Total				**92**	**27**	**8**

CRITERIA USED IN 2010 FOR ASSESSMENT OF CHPZ AND SSCE

These criteria are based on Environment Waikato (2002) and Environment Bay of Plenty (2005).

A site is of national significance if it meets at least one of the following criteria:

National (including International)

N1 **Protected, or recommended for protection** under international legislation (e.g. RAMSAR, World Heritage), or

N2 **Protected or recommended for protection** under the Conservation Act 1987 (as an Ecological Area or Forest Sanctuary), National Parks Act 1980, Marine Reserves Act 1971, or Reserves Act 1977 (as a Nature Reserve or Scientific Reserve) [1], or

N3 Identified as being of international or national significance in a **previous assessment** (e.g. Kenny and Hayward 1996; Cody 1994), or

N4 **Best or only remaining** representative example of an indigenous vegetation/habitat type, or

N5 A good quality example of indigenous vegetation/habitat that is under-represented nationally **(10 % or less remains)**, or is nationally uncommon and representative of its type, or

N6 Good quality example of a **nationally uncommon suite** of vegetation/ **habitat types** or a **sequence** of ecosystems, or

N7 Best or only remaining **large example** of a **suite** of vegetation/habitat types or an ecological sequence, or

N8 Unmodified/**pristine example** of a nationally under-represented type, or

N9 Forms a key part of an **ecological sequence** that includes an international or nationally significant site, or

N10 **Best or only remaining example** of a threatened or uncommon vegetation/habitat type, or

N11 Good quality example of a **threatened or uncommon habitat** type, or

N12 Habitat used on a regular or continuous basis by an **acutely threatened** species (i.e. 'Nationally Critical', 'Nationally Endangered' or 'Nationally Vulnerable') (see national threat rankings in Hitchmough 2002, Hitchmough (In press) and de Lange *et al.* 2004), or

N13 Habitat for the completion of the life cycle of an **international migratory species** that would be threatened if the habitat were not sustained, or

N14 Provides a habitat for a **threatened species** at a key stage of its **life cycle**; or

N15 **Largest**, or one of the **largest remaining good quality** examples of its type.

A site is of regional significance if it meets at least one of the following criteria, but does not meet any of the criteria for national significance above.

Regional

R1 **Protected under the Reserves Act** 1977 (as a Wildlife Management Reserve, Wildlife Refuge, or Scenic Reserve), Nga Whenua Rahui Kawenata, or for any purpose under the Conservation Act (e.g. Conservation Area or Conservation Park) with significant fauna and/or flora values[1], or

R2 **Protected** under QEII National Trust Act 1977[1], or

R3 **Recommended for protection** by NHF, NWR, or QEII[1], or

R4 Good quality example of a **regionally under-represented** type, or

R5 Identified as of regional significance in a **previous assessment** (e.g. Kenny and Hayward 1996; Cody 1994) [1], or

R6 Degraded but relatively large example of a nationally **under-represented** or **nationally uncommon** type, or

R7 One of the **best representative examples** in the **Region** of indigenous vegetation or habitat for indigenous fauna, or

R8 **Good quality** example of indigenous vegetation or habitat for indigenous species that is representative of the ecological character typical of the Region, or

R9 **Best or one of the best populations (in an ecological district) of** a **chronically threatened species** (i.e. 'Serious Decline' or 'Gradual Decline') or **at risk species** (i.e. 'Range Restricted' or 'Sparse'), (see national threat rankings in Hitchmough 2002, Hitchmough (In press) and de Lange *et al.* 2004), or

R10 Habitat of a **species** that is **endemic** to the Region, or

R11 One of the best examples in the Region of an **ecological sequence**, or

R12 Degraded but relatively large example of a **nationally uncommon sequence**, or

R13 **Degraded**, but the only remaining example of the **sequence** in the Region, or

R14 Forms part of an ecological sequence that includes a **regionally significant site**, or

R15 **Least-modified** example of its type in the Region, or

R16 Modified, but the **largest example** of its type in the Region, or

R17 Is a **buffer** (or a key part of a buffer) to a site that is internationally or nationally significant, or

R18 Provides a habitat for an indigenous species at a key stage of its **life cycle**, or

R19 The largest remaining good quality example of its type in the Region.

A site is **at least** of local significance if it met at least one criterion in Appendix 1 but did not meet any of the above criteria.

Local

Locally significant natural areas are healthy examples of relatively common vegetation and habitat types. They are often small areas, but large enough to enable key ecological processes to occur, such as regeneration of seedlings or reproduction of indigenous fauna. These sites may not be particularly significant in their own right, but nevertheless play an important part in a network of natural areas. For example, a locally significant site might be important as a seasonal feeding or breeding area. It might also act as a stepping stone between other natural areas, allowing indigenous fauna to move in search of food or mates.

Such sites are likely to provide representative examples of common or typical vegetation types or habitat for common indigenous species. They will not be among the best examples in the Region but will meet criteria for viability and sustainability as healthy, functioning, and ecologically viable sites.

DRAFT ASSESSMENT FORM FOR COASTAL ENVIRONMENT SITES IN THE BAY OF PLENTY REGION

NZCPS Criteria	Explanation/Interpretation	Yes/No	Notes/Justification
Policy 11(a)			
i Indigenous taxa that are listed as threatened or at risk in the New Zealand Threat Classification System lists.	The site is permanently or regularly used by taxa classified as 'Threatened' or 'At Risk' by: • de Lange *et al.* (2009) for vascular plants • Miskelly *et al.* (2008) for avifauna • Allibone *et al.* (2009) for freshwater fish • Hitchmough *et al.* (2007) for other taxa		List species and threat status.
ii Taxa that are listed by the International Union for Conservation of Nature and Natural Resources as threatened.	The IUCN 'red list' is an online database that classifies taxa that are facing a high risk of global extinction. Threatened species are categorised as 'Critically Endangered', 'Endangered', or 'Vulnerable'. The IUCN list is a small sub-set of the taxa included in the publications listed for Criterion 11(a)i.		List species and threat status.
iii Indigenous ecosystems and vegetation types that are threatened in the coastal environment, or are naturally rare.	The site includes an ecosystem or vegetation type which is threatened (i.e. has been greatly reduced in extent either nationally or regionally), including: • indigenous forest on sand dunes • primary forest • kanuka forest at Thornton • forest dominated by pohutukawa e.g. Ohope Scenic Reserve • pohutukawa-hard beech forest • high quality, large freshwater wetlands contiguous with dunes or estuaries, e.g. Hiwarau, Waikareao, Blue Gum Bay, Hunters Creek • High quality estuarine wetlands • Intact dunes, e.g. Maketu Spit • Important, high quality bird roosting sites • Coastal cliffs Or;		Name high quality example of threatened or "originally rare" ecosystem or vegetation type at the site.

NZCPS Criteria	Explanation/Interpretation	Yes/No	Notes/Justification
	The site includes an "originally rare" ecosystem type, as defined by Williams *et al.* (2006), including: • rock stacks, e.g. Whanarua, Mutuputa Island (Motiti) • geothermal sites, i.e. Whakaari/White Island • shingle beaches, e.g. Opape • Large and/or high quality estuaries and lagoons e.g. Ohiwa, parts of Tauranga Harbour • Sand dunes.		
iv Habitats of indigenous species where the species are at the limit of their natural range, or are naturally rare.	The site provides habitat to a species that is endemic to Bay of Plenty Region, e.g. Thornton kanuka; Or, The site provides habitat for a species at the limit of its distribution, including: • mangroves at Ohiwa Harbour • *Austrostipa stipoides* at Waiotahe Estuary. • *Lepidosperma laterale* at Mauao • *Pteris comans* at Bowentown Heads. • taraire (*Beilschmiedia tarairi*) near East Cape • tawapou (*Plachonella costata*) near East Cape • *Cortaderia toetoe* at Te Hopai Island • black katipo (*Latrodectus atritus*) at Maketu Spit.		List the species.
v Areas containing nationally significant examples of indigenous community types.	The site has been assessed against the Heritage Criteria in the Regional Policy Statement and identified as being nationally significant.		Indicate the relative significance criteria met by the site.
vi Areas set aside for full or partial protection of indigenous biological diversity under other legislation.	Biodiversity values are legally protected in all or most of the site as a reserve that is administered by DOC or as a conservation covenant (e.g. QEII, Nga Whenau Rahui, council covenant).		Explain the protection status.

NZCPS Criteria	Explanation/Interpretation	Yes/No	Notes/Justification
A site is consistent with Policy 11a if it meets one or more of the criteria and • **it is relatively large and of high quality, or** • **it is relatively small but is a high quality example of its type, or** • **it is one of only a few examples of its type in the Bay of Plenty Region, or** • **it is an important habitat for 'threatened' species** **The site is consistent with Policy 11b if it meets one of the Policy 11a criteria but is not large or high quality, or if it is a relatively common type.** **If a site does not meet the criteria in Policy 11a, assess it against the criteria in Policy 11b.**			
Policy 11b			
i Areas of predominantly indigenous vegetation in the coastal environment.	The site comprises predominantly indigenous vegetation, e.g. mangrove scrub or shrubland, saltmarsh, freshwater wetland Including wetland with a canopy dominated by grey willow but withy an indigenous understorey), dune communities, primary forest, secondary forest, coastal scrub or shrubland, seagrass beds.		Describe the vegetation type(s).
ii Habitats in the coastal environment that are important during the vulnerable life stages of indigenous species.	The site is a whitebait spawning site, Or, It is a nesting site for avifauna, Or, It is an important site for migratory birds.		Name the species and life stage.
iii Indigenous ecosystems and habitats that are only found in the coastal environment and are particularly vulnerable to modification, including estuaries, lagoons, coastal wetlands, dunelands, intertidal zones, rocky reef systems, eelgrass and saltmarsh.	The site is modified and is not among the highest quality sites so does not meet the criteria in Policy 11a, including: • estuaries e.g. Maketu, Waihi, Opotiki • lagoons • coastal wetlands • dunelands • unvegetated intertidal areas • offshore rocky reefs • eelgrass beds • saltmarshes • mangrove scrub and shrubland		Describe the vegetation type(s).

NZCPS Criteria	Explanation/Interpretation	Yes/No	Notes/Justification
iv Habitats of indigenous species in the coastal environment that are important for recreational, commercial, traditional or cultural purposes.			NOT ASSESSED
v Habitats, including areas and routes, important to migratory species.	The site is an important migratory route or habitat for indigenous species of: • freshwater fish • avifauna.		List of migratory species.
vi Ecological corridors, and areas important for linking or maintaining biological values identified under this policy.	The site is part of a corridor that links the coast with indigenous habitat that is inland. Or, The site is a key connection between significant sites in the coastal environment.		Name or describe the inland site or coastal site that is part of the corridor.
The site is consistent with Policy 11b if: • **it meets one or more of the criteria in Policy 11a but is <u>not</u> large or high quality, or a relatively common type.** **Or** • **it meets one or more of the criteria in Policy 11b <u>and</u> it is of a size and shape that would enable it to be viable in the long-term.**			

APPENDIX 3

BAY OF PLENTY REGIONAL POLICY STATEMENT HERITAGE CRITERIA (INDIGENOUS VEGETATION AND HABITATS OF INDIGENOUS FAUNA)

BAY OF PLENTY REGIONAL POLICY STATEMENT - HERITAGE CRITERIA: APPENDIX F, SET 3* and *GUIDELINES - Natural area is 'significant' if it meets one or more the criteria (i.e. at least one 'H' or several 'M' for any of these).

Representativeness

3.1 "Indigenous vegetation or habitat of indigenous fauna that contains associations of indigenous species representative, typical, or characteristic of the natural diversity of the region or any relevant ecological districts."

H Best *OR* relatively large *OR* good quality example of vegetation/habitat in the ecological district; *OR* only example of a type which was formerly more extensive.
M Similar to other areas that occur elsewhere in relevant ecological district.
L Degraded, small; better quality examples exist elsewhere in ecological district.

Rarity or Distinctive Features

3.2 "Indigenous vegetation or habitat of indigenous fauna supports an indigenous species or associations of species threatened, or rare nationally, regionally, or within the relevant ecological district."

H Nationally acutely or chronically threatened species present (includes Nationally Critical, Nationally Endangered, Nationally Vulnerable, Serious Decline, Gradual Decline; see Molloy *et al.* 2002); *OR* several nationally At Risk species present.
M Nationally At Risk or data deficient species present (includes Naturally Uncommon, Declining, Relict, Recovering, Data Deficient) *OR* species considered rare or threatened in the region or ecological district.
L No rare or threatened species known to be present.

3.3 "Indigenous vegetation or habitat of indigenous fauna can contribute to the maintenance or recovery of a species threatened, or rare nationally, regionally, or within the relevant ecological district."

H Potentially key habitat for a threatened species *OR* likely to already be habitat for a threatened species, though not recorded (e.g. because same species has been recorded from very nearby in similar habitat, to which this area is complementary).
M Potentially habitat that can contribute to maintaining or recovering a threatened species.
L Not potential habitat for a threatened species.

3.4 "Indigenous vegetation or habitat of indigenous fauna is distinctive, of restricted occurrence, or at the limits of its natural distribution range, or has developed as a result of factors such as natural geothermal activity, historical cultural practices, altitude, water table, or soil type."

H Nationally distinctive (e.g. nationally rare vegetation or habitat type; national species distribution limit).
M Regionally distinctive (e.g. unusual vegetation or habitat type within region; only or one of few populations of species within region)
L Typical vegetation or habitat type.

3.5 "Indigenous vegetation or habitat of indigenous fauna that is one of the largest remaining examples of its type within the region or any relevant ecological district."

H Yes - one of largest examples of type in region (e.g. 1 of 3).
M Yes - one of largest examples of type in ecological district (but also represented in other ecological districts).
L Moderate or small size example of type.

3.6 "Indigenous vegetation or habitat of indigenous fauna is significantly reduced in area and is degraded but retains key natural ecosystem functions (for example hydrology) and has a high potential for restoration."

H High restoration potential (e.g. reasonably large but moderately degraded example, however retains key ecosystem functions).
M Moderate restoration potential (e.g. highly degraded example, however retains key ecosystem functions).
L Little potential for restoration without large investment in restoring ecosystem function (e.g. restoring hydrology).
N/A Indigenous vegetation or habitats of indigenous fauna not significantly reduced in area, or not degraded, or requiring little or not restoration effort.

Diversity and Pattern

3.7 "Indigenous vegetation or habitats of indigenous fauna which contains a high diversity of indigenous ecosystem or habitat types or changes in species composition, reflecting the existence of diverse natural features (for example landforms, soil types or hydrology), or communities along an ecological gradient."

H More than two landforms or bioclimatic zones; or more than 7 mainly indigenous vegetation/habitat classes.
M More than one landform or bioclimatic zone; or 4-7 mainly indigenous vegetation/habitat classes.
L Only one landform and bioclimatic zone; or 1-3 mainly indigenous vegetation/habitat classes.

Naturalness

3.8 "Indigenous vegetation or habitat of indigenous fauna is in a natural state or healthy condition, or is in an original condition."

H Low-level or nil human-related disturbance (e.g. weeds, pests, logging, fire, dumping, development) - includes secondary vegetation established following natural disturbance.
M Moderate level of human-related disturbance, for example relatively good quality secondary vegetation developed following human disturbance, low levels of selective logging 20 or more years earlier.
L Exotic/induced/heavily disturbed.

Ecological Context

3.9 "Indigenous vegetation or habitat of indigenous fauna contributes to the ecological viability of adjoining natural areas and biological communities, by providing or contributing to an important ecological linkage or network, or providing a buffer from adjacent land uses."

H Provides an ecological linkage/corridor function or buffer to an adjoining natural area of high overall ecological significance *OR* one of only a few examples of existing or potential key ecological linkages within the ecological district (e.g. only stream with riparian vegetation which reaches harbour).
M Provides an ecological linkage/corridor function or buffer to an adjoining natural area of moderate or low overall ecological significance; *OR* an example of an ecological linkage or buffer which is not common within the ecological district.
L An isolated natural area, without linkage or buffer functions *OR* an example of a linkage or buffer that is common.

3.10 "Indigenous vegetation or habitat of indigenous fauna provides habitat for indigenous species at key stages of their life cycle."

H Yes - critical to the self-sustainability of an indigenous species (e.g. feeding, breeding or roosting site, such as for indigenous fish species or migratory birds (national and international).
M Yes - provides habitat for indigenous species at key stages of their life cycle.
L Not known to provide habitat for indigenous species at key stages in their life cycle.

Viability and Sustainability

3.11 "Indigenous vegetation or habitat of indigenous fauna is of sufficient size and compact shape and has the capacity to maintain its ecological viability over time."

H Large size (relative to similar vegetation/habitat in region) *OR* primarily compact, no major constrictions.
M Moderate size (relative to similar vegetation/habitat in region) *OR* irregular or convoluted.
L Small size (relative to similar vegetation/habitat in region) *OR* highly convoluted or discontinuous.

3.12 "Indigenous vegetation or habitat of indigenous fauna supports intact habitats and healthy functioning ecosystems."

H Intact and healthy; able to remain ecological viable with low or minimal management effort.
M Contains elements of a functioning ecosystem, but requires management intervention to be ecologically viable in long term.
L Degraded; requires considerable management effort to render ecologically viable.

3.13 "Indigenous vegetation or habitat of indigenous fauna is of sufficient size and compact shape to resist changes initiated by external agents." (Same as 3.11, but relatively larger)

H Large size (relative to similar vegetation/habitat in region) *OR* primarily compact, no major constrictions.
M Moderate size (relative to similar vegetation/habitat in region) *OR* irregular or convoluted.
L Small size (relative to similar vegetation/habitat in region) *OR* highly convoluted or discontinuous.

CRITERIA FOR ASSESSMENT OF RELATIVE SIGNIFICANCE

These criteria are from Wildland Consultants 2006g and are based on Environment Waikato (2002) and Environment Bay of Plenty (2005b).

A site is of national significance if it meets at least one of the following criteria:

National (including International)

N1 **Protected, or recommended for protection** under international legislation (e.g. RAMSAR, World Heritage), or

N2 **Protected or recommended for protection** under the Conservation Act 1987 (as an Ecological Area or Forest Sanctuary), National Parks Act 1980, Marine Reserves Act 1971, or Reserves Act 1977 (as a Nature Reserve or Scientific Reserve) [1], or

N3 Identified as being of international or national significance in a **previous assessment** (e.g. Kenny and Hayward 1996; Cody 1994), or

N4 **Best or only remaining** representative example of an indigenous vegetation/habitat type, or

N5 A good quality example of indigenous vegetation/habitat that is under-represented nationally **(10 % or less remains)**, or is nationally uncommon and representative of its type, or

N6 Good quality example of a **nationally uncommon suite** of vegetation/ **habitat types** or a **sequence** of ecosystems, or

N7 Best or only remaining **large example** of a **suite** of vegetation/habitat types or an ecological sequence, or

N8 Unmodified/**pristine example** of a nationally under-represented type, or

N9 Forms a key part of an **ecological sequence** that includes an international or nationally significant site, or

N10 **Best or only remaining example** of a threatened or uncommon vegetation/habitat type, or

N11 Good quality example of a **threatened or uncommon habitat** type, or

N12 Habitat used on a regular or continuous basis by a **chronically threatened** species (i.e. 'Nationally Critical', 'Nationally Endangered' or 'Nationally Vulnerable') or **threatened species** (i.e. 'Nationally Critical', 'Nationally Endangered' or 'Nationally Vulnerable') (see national threat rankings in Miskelly *et al.* 2008, Hitchmough *et al.* 2007, de Lange *et al.* 2009, and Newman *et al.* 2010)

N13 Habitat for the completion of the life cycle of an **international migratory species** that would be threatened if the habitat were not sustained, or

N14 Provides a habitat for a **threatened species** at a key stage of its **life cycle**; or

N15 **Largest**, or one of the **largest remaining good quality** examples of its type.

A site is of regional significance if it meets at least one of the following criteria, but does not meet any of the criteria for national significance above.

Regional

R1 **Protected under the Reserves Act** 1977 (as a Wildlife Management Reserve, Wildlife Refuge, or Scenic Reserve), Nga Whenua Rahui Kawenata, or for any purpose under the Conservation Act (e.g. Conservation Area or Conservation Park) with significant fauna and/or flora values[1], or

R2 **Protected** under QEII National Trust Act 1977[1], or

R3 **Recommended for protection** by NHF, NWR, or QEII[1], or

R4 Good quality example of a **regionally under-represented** type, or

R5 Identified as of regional significance in a **previous assessment** (e.g. Kenny and Hayward 1996; Cody 1994) [1], or

R6 Degraded but relatively large example of a nationally **under-represented** or **nationally uncommon** type, or

R7 One of the **best representative examples** in the **Region** of indigenous vegetation or habitat for indigenous fauna, or

R8 **Good quality** example of indigenous vegetation or habitat for indigenous species that is representative of the ecological character typical of the Region, or

R9 **Best or one of the best populations (in an ecological district) of** a **chronically threatened species** (i.e. 'Serious Decline' or 'Gradual Decline') or **At Risk species** (i.e. 'Naturally Uncommon', 'Relict, 'Declining' or 'Recovering'), (see national threat rankings in Miskelly *et al.* 2008, Hitchmough *et al.* 2007, de Lange *et al.* 2009, and Newman *et al.* 2010).

R10 Habitat of a **species** that is **endemic** to the Region, or

R11 One of the best examples in the Region of an **ecological sequence**, or

R12 Degraded but relatively large example of a **nationally uncommon sequence**, or

R13 **Degraded**, but the only remaining example of the **sequence** in the Region, or

R14 Forms part of an ecological sequence that includes a **regionally significant site**, or

R15 **Least-modified** example of its type in the Region, or

R16 Modified, but the **largest example** of its type in the Region, or

R17 Is a **buffer** (or a key part of a buffer) to a site that is internationally or nationally significant, or

R18 Provides a habitat for an indigenous species at a key stage of its **life cycle**, or

R19 The largest remaining good quality example of its type in the Region.

A site is **at least** of local significance if it met at least one criterion in Appendix 1 but did not meet any of the above criteria.

Local
Locally significant natural areas are healthy examples of relatively common vegetation and habitat types. They are often small areas, but large enough to enable key ecological processes to occur, such as regeneration of seedlings or reproduction of indigenous fauna. These sites may not be particularly significant in their own right, but nevertheless play an important part in a network of natural areas. For example, a locally significant site might be important as a seasonal feeding or breeding area. It might also act as a stepping stone between other natural areas, allowing indigenous fauna to move in search of food or mates. Such sites are likely to provide representative examples of common or typical vegetation types or habitat for common indigenous species. They will not be among the best examples in the Region but will meet criteria for viability and sustainability as healthy, functioning, and ecologically viable sites.

CRITERIA FOR RANKING SITES OF SPECIAL WILDLIFE INTEREST
(from Rasch 1989a)

1. Outstanding

(a) Presence of a breeding population of a highly endangered or rare endemic species.
(b) Presence of a population of an endemic species of very restricted distribution and which could become endangered.
(c) Areas essential to species from (a) and (b) for purposes other than breeding.
(d) Areas of vital importance to internationally uncommon species (breeding and/or migratory).
(e) Areas of vital importance to internally migratory species with very limited distribution or abundance.
(f) Largely unmodified ecosystem or example of original habitat type not represented elsewhere in the country, of large size and containing viable populations of all or almost all species which are typical of the ecosystem or habitat type.

2. High

(a) Site containing an indigenous species which has declined significantly as a result of human influence.
(b) One of few or the only breeding area for a non-endemic indigenous species of limited abundance.
(c) Habitat of an uncommon, discontinuously distributed species not adequately represented in a particular ecological region.
(d) Example of a largely unmodified site which is not represented to the same extent elsewhere in the ecological region and is used by most species which are typical of that habitat type for the region.
(e) Presence of a species of an endemic family which is of limited abundance throughout the country although adequately represented in one ecological region but whose habitat is at some risk.

3. Moderate-High

(a) Presence of a species which is still quite widely distributed but whose habitat has been and still is being significantly reduced or modified as a result of human influence.
(b) Areas containing high numbers of breeding or moulting birds or where breeding or moulting areas are of inter-regional significance to wildlife.
(c) A large and fairly unmodified site or ecosystem which is represented elsewhere in the ecological region and contains all, or almost all, species typical of that habitat type for a particular region.

(d) An area where any particular species is exceptional in terms of, for example, abundance or behaviour but which is otherwise widespread.

4. Moderate

All sites supporting good numbers of species which are typical of that type of habitat within an ecological region and which have not been heavily modified by human influence.

5. Potential

All areas of some wildlife significance whose wildlife values are limited by small size, heavy modification or other factors, but which would have increased wildlife value if left to regenerate or if managed or developed for wildlife. (May include wildlife habitat which functions as a corridor, or which is sub-optimal habitat which may be necessary for maintaining genetic diversity.)

LIST OF SITES BY ECOLOGICAL DISTRICT

ECOLOGICAL DISTRICT	SITE
COROMANDEL ECOLOGICAL REGION	
Waihi Ecological District	Orokawa (Part)
Mayor Island Ecological District	Tūhua (Mayor Island)
NORTHERN VOLCANIC PLATEAU ECOLOGICAL REGION	
Tauranga Ecological District	Central Waihī Beach
	Waihī Beach Grey Willow Forest
	Bowentown Sand Dunes and Beach
	Bowentown Heads
	Tauranga Harbour - Unvegetated and Sparsely Vegetated Intertidal and Subtidal Areas
	Athenree
	Steele Road Wetlands A
	Steele Road Wetlands B (Part)
	Hikurangi
	Bowentown Shellbanks
	Tanners Point
	Tuapiro
	Tuapiro Estuary Sandspit
	Ongare
	Kauri Point
	Egg Island Sandbank
	Stokes Road Coastal Forest
	Katikati Inlet
	Park Road Estuary
	Tutaetaka Island
	Tetley Road Inlet
	Rereatukahia
	Te Rereatukahia
	Waitekohe Stream Mouth
	Matahui Road
	Matahui Point Intertidal Flats
	Aongatete Estuary
	Wainui Estuary
	Wainui Estuary Wetlands
	Te Hopai Island
	Apata Estuary
	Ngakautuakina Point
	Waipapa Estuary
	Waipapa Estuary Wetland
	Mangawhai Bay
	Mangawhai Bay Inlet
	Ōmokoroa Wetlands
	Ōmokoroa
	Jess Road
	Te Puna Estuary
	Snodgrass Road Inlet
	Newnham Road
	Waikaraka Estuary
	Waipa Road
	Motuhoa Island
	Kuka Road Wetlands
	Oikimoke

ECOLOGICAL DISTRICT	SITE
	Wairoa River Wetlands
	Matua Estuary - Yorke Park
	Waikareao Estuary 1
	Waikareao Estuary 2
	Motuopae Island
	Kopurererua Stream Wetland (Part)
	Motuopuhi Island
	Waimapu Estuary Walkway
	Waimapu Estuary
	Poike
	Hairini
	Kaitemako Stream Mouth
	Welcome Bay
	Tye Park Inlet
	Ranginui Road
	Ngāpeke Road Wetlands
	Waitao Stream
	Mangatawa
	Rangataua Bay A
	Rangataua Bay B
	Waipu Bay Margins
	Matakana Island 1
	Matakana Wetlands A
	Matakana Wetlands B
	Matakana Wetlands C
	Matakana Wetlands D
	Central Matkana Wetlands
	Matakana Island 2
	Matakana Island 4
	Duck Bay
	Tirohanga Mangroves
	Blue Gum Bay 1
	Blue Gum Bay 2
	Tirohanga Point Beach
	Tirohanga Point Pohutukawa
	Matakana Point
	Tahunamanu Pohutukawa
	Tahunamanu Island
	Opureora
	Opureora Inlet
	Waihirere Road Wetland
	Otapu Bay
	Rangiwāea Island Foreshore
	Motutangaroa Isle Foreshore
	Rangiwāea Island Estuary
	Rangiwāea Island East
	Rangiwāea Island Sandspit
	Southeastern Matakana Wetlands
	Mauao 1
	Mauao 2
	Hopukiore
	Moturiki Island
	Motuotau (Rabbit Island)
	Shark Alley to Kaituna Spit Sand Dunes
	Ōtira Sand Dunes
	Pāpāmoa Sand Dunes
	Kaituna Sand Dunes and Wetland

ECOLOGICAL DISTRICT	SITE
	Elizabeth Wetland
	Kaituna River Wetlands and Kaituna River Mouth (Part)
	Lower Kaituna Wildlife Management Reserve
	Maketū Estuary - Unvegetated and Sparsely Vegetated Intertidal and Subtidal Areas
	Maketū Estuary Saltmarsh
	Kaituna River
	Maketū Spit and Wildlife Management Reserve
	Arawa Wetland
	Ōkurei Point
	Waihī Estuary - Unvegetated and Sparsely Vegetated Intertidal and Subtidal Areas
	Waewaetutuki (Part)
	Wharere Road Wetland
	Waihī Estuary Southern Margin
	Pukehina Spit
	Pukehina
Motītī Ecological District	Karewa Island
	Taumaihi Island
	Motītī Island
	Motītī Islets
	Motuputa Island
	Motunau (Plate Island)
Ōtānewainuku Ecological District	Ōtamarākau-Matatā-Whakatāne Dunes B
	Ohinekoao (Part)
	Matatā Scenic Reserve (Part)
White Island Ecological District	Rūrima, Moutoki, and Tokata Islands
	Moutohorā (Whale Island)
	Te Paepae O Aotea (Volkner Rocks)
	Whakaari (White Island)
WHAKATANE ECOLOGICAL REGION	
Te Teko Ecological District	Ōtamarākau-Matatā-Whakatāne Dunes A
	Ōtamarākau-Matatā-Whakatāne Dunes C
	Kohika Wetland (Part)
	Tarawera River Raupo Wetland
	Thornton Road Dunes
	Walker Road Wetlands
	Wahieroa Wetland
	Orini Stream (Part)
	Whakatāne Estuary
Taneatua Ecological District	Kōhi Point
	Ōhope Scenic Reserve and Extension (Part)
	Ōhope Pohutukawa Remnants
	Ōhope Dunes
	Ōhope Spit
	Ōhiwa Harbour - Unvegetated and Sparsely Vegetated Intertidal and Subtidal Areas
	Harbour Road
	Claydon Place
	Ohakana
	Tauwhare
	Awaraputuna Stream
	Harbour Quarry Shoreline
	Tunanui Stream Inlet
	Pukehoko
	Waiotane Stream
	Stuart's Bittern Spot

ECOLOGICAL DISTRICT	SITE
	Whitiwhiti
	Islets Near Ohakana Island (Unnamed)
	Paparoa Pa Historic Reserve and Surrounds
	Paparoa Road Peninsula Inlet
	Wainui Wetland
	Williams Wetland (Part)
	Ouaki Creek Wetlands
	Toritori
	Uretara Island
	Hiwarau (Part)
	Hiwarau Pohutukawa
	Hiwarau Wetlands
	Te Awawairoa Stream
	Kutarere
	State Highway 2
	Ruatuna Road Embayment
	Pataua Island Scientific Reserve and Extension
	Ruatuna Road
	Stipa
	Hokianga Island
	Motuotu Island Nature Reserve
	Pukeruru
	Ōhiwa Scenic Reserve and Surrounds
	Whangakopikopiko Island
	Uawhaipata Island
	Ōhiwa Loop Road Saltmarsh
	Reeves Road Wetlands
	Ōhiwa Spit
Ōpōtiki Ecological District	Ruatuna
	Onekawa
	Oscar Reeve Scenic Reserve and Extension
	Bryans Beach B
	Looney's Remnants (Part)
	Onekawa Forest Remnants
	Bryans Beach A
	Waiōtahe Estuary
	Waiōtahe Spit
	Lower Paerata Ridge (Part)
	Waiōtahe Beach
	Huntress Creek
	Waioweka Estuary (Part)
	Hikuwai Beach
	Te Matau (Part)
	Tirohanga Dunes and Wetland
	Tirohanga Pā
	Omarumutu
	Ōpape
RAUKŪMARA ECOLOGICAL REGION	
Mōtū Ecological District	Haurere and Ōpape Headlands (Part)
	Oroi (Part)
	Tōrere River Mouth
	Te Whiorau (Part)
	Hāwaī-Motū River (Part)
	Houpoto Swamp (Part)
	Maraenui Wetland
	Motu-Waikakariki River (Part)
	Haparapara River-Te Kaha (Part)

ECOLOGICAL DISTRICT	SITE
	Whanarua (Part)
	Waimanu (Part)
	Raukōkore River Mouth (Part)
EAST CAPE ECOLOGICAL REGION	
Pukeamaru Ecological District	Waiokaha Stream Corridor (Part)
	Tauranga Stream (Part)
	Waihau Pohutukawa Remnants
	Te Ranginui-Oruaiti-Whangaparaoa-Tapuaeharuru (Part)
	Oruaiti Wetland
	Whangaparaoa B
	Whangaparaoa Beach and River Mouth
	Tikirau (Cape Runaway)
	Otarawhata Island
	Cape Runaway Pohutukawa Remnants
	Pōtikirua
	Maungahiha

DEFINITION FOR EACH FIELD ON EACH SITE DATA SHEET

Data Field	Definition
Site Number	CHPZ or SSCE number.
Grid Reference	Grid reference.
Local Authority	Local authority.
Ecological District	Ecological District.
Protection Status	Protected or Unprotected status.
Site Area	Area (ha) of site.
Altitudinal Range	Range of altitude within the site.
Geology-Landform Type	Geological-landform type using Healy *et al.* 1964, geology spatial layer supplied by BOP Regional Council, and Owen 1962.
Hydrosystem	Hydrosystem type.
Vegetation/Habitat Type	Vegetation type as per Atkinson (1985) (see Appendix 5).
Landform	Landform type.
Vegetation and Indigenous Flora	Threatened, At Risk or notable flora species.
Indigenous Fauna	Threatened, At Risk or notable faunal species.
Conditions/Pressures	A short description of any pressures that may compromise the vegetation or habitat of the site.
Key Site Features	A short description of the site and its relevant ecological importance.
Significance	Significance ranking (local, regional or national) .
Assessment Against Policy 11 of the NZCPS	Assessment against Policy 11 of the NZCPS criteria met, policy met (11a or 11b), and justification for which policy is met.
Notes	Othere relevant information about the site.
References	A list of references for the site.

LIST OF COMMON PLANT NAMES USED IN THE TEXT

agapanthus	*Agapanthus praecox*
akeake	*Dodonea viscosa*
akepiro	*Olearia furfuracea*
arctotis	*Arctotis stoechadifolia*
arrow grass	*Triglochin striata*
arum lily	*Zantedeschia aethiopica*
Australian ngaio	*Myoporum insulare*
Bachelor's button	*Cotula coronopifolia*
banana passionfruit	*Passiflora mollissima*
banksia	*Banksia* sp.
black wattle	*Acacia mearnsii*
blackberry	*Rubus* sp. (*R. fruticosus* agg.)
blue morning glory	*Ipomoea indica*
bracken	rarahu; *Pteridium esculentum*
brush wattle	*Paraserianthes lophantha*
bush rice grass	*Microlaena avenacea*
catsear	*Hypochoeris radicata*
Chinese privet	*Ligustrum sinense*
climbing asparagus	*Asparagus scandens*
climbing dock	*Rumex sagittatus*
cocksfoot	*Dactylis glomerata*
Cook's scurvy grass, nau	*Lepidium oleraceum*
cotoneaster	*Cotoneaster glaucophyllus*
dimorphotheca, rain daisy	*Osteospermum fruticosum*
duckweed, karearea	*Lemna minor*
dwarf greenhood	*Linguella puberula*
dwarf mistletoe	*Korthalsella salicornioides*
Italian evergreen buckthorn	*Rhamnus alaternus*
Formosan lily	*Lilum formosanum*
freesia	*Freesia* sp.
German ivy	*Senecio mikanioides*
glasswort, ureure	*Sarcocornia quinqueflora*
gorse	*Ulex europaeus*
grape	*Vitis vinifera*
grey willow	*Salix cinerea*
hairy birdsfoot treefoil	*Lotus suaveolens*
hangehange	*Geniostoma ligustrifolium*
harakeke	flax, *Phormium tenax*
hard beech, tawhai raunui	*Nothofagus truncata*
harestail	*Lagurus ovatus*
hinarepe, sand tussock	*Poa billardierei*
houpara	*Pseudopanax lessonii*
inkweed	*Phytolacca octandra*
iceplant	*Carpobrotus edulis*

Japanese honeysuckle	*Lonicera japonica*
Japanese spindleberry	*Euonymus japonicus*
Japanese walnut	*Juglans ailantifolia*
kahikatea	*Dacrycarpus dacrydioides*
kamahi	*Weinmannia racemosa*
kanuka	*Kunzea ericoides*
karamu	*Coprosma robusta*
karo	*Pittosporum crassifolium*
kawakawa	*Macropiper excelsum* var. *excelsum*
Kentucky bluegrass	*Poa pratensis*
kikuyu grass	*Pennisetum clandestinum*
king fern, para	*Ptisana salicina*
kiokio	*Blechnum novae-zelandiae*
kohekohe	*Dysoxylum spectabile*
kohuhu	*Pittosporum tenuifolium* subsp. *tenuifolium*
koromiko	*Hebe stricta* var. *stricta*
Lombardy poplar	*Populus nigra* 'Italica'
loquat	*Eriobotrya japonica*
lupin	*Lupinus arboreus*
macrocarpa	*Cupressus macrocarpa*
mahoe	*Melicytus ramiflorus* subsp. *ramiflorus*
mamaku	*Cyathea medullaris*
mangeao	*Litsea calicaris*
manawe, mangrove	*Avicennia marina* subsp. *australasica*
manuka	*Leptospermum scoparium*
mapou	*Myrsine australis*
maritime pine	*Pinus pinaster*
marram	*Ammophila arenaria*
marsh ribbonwood	*Plagianthus divaricatus*
mawhai	*Sicyos mawhai*
Mercer grass	*Paspalum distichum*
mignonette vine	*Andredera cordifolia*
mingimingi	*Leucopogon fasciculatus*
Moreton Bay fig	*Ficus macrophylla*
moth plant	*Araujia sericifera*
nasturtium	*Tropaeolum majus*
native hibiscus	*Hibiscus richardsonii*
New Zealand iceplant	*Disphyma australe*
New Zealand shore spurge	*Euphorbia glauca*
ngaio	*Myoporum laetum*
Norfolk pine	*Araucaria heterophylla*
northern rata	*Metrosideros robusta*
NZ spinach, kokihi	*Tetragonia tetragonioides*
oioi	*Apodasmia similis*
pampas	*Cortaderia selloana*
parapara	*Pisonia brunoniana*
paspalum	*Paspalum dilatatum*
periwinkle	*Vinca major*
Phoenix palm	*Phoenix canariensis*
pingao	*Ficinia spiralis*

plectranthus	*Plectranthus ciliatus*
pohuehue	*Muehlenbeckia complexa*
pohutukawa	*Metrosideros excelsa*
ponga	silver fern; *Cyathea dealbata*
poplar	*Populus* species
porokaiwhiri	pigeonwood, *Hedycarya arborea*
prickly mingimingi	*Leptecophylla juniperina* var. *juniperina*
prostrate kanuka	*Kunzea ericoides* var. *microflora*
pukatea	*Laurelia novae-zelandiae*
puriri	*Vitex lucens*
radiata pine	*Pinus radiata*
ragwort	*Jacobaea vulgaris*
rangiora	*Brachyglottis repanda*
ratstail	*Sporobolus africanus*
raupo	*Typha orientalis*
reed sweetgress	*Glyceria maxima*
rengarenga	*Arthropodium cirratum*
rewarewa	*Knightia excelsa*
ripgut brome	*Bromus diandrus*
rimu	*Dacrydium cupressinum*
rye grass	*Lolium perenne*
royal fern	*Osmunda regalis*
saltwater paspalum	*Paspalum vaginatum*
sand pimelea	*Pimelea villosa*
sea couch	*Elytrigia pycnantha*
sea rush	*Juncus kraussii* subsp. *australiensis*
seagrass, karepo	*Zostera* spp.
selaginella	*Selaginella kraussiana*
sheep's sorrel	*Rumex acetosella*
shore bindweed, panahi	*Calystegia soldanella*
silver poplar	*Populus alba*
smilax	*Asparagus asparagoides*
Spanish heath	*Erica lusitanica*
spinifex, kowhangatara	*Spinifex sericeus*
swamp coprosma, hukihuki	*Coprosma tenuicaulis*
swamp kiokio	*Blechnum minus*
swamp millet	*Isachne globosa*
sycamore	*Acer pseudoplatanus*
Taiwan cherry	*Prunus campanulata*
tall fescue	*Schedonorus phoenix*
tanekaha	*Phyllocladus trichomanoides*
taraire	*Beilschmiedia tarairi*
tarata	lemonwood; *Pittosporum eugenioides*
taro	*Colocasia esculenta*
Tasmanian blackwood	*Acacia melanoxylon*
tauhinu	*Ozothamnus leptophyllus*
taupata	*Coprosma repens*
tawa	*Beilschmiedia tawa*
tawapou	*Planchonella costata*
tawheowheo	*Quintinia serrata*

ti kouka	*Cordyline australis*
titoki	*Alectryon excelsus*
totara	*Podocarpus totara*
tradescantia	*Tradescantia fluminensis*
tree lucerne	*Chamaecytisus palmensis*
tree privet	*Ligustrum lucidum*
tutu	*Coriaria arborea*
umbrella sedge	*Cyperus eragrostis*
watercress	*Nasturtium officinale*
whararikí	*Phormium cookianum*
whauwhaupaku	five finger; *Pseudopanax arboreus*
wild broom	*Cytisus scoparius*
wild ginger	*Hedychium gardnerianum*
wild rose	*Rosa* sp.
woolly nightshade	*Solanum mauritianum*
Yorkshire fog	*Holcus lanatus*

LIST OF COMMON FAUNA NAMES USED IN THE TEXT

BIRDS

Australasian bittern; matuku	*Botaurus poiciloptilus*
Australasian gannet; takapu	*Morus serrator*
Australasian harrier; kahu	*Circus approximans*
banded dotterel	*Charadrius bicinctus bicinctus*
banded rail	*Gallirallus philippensis assimilis*
bar-tailed godwit	*Limosa lapponica*
bellbird;korimako; makomako	*Anthornis melanura*
black stilt; kaki	*Himantopus novaezelandiae*
black-backed gull; karoro	*Larus dominicanus* ssp. *dominicanus*
black-billed gull	*Larus bulleri*
brown teal; pateke	*Anas chlorotis*
Caspian tern	*Sterna caspia*
diving petrel	*Pelecanoides* sp.
eastern curlew	*Numenius madagascariensis*
NZ fairy tern	*Sterna nereis davisae*
flesh-footed shearwater; toanui	*Puffinus carneipes*
grey duck	*Anas superciliosa superciliosa*
grey ternlet	*Procelsterna cerulea*
grey warbler; riroriro	*Gerygone igata*
grey-faced petrel; oi	*Pterodroma macroptera* ssp. *gouldi*
kakariki; red-crowned kakariki	*Cyanoramphus novaezelandiae novaezelandiae*
kereru, NZ wood pigeon	*Hemiphaga novaeseelandiae*
kingfisher; kotare	*Todiramphus sanctus*
lesser knot	*Calidris canutus*
little black shag	*Phalacrocorax sulcirostris*
long-tailed cuckoo	*Eudynamys taitensis*
mallard	*Anas platyrhynchos*
marsh crake	*Porzana pusilla affinis*
morepork; ruru	*Ninox novaeseelandiae*
New Zealand dabchick	*Poliocephalus rufopectus*
New Zealand dotterel; tuturiwhatu	*Charadrius obscurus*
New Zealand falcon	*Falco novaeseelandiae sensu stricto*
North Island brown kiwi	*Apteryx mantelli*
North Island fantail; piwakawaka	*Rhipidura fuliginosa* ssp. *placabilis*
North Island fernbird	*Bowdleria punctata vealeae*
North Island kākā	*Nestor meridionalis* ssp. *septentrionalis*
North Island kokako	*Callaeas cinerea* ssp. *wilsoni*
North Island robin; toutouwai	*Petroica australis* ssp. *longipes*
North Island saddleback; tieke	*Philesturnus rufusater*
North Island weka	*Gallirallus australis* ssp. *greyi*
northern blue penguin; korora	*Eudyptula minor iredalei*
papango; New Zealand scaup	*Aythya novaeseelandiae*

paradise shelduck; putangitangi	*Tadorna variegata*
NZ pied oystercatcher; torea	*Haematopus finschi*
pied shag; karuhiruhi	*Phalacrocorax varius varius*
pukeko	*Porphyrio porphyrio* ssp. *melanotus*
red-billed gull	*Larus novaehollandiae scopulinus*
reef heron	*Egretta sacra sacra*
royal spoonbill; kotuku-ngutupapa	*Platalea regia*
silvereye; tauhou	*Zosterops lateralis*
skua (unidentified)	*Stercorarius* sp.
spotless crake; puweto	*Porzana tabuensis* ssp. *plumbea*
spur-winged plover	*Vanellus miles*
starling	*Sturnus vulgaris*
stitchbird; hihi	*Notiomystis cincta*
storm petrel (unidentified)	*Fregetta* sp.
tomtit; miromiro	*Petroica macrocephala* ssp. *toitoi*
tui	*Prosthemadera novaeseelandiae*
turnstone	*Arenaria interpres*
variable oystercatcher; torea; toreapango	*Haematopus unicolor*
welcome swallow	*Hirundo tahitica* ssp. *neoxena*
whimbrel	*Numenius phaeopus*
whio; blue duck	*Hymenolaimus malacorhynchos*
white-faced heron	*Ardea novaehollandiae*
white-fronted tern; tara	*Sterna striata striata*
whitehead; popokatea	*Mohoua albicilla*
wrybill	*Anarhynchus frontalis*

MAMMALS

cat	*Felis catus*
cattle	*Bos taurus*
deer	*Cervus* spp.
dog	*Canis familiaris*
goat	*Capra hircus*
hedgehog	*Erinaceus europaeus*
horse	*Equus caballus*
kiore; Pacific rat	*Rattus exulans*
long-tailed bat; pekapeka	*Chalinolobus tuberculatus*
mouse	*Mus musculus*
mustelid species	*Mustela* sp.
New Zealand fur seal; kekeno	*Arctocephalus forsteri*
pig	*Sus scrofa*
possum; brushtail possum	*Trichosurus vulpecula*
rabbit	*Oryctolagus cuniculus*
sheep	*Ovis aries*
stoat	*Mustela erminea*

LIZARDS

common gecko	*Hoplodactylus maculatus*
copper skink	*Cyclodina aenea*
Duvaucel's gecko	*Hoplodactylus duvaucelii*
forest gecko	*Hoplodactylus granulatus*
moko skink	*Oligosoma moco*
northern tuatara	*Sphenodon punctatus*
pacific gecko	*Hoplodactylus pacificus*
shore skink	*Oligosoma smithi*
speckled skink	*Oligosoma infrapunctatum*
unidentified gecko	*Hoplodactylus* spp.
unidentified skink	*Oligosoma* sp.
Whitaker's skink	*Oligosoma whitakeri*

FISH

shortfin eel	*Anguilla australis*
longfin eel	*Anguilla dieffenbachii*
giant kōkopu	*Galaxias argenteus*
inanga, whitebait	*Galaxias maculatus*
kōaro	*Galaxias brevipinnis*
torrentfish	*Cheimarrichthys fosteri*
redfin bully	*Gobiomorphus huttoni*
shortjaw kōkopu	*Galaxias postvectis*
lamprey	*Geotria australis*

FROGS

Hochstetter's frog	*Leiopelma hochstetteri*

INSECTS

Northern giant weta	*Deinacrida* sp.
wasp	*Vespula* spp.

SPIDERS

katipo	*Latrodectus katipo*

VEGETATION STRUCTURAL CLASSES (ATKINSON 1985)

Atkinson (1985) details structural classes of a widely recognised vegetation structural class system which provides a conventional classification system for New Zealand vegetation and habitats. Each vegetation type name combines both compositional and structural information, as summarised below.

Vegetation type names

The dominant canopy species are listed first, and then any species in lower vegetation tiers (if these are known) followed by the structural class of the vegetation, e.g. rimu/tawa-kamahi forest; *Ficinia nodosa*/pohuehue sedge-vineland. Common names are preferred (when they cannot be mistaken) otherwise Latin names are used (see list of common and Latin name equivalents).

The percentage cover of particular species and their position in the vegetation tiers are indicated as follows:

(tawa)	less than 5% cover of the bracketed species
(rimu)/tawa	indicates less than 5% cover of rimu emergent over a canopy of tawa
tawa-hinau	indicates tawa and hinau occur in the same tier
⇔	indicates a mosaic of two or more vegetation types exists within a defined area

Structural classes

Forest — Woody vegetation in which the cover of trees and shrubs in the canopy is >80% and in which tree cover exceeds that of shrubs. Trees are woody plants >10 cm dbh. Tree ferns >10 cm dbh are treated as trees.

Treeland — Vegetation in which the cover of trees in the canopy is 20-80%, with tree cover exceeding that of any other growth form, and in which the trees form a discontinuous upper canopy above either a lower canopy of predominantly non-woody vegetation or bare ground, e.g. mahoe/rarahu treeland. (Note: Vegetation consisting of trees above shrubs is classified as either forest or scrub depending on the proportion of trees and shrubs in the canopy.)

Vineland — Vegetation in which the cover of unsupported (or artificially supported) woody vines in the canopy is 20-100% and in which the cover of these vines exceeds that of any other growth form or bare ground. Vegetation containing woody vines that are supported by trees or shrubs is classified as forest, scrub or shrubland. Examples of woody vines occur in the genera *Actinidia, Clematis, Lonicera, Metrosideros, Muehlenbeckia, Ripogonum, Vitis* and others.

Scrub	Woody vegetation in which the cover of shrubs and trees in the canopy is >80% and in which shrub cover exceeds that of trees (cf forest). Shrubs are woody plants <10 cm dbh.
Shrubland	Vegetation in which the cover of shrubs in the canopy is 20-80% and in which the shrub cover exceeds that of any other growth form or bare ground. It is sometimes useful to separate tussock-shrublands as a sub-class for areas where tussocks are >20% but less than shrubs. (Note: the term scrubland is not used in this classification.)
Tussockland	Vegetation in which the cover of tussocks in the canopy is 20-100% and in which the tussock cover exceeds that of any other growth form or bare ground. Tussocks include all grasses, sedges, rushes, and other herbaceous plants with linear leaves (or linear non-woody stems) that are densely clumped and > 10 cm height. Examples of the growth form occur in all species of *Cortaderia, Gahnia* and *Phormium*, and in some species of *Chinochloa, Poa, Festuca, Rytidosperma, Cyperus, Carex, Uncinia, Juncus, Astelia, Aciphylla* and *Celmisia*.
Fernland	Vegetation in which the cover of ferns in the canopy is 20-100% and in which the fern cover exceeds that of any other growth form or bare ground. Tree ferns >10 cm dbh are excluded as trees (cf. forest).
Grassland	Vegetation in which the cover of grass in the canopy is 20-100% and in which the grass cover exceeds that of any other growth form or bare ground. Tussock-grasses are excluded from the grass growth-form.
Sedgeland	Vegetation in which the cover of sedges in the canopy is 20-100% and in which the sedge cover exceeds that of any other growth form or bare ground. Included in the sedge growth form are *Leptocarpus similis* and many species of *Carex, Uncinia, Isolepis*, and *Bolboschoenus*. Tussock-sedges and reed-forming sedges (cf. reedland) are excluded.
Rushland	Vegetation in which the cover of rushes in the canopy is 20-100% and in which the rush cover exceeds that of any other growth form or bare ground. Included in the rush growth form are some species of *Juncus*, most species of *Leptocarpus*, and all species of *Sporadanthus,* and *Empodisma*. Tussock-rushes are excluded.
Reedland	Vegetation in which the cover of reeds in the canopy is 20-100% and in which the reed cover exceeds that of any other growth form or open water. Reeds are herbaceous plants growing in standing or slowly-running water that have tall, slender, erect, unbranched leaves or culms that are either hollow or have a very spongy pith. Examples include *Typha, Bolboschoenus, Schoenoplectus tabernaemontani, Eleocharis sphacelata,* and *Machaerina articulata*.
Cushionfield	Vegetation in which the cover of cushion plants in the canopy is 20-100% and in which the cushion-plant cover exceeds that of any other growth

form or bare ground. Cushion plants include herbaceous, semi-woody and woody plants with short densely packed branches and closely spaced leaves that together form dense hemispherical cushions. The growth form occurs in all species of *Donatia, Gaimardia, Hectorella, Oreobolus,* and *Phyllachne* as well as in some species of *Aciphylla, Celmisia, Centrolepis, Chionohebe, Colobanthus, Dracophyllum, Drapetes, Haastia, Leucogenes, Luzula, Myosotis, Poa, Raoulia,* and *Scleranthus*.

Herbfield — Vegetation in which the cover of herbs in the canopy is 20-100% and in which the herb cover exceeds that of any other growth form or bare ground. Herbs include all herbaceous and low-growing semi-woody plants that are not separated as ferns, tussocks, grasses, sedges, rushes, reeds, cushion plants, mosses or lichens.

Mossfield — Vegetation in which the cover of mosses in the canopy is 20-100% and in which the moss cover exceeds that of any other growth form or bare ground.

Lichenfield — Vegetation in which the cover of lichens in the canopy is 20-100% and in which the lichen cover exceeds that of any other growth form or bare ground.

Rockland — Land in which the area of residual bare rock exceeds the area covered by any one class of plant growth-form. Cliff vegetation often includes rocklands. They are named from the leading plant species when plant cover ≥ 1%, e.g. [koromiko] rockland.

Boulderfield — Land in which the area of unconsolidated bare boulders (>200 mm diam.) exceeds the area covered by any one class of plant growth-form. Boulderfields are named from the leading plant species when plant cover ≥ 1%.

Stonefield/gravelfield — Land in which the area of unconsolidated bare stones (20-200 mm diam.) exceeds the area covered by any one class of plant growth-form. The appropriate name is given depending on whether stones or gravel form the greater area of ground surface. Stonefields and gravelfields are named from the leading plant species when plant cover ≥ 1%.

Sandfield — Land in which the area of bare sand (0.02 - 2 mm diam.) exceeds the area covered by any one class of plant growth-form. Dune vegetation often includes sandfields which are named from the leading plant species when plant cover ≥ 1%.

Loamfield/Peatfield — Land in which the area of loam and/or peat exceeds the area covered by any one class of plant growth-form. The appropriate name if given depending on whether loam or peat forms the greater area of ground surface. Loamfields and peatfields are named from the leading plant species when plant cover ≥ 1%.

Flaxland — Vegetation in which the cover of flax in the canopy is 20-80%, and in which the flax cover exceeds that of any other growth form or bare ground.

Pasture	Pasture comprises exotic grasses and herbs, and often includes sweet vernal, ryegrass, browntop, dandelion, foxglove, with scattered Yorkshire fog, selfheal, and white clover.

RELATIONSHIP OF SITES TO MEAN HIGH WATER SPRINGS

This appendix contains 3 lists of sites (in alphabetical order) in each of the following groups:

- entirely above MHWS;
- entirely below MHWS;
- partly above and partly below MHWS.

SITES ENTIRELY ABOVE MEAN HIGH WATER SPRINGS

118	Arawa Wetland
029	Bowentown Heads
192	Bryans Beach A
191	Bryans Beach B
228	Cape Runaway Pohutukawa Remnants
034	Central Matakana Wetlands
156	Claydon Place
108	Elizabeth Wetland
207	Haurere and Ōpape Headlands (Part)
212	Hāwai - Motū River (Part)
201	Hikuwai Beach
167	Hiwarau Pohutukawa
092	Hopukiore
211	Houpoto Swamp (Part)
154	Islets near Ohakana Island
111	Kaituna River Wetlands (Part) and Kaituna River Mouth
107	Kaituna Sand Dunes and Wetland
025	Kauri Point
142	Kōhi Point
131	Kohika Wetland (Part)
079	Kopurererua Stream Wetland (Part)
061	Kuka Road Wetlands
187	Looney's Remnants (Part)
109	Lower Kaituna Wildlife Management Reserve
196	Lower Paerata Ridge (Part)
213	Maraenui Wetland
046	Matakana Point
063	Matakana Wetlands A
032	Matakana Wetlands B
033	Matakana Wetlands C
035	Matakana Wetlands D
129	Matatā Scenic Reserve (Part)
088	Mauao 1
089	Mauao 2
230	Maungahiha
113	Motītī Islets
060	Motuhoa Island

127	Motunau Island
087	Motuopuhi Island
095	Motuotau Island
119	Motuputa Island
093	Moturiki Island
038	Ngakautuakina Point
128	Ohinekoao (Part)
157	Ōhope Dunes
144	Ōhope Pohutukawa Remnants
143	Ōhope Scenic Reserve and Extension (Part)
121	Okurei Point
040	Ōmokoroa Wetlands
189	Onekawa
193	Onekawa Forest Remnants
206	Ōpape
139	Orini Stream (Part)
208	Oroi (Part)
222	Oruaiti Wetland
190	Oscar Reeve Scenic Reserve and Extension
224	Otarawhata Island
104	Ōtira Sand Dunes
106	Pāpāmoa Sand Dunes
160	Paparoa Pa Historic Reserve and Surrounds
229	Pōtikirua
126	Pukehina
101	Rangataua Bay B
185	Ruatuna
098	Shark Alley to Kaituna Spit Sand Dunes
078	Southeastern Matakana Wetlands
018	Steele Road Wetlands A
015	Steele Road Wetlands B (Part)
006	Stokes Road Coastal Forest
056	Tahunamanu Pohutukawa
132	Tarawera River Raupo Wetland
220	Tauranga Stream (Part)
202	Te Matau (Part)
186	Te Paepae o Aotea (Volkner Rocks)
210	Te Whiorau (Part)
133	Thornton Road Dunes
044	Tirohanga Point Pohutukawa
164	Toritori
013	Tutaetaka Island
134	Wahieroa Wetland
221	Waihau Pohutukawa Remnants
011	Waihī Beach Grey Willow Forest
064	Waihirere Road Wetland
217	Waimanu (Part)
219	Waiokaha Stream Corridor (Part)
037	Waipapa Estuary Wetland
136	Walker Road Wetlands

197	Whakaari (White Island)
216	Whanarua (Part)
226	Whangaparaoa B
122	Wharere Road Wetland
153	Williams Wetland (Part)

SITES ENTIRELY BELOW MEAN HIGH WATER SPRINGS

020	Aongatete Estuary
024	Bowentown Shellbanks
076	Duck Bay
027	Egg Island Sandbank
110	Kaituna River (Part)
177	Kutarere
116	Maketū Estuary Saltmarsh
026	Matahui Point Intertidal flats
012	Matahui Road
179	Ōhiwa Loop Road Saltmarsh
050	Ōmokoroa
100	Rangataua Bay A
003	Rereatukahia
173	Stipa
056	Tahunamanu Island
039	Tirohanga Mangroves
045	Tirohanga Point Beach
016	Tuapiro Estuary Sandspit
096	Tye Park Inlet
058	Waipa Road

SITES PARTLY ABOVE AND PARTLY BELOW MEAN HIGH WATER SPRINGS

030	Apata Estuary
021	Athenree
148	Awaraputuna Stream
059	Blue Gum Bay 1
065	Blue Gum Bay 2
028	Bowentown Sand Dunes and Beach
022	Central Waihī Beach
086	Hairini
215	Haparapara River-Te Kaha (Part)
150	Harbour Quarry Shoreline
161	Harbour Road
009	Hikurangi
165	Hiwarau (Part)
168	Hiwarau Wetlands
171	Hokianga Island
199	Huntress Creek
051	Jess Road
090	Kaitemako Stream Mouth
077	Karewa Island

002	Katikati Inlet
114	Maketū Estuary
115	Maketū Spit and Wildlife Management Reserve
103	Mangatawa
048	Mangawhai Bay
043	Mangawhai Bay Inlet
062	Matakana Island 1
042	Matakana Island 2
049	Matakana Island 4
075	Matua Estuary - Yorke Park
113	Motītī Island
083	Motuopae Island
172	Motuotu Island Nature Reserve
071	Motutangaroa Isle Foreshore
214	Motu-Waikakariki River (Part)
140	Moutohora (Whale Island)
052	Newnham Road
099	Ngāpeke Road Wetlands
155	Ohakana
163	Ōhiwa Harbour
178	Ōhiwa Scenic Reserve and Surrounds
188	Ōhiwa Spit
169	Ōhope Spit
069	Oikimoke
205	Omarumutu
206	Ongare
067	Opureora
063	Opureora Inlet
008	Orokawa (Part)
135	Ōtamarākau-Matatā-Whakatāne Dunes A
130	Ōtamarākau-Matatā-Whakatāne Dunes B
138	Ōtamarākau-Matatā-Whakatāne Dunes C
066	Otapu Bay
162	Ouaki Creek Wetlands
158	Paparoa Road Peninsula Inlet
007	Park Road Estuary
176	Pataua Island Scientific Reserve & Extension
085	Poike
123	Pukehina Spit
146	Pukehoko
175	Pukeruru
097	Ranginui Road
073	Rangiwāea Island East
072	Rangiwāea Island Estuary
070	Rangiwāea Island Foreshore
074	Rangiwāea Island Sandspit
218	Raukōkore Mouth (Part)
183	Reeves Road Wetlands
174	Ruatuna Road
181	Ruatuna Road Embayment

137	Rūrima, Moutoki and Tokata Islands
053	Snodgrass Road Inlet
182	State Highway 2
149	Stuart's Bittern Spot
014	Tanners Point
112	Taumaihi Island
055	Tauranga Harbour
152	Tauwhare
170	Te Awawairoa Stream
031	Te Hopai Island
047	Te Puna Estuary
223	Te Ranginui-Oruaiti-Whangaparaoa-Tapuaeharuru (Part)
001	Te Rereatukahia
004	Tetley Road Inlet
227	Tikirau
204	Tirohanga Dunes and Wetland
203	Tirohanga Pa
209	Tōrere Rivermouth
005	Tuapiro
105	Tūhua (Mayor Island)
145	Tunanui Stream Inlet
184	Uawhaipata island
166	Uretara Island
120	Waewaetutuki
124	Waihī Estuary
125	Waihī Estuary Southern Margin
057	Waikaraka Estuary
081	Waikareao Estuary 1
082	Waikareao Estuary 2
080	Waimapu Estuary
084	Waimapu Estuary Walkway
023	Wainui Estuary
019	Wainui Estuary Wetlands
159	Wainui Wetland
198	Waiōtahe Beach
195	Waiōtahe Estuary
194	Waiōtahe Spit
147	Waiotane Stream
200	Waioweka Estuary (Part)
041	Waipapa Estuary
094	Waipu Bay Margins
068	Wairoa River Wetlands
102	Waitao Stream
010	Waitekohe Stream Mouth
091	Welcome Bay
141	Whakatāne Estuary
180	Whangakopikopiko Island
225	Whangaparaoa Beach and River Mouth
151	Whitiwhiti

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