KAPITI COAST DISTRICT COUNCIL
2002-2003 ECOLOGICAL
SITES SURVEY

MAY 2003

Contract Report No. 662

Report prepared for:

KAPITI COAST DISTRICT COUNCIL
175 RIMU ROAD
PRIVATE BAG 601
PARAPARAUMU

WILDLAND CONSULTANTS LTD, P.O. BOX 7137, TE NGAE, ROTORUA
Ph 07-343-9017, Fax 07-343-9018, email willdland@wave.co.nz, www.wildland.co.nz

CONTENTS

1. INTRODUCTION

In 1995 Kapiti Coast District Council notified it's Proposed District Plan. The Plan contained a Heritage Register with a list of 138 Ecological Sites (being remnant forests or wetlands). The majority of sites were nominated to be included in the District Plan's Heritage Register by the Department of Conservation and were identified from the Protected Natural Areas Programme.

The District Plan has been operative since 1999 and the Heritage Register now contains 133 Ecological Sites. The Plan includes rules that prevent modification to any ecological site without a resource consent. However, the Plan also identifies the need to provide non-regulatory incentives to assist landowners to effectively manage ecological sites on their property.

Council has set aside funds towards the management of the Ecological Sites. However, before funds are allocated, a review of the Ecological Sites (including those not currently identified in the District Plan) and identification of management priorities was required.

Field inspections were undertaken of all sites to confirm or identify boundaries and collect ecological information. In addition to the 133 Ecological Sites there were 36 proposed sites requiring site visits. The Ecological Sites are located within the Foxton, Manawatu Plains and Tararua Ecological Districts. This report documents the work undertaken on the Ecological Sites during the period October 2002 - May 2003.

On completion of the current study 39 wetland sites (five of which are swamp forest) and 102 forest fragments had been identified, a further seven sites containing both a dry forest component and a wetland with the largest site, Tararua Foothills, being mainly forest contiguous with the Tararua Forest Park. The majority of the Ecological Sites are under private ownership.

2. PROJECT TEAM

Sarah Beadel	– Project manager, technical advice
Fleur Maseyk	– Project management, field survey, data entry, site assessment, report preparation
Hamish Dean	– Field survey, data entry, site assessment
William Shaw	– Technical advice
Debbie Little	– GIS preparation
Karen Riddell	– Plant identification
Margaret Honey	– Report preparation

3. OBJECTIVES

The project objectives are to:

- Field survey each Ecological Site to collect ecological information and determine correct boundaries.
- Review existing Ecological Sites to determine appropriateness of Ecological Site Designation under the Heritage Register.
- Assess proposed Ecological Sites to determine whether eligible for Ecological Site designation.
- Assess each Ecological Site for key ecological features and level of ecological ranking.
- Provide GIS layer of recommended site boundaries.
- Provide completed database of ecological data pertaining to each Ecological Site.

4. METHODS

Fieldwork was undertaken over the period November 2002 - March 2003. One hundred and sixty-one sites were visited during the survey; five sites were not surveyed because permission to undertake the survey was not forthcoming or the landowners could not be located (listed in Appendix 1). A further site (K174) was not surveyed as per instruction from the client. This site will be included in the forthcoming riparian margin survey. The extent of Kapiti Coast District is shown in Figure 1. The following information was collected at each site:

- A brief site description of the site and the dominant vegetation and habitat types.
- Observed fauna (indigenous and exotic).
- Threats from invasive flora and fauna.
- Effects of human activity.
- Management requirements.

Tapes of bird calls were played at wetland sites to monitor for the presence of North Island fern bird (*Bowdleria punctata vealeae*) and spotless crake (*Porzana tabuensis plumbea).* A blank example of the data collection forms is presented in Appendix 2.

A Global Positioning System (GPS) unit (Leica Geosystems GIS DataPRO, using a GS50 sensor and TR500 terminal and antenna) was used to take readings to assist in demarking the boundaries of each site. Final GIS mapping (MapInfo Version 6) of sites used this data, along with recent, high quality, colour digital aerial photography. Vegetation unit types were marked on the aerial photographs while in the field.

An Access (Microsoft®) database was created for Council by Richardson Consultancy to manage all past and future information pertaining to the Ecological Sites. All information from the field sheets for each site was transferred into this database. Landowner comments as they relate to the review of Ecological Sites were entered into the designated confidential component of the Ecological Site Database.

Figure 1.
Kapiti Coast District Council

KEY

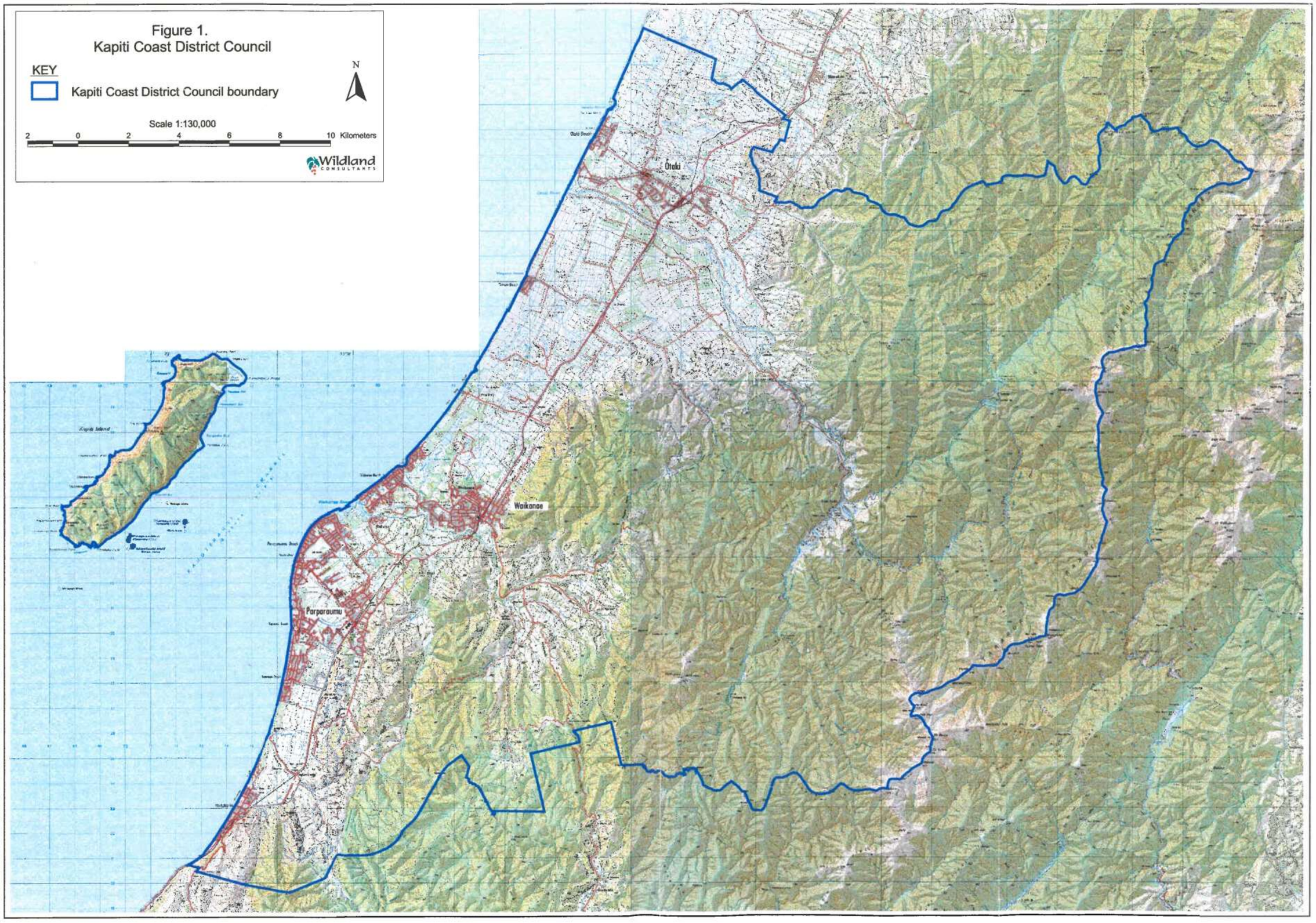
Kapiti Coast District Council boundary

N

Scale 1:130,000

2 0 2 4 6 8 10 Kilometers

Wildland CONSULTANTS



Key ecological features for each site were identified and each site was ranked. Each Ecological Site was then ranked as being of International, National, Regional or Local Significance using accepted ecological ranking criteria (see Appendix 3). Alongside this all sites (proposed and current) were assessed to identify whether they qualified for inclusion in the Heritage Register. Existing survey data and site information was evaluated alongside data gathered during the course of field survey in considering ecological rank for each site.

5. RESULTS

All data collected in the field have been transferred into the database. The database has been provided to Council in electronic form.

The majority of ecological sites required amendments to site boundaries. The recommended boundary lines are shown on the GIS layer supplied to Council. Properties where owners desired exclusion from the Heritage Register have been indicated.

The field copies of the aerial photographs showing the vegetation unit types within each Ecological Site have been supplied to Council without further processing.

During the course of the field survey several areas that could qualify as Ecological Sites that were not identified by the Council for survey were noted and are listed in Appendix 4. This preliminary list only includes areas that were noticed during fieldwork and is not exhaustive.

There are no Ecological Sites of International Significance within Kapiti District. Three sites were of National Significance, 90 were of Regional Significance, and 40 were of Local Significance. Twenty-seven sites were not considered to contain features of ecological value and are either not recommended for inclusion (proposed sites) or recommended for removal (current sites) from the Natural Area Register. A further 12 sites have been merged into existing sites.

A summary of findings is provided in Appendix 1. This outlines key ecological features, level of ranking, and whether a change is recommended for current status for each Ecological Site.

ACKNOWLEDGMENTS

We would like to thank Andrew Guerin (Kapiti Coast District Council) for initiating this project and providing logistical support. Lisa Gibellini for liaison with landowners and scheduling of site visits and Sherilyn Hinton for taking on this role after Lisa's departure. Anna Carter (now Department of Conservation) for continued involvement and comment. Melanie Dixon (Greater Wellington) for comment and site information.

Stefan Ziaja (Kapiti Coast District Council) for technical advice on the GIS unit and for processing the GPS data. Phil Wall filled in during Stefan's absence.

Geoff Richardson (Richardson Consultancy) for provision of , amendment to, and assistance with the Access Database.

Pat Enright for generous supply of flora species lists for many sites. John Sawyer (Department of Conservation) for provision of botanical information and useful comment. Fergus Wheeler (Nga Uruora), Tim Park (Queen Elizabeth II Trust) and Carol Knutson (Forest & Bird Society) for site information.

REFERENCES

Department of Conservation 1996: Conservation Management Strategy. *Volume II for Wellington 1996 – 2005*. Wellington Conservancy.

Enright P. 2002a: Vascular plants of the swamp area on the property at 73 Forest Lakes Road North of Otaki (S25 936501). Unpublished species list.

Enright P. 2002b: Vascular plants in bush and swamp area on the Pritchard property North of Otaki (S25 931501). Unpublished species list.

Enright P. 2002c: Waikanae Scenic Reserve (R26 & Pt. R25 858375). *Update of list compiled by P. Beveridge, O. John & P. Enright (2000) based on lists compiled by A. P. Druce (1978) and M. C. Wassilieff (1984).* Unpublished species list.

Enright P., John O. 2002a: Vascular plants in bush and swamp area at the end of Taylors Road North of Otaki (S25 931501). Unpublished species list.

Enright P., John O. 2002b: List of vascular plants in the bush area at Waterfall Road near Paraparaumu (R26 & Pt. R25 784262). Unpublished species list.

Enright P. John O. 2002c: List of vascular plants in the bush area at Bluff Hill on the Reikorangi Road (R26 & Pt. R25 850316). *From original lists compiled from Wellington Regional Council staff in 1997.* Unpublished species list.

Enright P., Park T., John O. 2002: Vascular plants in bush and swamp area on the Bristed Block, Waikanae (R26 836359). Unpublished species list.

Enright P., John O. 2001: Vascular plants and mosses on the properties at 226 and 234 Te Hapua Road (S25 850411). Unpublished species list.

Enright P., John O. 2000: Bush patch at Te Horo (R26 & Pt. R25 870397). Unpublished species list.

Enright P., Park T., Bryant, M., Kessell, B. 2002: Vascular plants in swamp area on the property at 75 Forest Lakes Road North of Otaki (S25 933500). Unpublished species list.

Forest & Bird Society (no date): Field Reserve (previously Pharazyn Bush). File P86 018. Unpublished file notes.

Gabites I. 1993: Wellington's Living Cloak. A guide to the Natural Plant Communities. *Wellington Botanical Society*. Victoria University Press. Wellington. 120 pp.

Hitchmough R. (compiler) 2002: New Zealand Threat Classification System lists. Biodiversity Recovery Unit. Department of Conservation. Wellington. 210 pp.

Horne C., Humble J., Pomare L., Enright P. 2000: List of vascular plants in fenced bush area at Queen Elizabeth II Park (R26 & Pt. R25 761245). *From original lists compiled by C. Ogle in 1981 and 1987.* Unpublished species list.

Kapiti Coast District Council: Unpublished file notes on Ecological Sites.

Milne R., Sawyer J. 2002: Coastal Foredune Vegetation in Wellington Conservancy: *Current status and future management.* Department of Conservation. Wellington. 58 pp.

New Zealand Landcover Database 2001: LCDBI, Version 2, Revised September 2001.

Ogle C. 1989: Forest remnant at site of old Lion Safari Park, Otaihanga, Waikanae River. Unpublished Department of Conservation file note.

Ravine D. A. 1995: Manawatu Plains Ecological District. Survey Report for the Protected Natural Areas Programme. *New Zealand Protected Natural Areas Programme No. 33*. Department of Conservation. Wanganui. 350 pp.

Ravine D. A. 1992: Foxton Ecological District. Survey Report for the Protected Natural Areas Programme. *New Zealand Protected Natural Areas Programme No. 19*. Department of Conservation. Wanganui. 264 pp.

Sawyer J. 2001: Bibliography of plant checklists and vegetation survey data for Wellington Conservancy (excluding Chatham Islands). 2nd Edition. Department of Conservation. Wellington. 76 pp.

Sawyer J. (undated): National and Regional Threat Status of Native Vascular Plants in Wellington Conservancy. Department of Conservation. Wellington Conservancy. 18 pp.

Townsend A. J.; Beadel S. M.; Sawyer J. W. D.; Shaw W. B. 1998: Plants of National Conservation Concern in Wellington Conservancy. Current Status and Future Management. Department of Conservation. Wellington Conservancy. 450 pp plus appendices.

Wassilieff M. C., Clark D. J. 1986: Scenic Reserves of the Lower North Island. A botanical survey of scenic and allied reserves of Wellington, Horowhenua and Wairarapa. Part 1. Wellington and Horowhenua. *Biological Survey of Reserves Series No. 14*. Department of Lands and Survey. Wellington.

Wellington Regional Council 1996-2000: Key Native Ecosystem survey data of areas in Wellington Region. Unpublished report sheets held by Wellington Regional Council.

Wildland Consultants Ltd. 2003. Kapiti Coast District Wetlands. *Wildland Consultants Ltd. Contract Report No. 669.*

ECOLOGICAL SITES OF KAPITI COAST DISTRICT: KEY ECOLOGICAL FEATURES, RANKING AND RECOMMENDATION[1]

Site No.	Site Name	Ecological District	Dominant habitat(s) or vegetation type	Area (ha)	Ranking	Justification	Recommendation	Eligible for Ecological Site designation?
Existing ecological sites								
1	Lake Waiorongomai	Foxton	Dune lake	15.1	Regional	Wetland habitat is nationally under-represented. Best dune lake with outflow to the sea in the Kapiti District. Provides important habitat for wetland species including kapungawha. Under considerable threat from stock and drainage. In process of becoming protected under QEII Covenant.	Boundary change.	Yes
2	Lake Huritini	Foxton	Dune lake, wetland	27.1	Regional	Wetland habitat is nationally under-represented. One of the few remaining dune lake and wetland associations within Foxton Ecological District and is representative of a formally more common habitat. However, the site is modified and exotic species are common. Provides habitat for bamboo spike-sedge and kapungawha. Protected by DOC Covenant.	Boundary change.	Yes
3	Simcox Lake	Foxton	Rank pasture, manuka-gorse scrub	0.75	N/A	This site was previously a wetland but has been drained and modified. Now an area of rank pasture bounded by pine plantation. A very small area of manuka-gorse scrub with an understorey of blackberry and exotic herbaceous and grass species is present. Very low ecological value.	Recommend removal of Ecological Site designation from this site.	No

[1] Definitions of threat status for flora and fauna species mentioned in the table can be found in Appendix 4.

Site No.	Site Name	Ecological District	Dominant habitat(s) or vegetation type	Area (ha)	Ranking	Justification	Recommendation	Eligible for Ecological Site designation?
4	Simcox Swamp	Foxton	Manuka wetland	5.73	Local	Wetland habitat is nationally under-represented. Small, ephemeral wetland dominated by manuka scrub. Provides habitat for bamboo spike-sedge.	Boundary change.	Yes
5	Pylon Swamp	Foxton	Ephemeral wetland	1.8	Local	Wetland habitat is nationally under-represented. Very small and vulnerable with considerable threat from grazing and weed invasion. Has been considerably reduced in recent years. Provides habitat for kapungawha.	Boundary change.	Yes
6	Lake Purehurehu/ Wairongomai Road Swamp	Manawatu Plains	Ephemeral wetland	Not mapped	N/A	Very small highly modified, drained and grazed. Dominated by rushland. Currently of low ecological value.	Recommend removal of Ecological Site designation from this site.	No
7	Lake Kopureherehere	Foxton	Lake-wetland, swamp forest, tawa forest	17.06	Regional	Wetland habitat is nationally under-represented. Provides an example of ecological sequence between dune lake, swamp forest and dry forest formally characteristic of the area but now uncommon within Foxton Ecological District. Has been modified and grazed. Provides habitat for kapungawha and kereru.	Boundary change.	Yes
8	Takapu Bush	Manawatu Plains	Tawa-kohekohe forest	2.97	Regional	Indigenous vegetation on alluvial plain is nationally under-represented. The largest example of the under-represented tawa-kohekohe forest habitat type within the Manawatu Plains Ecological District. Partially fenced, pest plant species absent. Habitat for kereru. Provides example of sequence from dune lake habitat to forest on alluvial plains.	Boundary change.	Yes
9	Lake Kaitawa	Foxton	Dune lake	31.53	Regional	Wetland habitat is nationally under-represented. Lake margin vegetation largely reduced and subject to grazing in parts but contains representative elements of this habitat type. Provides habitat for kapungawha and kereru.	Boundary change.	Yes
10	Waimanguru Lagoon	Foxton	Wetland, lagoon	1.2	Local	Wetland habitat is nationally under-represented. Small, degraded wetland. Provides habitat for small population of bamboo spike-sedge although it is under threat from grazing.	Boundary change.	Yes

Site No.	Site Name	Ecological District	Dominant habitat(s) or vegetation type	Area (ha)	Ranking	Justification	Recommendation	Eligible for Ecological Site designation?
11	Rotopotakataka Lake	Foxton	Tawa forest, lake	2.63	Local	Very small area of uncommon habitat types. The lake has been modified and has an artificial species assemblage. Although this fragment is very small and under threat from pest plant species, tawa forest is uncommon within the Foxton Ecological District. Provides habitat for kereru and is a component of a series of fragments in the area.	Boundary change.	Yes
12	Ngatotara Lagoon	Foxton	Dune lake-wetland	5.77	Regional	Wetland habitat is nationally under-represented. Small, fragmented and unfenced but provides habitat for spotless crake and kapungawha.	Boundary change.	Yes
13	Pukehou/Pritchard's Swamp	Manawatu Plains	Wetland, swamp forest, secondary indigenous forest	24.89	Regional	Wetland habitat is nationally under-represented. Best, largest representative example of wetland-swamp forest associations in Manawatu Plains Ecological District. Provides habitat for *Korthalsella salicornioides, Hypolepis distans* and *Doodia australis* (Enright *et al.* 2002; Ravine 1995). In the process of becoming protected under QEII Covenant.	Boundary change.	Yes
14	Waitohu Rivermouth	Foxton	No information?	Not surveyed	Not surveyed	Not included in survey at the request of the landowner.	Not surveyed at request of landowner.	N/A
15	Haruatai Park Forest	Foxton	Pukatea-kahikatea swamp forest, wetland	6.95	Regional	Wetland habitat is nationally under-represented. This site is fragmented and under considerable threat from pest plant species. However, swamp forest is very uncommon in Foxton Ecological District. Provides habitat for kapungawha and kereru.	Boundary change.	Yes
16	Staples Bush	Manawatu Plains	Kohekohe-mahoe forest	1.28	Regional	Indigenous vegetation on alluvial plain is nationally under-represented. Small fragment of kohekohe-mahoe forest on river terrace tread; an uncommon vegetation type in Manawatu Plains Ecological District.	Boundary change.	Yes

Site No.	Site Name	Ecological District	Dominant habitat(s) or vegetation type	Area (ha)	Ranking	Justification	Recommendation	Eligible for Ecological Site designation?
17	Tararua Foothills	Tararua	Tawa forest, kamahi forest, mahoe forest, mamaku forest	41,353.07	Regional	A large area of relatively intact indigenous forest contiguous to the Tararua Forest. The Tararua Ranges provide the best example of indigenous forest on hill country in the Wellington Region. Provides habitat for kereru.	Boundary change.	Yes
18	Castlehill Farm	Manawatu Plains	Kohekohe-tawa forest	6.09	Regional	Indigenous vegetation on alluvial plain is nationally under-represented. The largest fragment of kohekohe-tawa forest in Manawatu Plains Ecological District. Is threatened by pest plant species.	Boundary change.	Yes
19	Waitohu Stream Bush A	Manawatu Plains	Tawa-kohekohe forest	2.63	Regional	Indigenous vegetation on alluvial plain is nationally under-represented. Tawa-kohekohe forest is under-represented within the Manawatu Plains Ecological District. Provides habitat for kereru.	Boundary change.	Yes
20	Hilla's Bush	Manawatu Plains	Kamahi forest	2.11	National	Indigenous vegetation on alluvial plain is nationally under-represented. Provides habitat for *Powelliphanta traversi otakia* (Department of Conservation 1996), one of only two known habitats nationally of this subspecies. Kamahi forest is uncommon in the Manawatu Plains Ecological District. Protected by DOC Covenant.	Boundary change.	Yes
21	Rahui Road Bush	Manawatu Plains	Totara-tawa-kamahi forest	3.73	Regional	Small, fragmented and under threat from pest plant species, however is a representative example of totara forest with tawa and kamahi within Manawatu Ecological District.	Boundary change.	Yes
22	Rahui Road Bush F	Manawatu Plains	Kamahi forest, tawa-totara forest	6.69	Regional	Indigenous vegetation on alluvial plain is nationally under-represented. Small and fragmented, however is a representative example of tawa-totara forest within Manawatu Ecological District. Kamahi forest is uncommon within the Ecological District.	Boundary change.	Yes

Site No.	Site Name	Ecological District	Dominant habitat(s) or vegetation type	Area (ha)	Ranking	Justification	Recommendation	Eligible for Ecological Site designation?
23	Croad's Bush	Manawatu Plains	Kamahi forest, tawa forest, tawa-kohekohe forest	19.59	Regional	Along with K25 this site is the best representative example of kamahi forest within Manawatu Plains Ecological District.	Boundary change. Not surveyed. Boundaries defined from aerial photograph as access was not granted to survey this site.	Yes
24	Rahui Road Bush A/Denton's Bush	Manawatu Plains	Pukatea-tawa-kohekohe forest	3.36	Regional	Indigenous vegetation on alluvial plain is nationally under-represented. Best representative example of semi-swamp forest within Manawatu Plains Ecological District.	Boundary change.	Yes
25	Croad's Bush	Manawatu Plains	Kamahi forest, tawa forest	Not surveyed	Not surveyed	Along with K23 this site is the best representative example of kamahi forest within Manawatu Plains Ecological District.	Not surveyed. Boundaries defined from aerial photograph.	Yes
26	Rahui Road Bush B	Manawatu Plains	Totara-kohekohe-kamahi forest, tawa-kohekohe forest	5.75	Regional	Indigenous vegetation on alluvial plain is nationally under-represented. . A small representative area of totara-kohekohe-kamahi forest. This habitat type and tawa-kohekohe forest are under-represented within Manawatu Ecological District.	Boundary change.	Yes
27	Otaki River Mouth	Foxton	Estuarine wetland, river mouth	71.53	Regional	The estuary provides habitat for banded dotterel, Caspian tern and long-finned eel. Dune system is degraded and with high level of threat from pest plant species. Flood control measures have greatly modified the system.	Boundary change.	Yes
28	Gorge Road Bush D	Manawatu Plains	Matai-totara-kohekohe forest	2.41	Regional	Indigenous vegetation on alluvial plain is nationally under-represented. Small, fragmented and under some threat from pest plant species. Provides habitat for *Korthalsella lindsayi*. (KCDC files).	Boundary change.	Yes
29	Breview Bush	Manawatu Plains	Kohekohe-tawa forest	1.85	Local	Indigenous vegetation on alluvial plain is nationally under-represented. A very small and narrow fragment, degraded in part, limited regeneration and under threat from pest plant species. Provides habitat for kereru.	Boundary change.	Yes

Site No.	Site Name	Ecological District	Dominant habitat(s) or vegetation type	Area (ha)	Ranking	Justification	Recommendation	Eligible for Ecological Site designation?
30	Gorge Road Bush C	Manawatu Plains	Totara-kohekohe forest	1.48	Local	Nationally under-represented habitat type. Small, fragmented and under threat from pest plant species, but one of only a few fragments of its type within Manawatu Plains Ecological District. Part of a series of fragments providing links between Kapiti Island and the Tararua Ranges. Provides habitat for kereru.	Boundary change.	Yes
31	Otaki River Bush A	Manawatu Plains	Totara forest	6.01	Regional	Indigenous vegetation on alluvial plain is nationally under-represented. The largest and best example of totara forest on alluvial plains in the area. In process of being protected under QEII Covenant.	Boundary change.	Yes
32	Otaki River Bush B	Manawatu Plains	Totara-mahoe forest	1.57	Local	Nationally under-represented habitat type. Contiguous with K31 (Otaki River Bush A)[2]. Representative of totara-mahoe forest although very small.	Boundary change.	
33	Gorge Road Bush A	Manawatu Plains	Totara forest	1.7	Local	Indigenous vegetation on alluvial plain is nationally under-represented. Small fragment with considerable weed threat and limited regeneration.	Boundary change.	Yes
34	Mansell's Bush	Tararua	Kohekohe forest	4.19	Regional	A relatively small fragment of kohekohe forest on hill country. Protected by DOC Covenant.	Boundary change.	Yes
35	Hautere Bush C	Manawatu Plains	Titoki-totara forest	0.82	Regional	Indigenous vegetation on alluvial plain is nationally under-represented. Provides habitat for *Streblus banksii, Ileostylis micranthus,* and DOC historic records list *Korthalsella lindsayi*	Boundary change.	Yes
36	Te Waka Road Bush	Manawatu Plains	Totara-kohekohe forest	1.61	Regional	Indigenous vegetation on alluvial plain is nationally under-represented. Provides habitat for *Korthalsella lindsayi* and *Nestegis montana* (KCDC files).	No change.	Yes
37	Cottle's Bush	Manawatu Plains	Totara-matai forest	1.46	Local	Indigenous vegetation on alluvial plain is nationally under-represented. Recovering from grazing, weed infestation, currently low quality but recovering. Part of a series of fragments across the plains providing links between Kapiti Island to the Tararua Ranges.	Boundary change.	Yes

[2] Sites K31 and K32 have not been combined as K31 is in the process of being formerly protected whilst K32 is unprotected.

Site No.	Site Name	Ecological District	Dominant habitat(s) or vegetation type	Area (ha)	Ranking	Justification	Recommendation	Eligible for Ecological Site designation?
38	Hautere Bush F	Manawatu Plains	Totara-titoki-matai forest	3.61	Local	Indigenous vegetation on alluvial plain is nationally under-represented. Convoluted, unfenced and lacking an understorey. Part of a series of fragments across the plains providing links between Kapiti Island and the Tararua Ranges.	Boundary change.	Yes
39	Hautere Bush E	Manawatu Plains	Totara-matai-titoki forest	2.8	Regional	Indigenous vegetation on alluvial plain is nationally under-represented. Convoluted but one of largest fragments of its type in the area with relatively good regeneration.	Boundary change.	Yes
40	Kiripiti Bush	Manawatu Plains	Totara-matai-titoki forest	1.74	Regional	Indigenous vegetation on alluvial plain is nationally under-represented. This site is compact with good understorey and natural regeneration. One of the best examples of habitat of its type in the area. Part of a series of fragments across the plains that provide links between Kapiti Island and the Tararua Ranges.	Boundary change.	Yes
41	Hautere Bush D	Manawatu Plains	Totara-matai-titoki forest	0.9	Regional	Indigenous vegetation on alluvial plain is nationally under-represented. These fragments are a continuation of Kiripiti Scenic Reserve and provide one of the best examples of this habitat type in the area. Provides habitat for *Korthalsella lindsayi* (KCDC files). Part of a series of fragments across the plains that provide links between Kapiti Island and the Tararua Ranges.	No change.	Yes
42	Bothamley Bush	Manawatu Plains	Totara-titoki-matai forest	3.69	Regional	Indigenous vegetation on alluvial plain is nationally under-represented. The largest fragment of its type within Kapiti District. Understorey present but site is convoluted and under considerable threat from pest plant species. Part of a series of fragments across the plains that provide links between Kapiti Island and the Tararua Ranges.	Boundary change.	Yes
43	Totara Grove	Manawatu Plains	Totara forest	3.4	Local	Indigenous vegetation on alluvial plain is nationally under-represented. Moderately sized fragment under considerable threat from pest plant species. Part of a series of fragments across the plains that provide links between Kapiti Island and the Tararua Ranges.	Boundary change.	Yes

Site No.	Site Name	Ecological District	Dominant habitat(s) or vegetation type	Area (ha)	Ranking	Justification	Recommendation	Eligible for Ecological Site designation?
44	Strathean	Manawatu Plains	Totara-matai forest, totara-titoki forest	1.44	Local	Indigenous vegetation on alluvial plain is nationally under-represented. Small and convoluted fragment under considerable threat from pest species. Part of a series of fragments across the plains that provide links between Kapiti Island and the Tararua Ranges.	Boundary change.	Yes
45	Gorge Road Bush B	Manawatu Plains	Totara-titoki-kohekohe forest	1.91	Local	Indigenous vegetation on alluvial plain is nationally under-represented. Small, fragmented with sparse understorey and under threat from pest plant species. Part of a series of fragments across the plains that provide links between Kapiti Island and the Tararua Ranges.	Boundary change.	Yes
46	Empson's Bush	Manawatu Plains	Totara forest	7.04	Regional	Indigenous vegetation on alluvial plain is nationally under-represented. Half of this fragment is unfenced. Understorey is sparse but one of largest fragments of its type. Part of a series of fragments across the plains providing linkage between Kapiti Island and the Tararua Ranges. In the process of being protected under QEII Covenant.	Boundary change.	Yes
47	Huapaka Bush	Manawatu Plains	Totara forest	3.51	Regional	Indigenous vegetation on alluvial plain is nationally under-represented. This site is highly fragmented but is an example of a formally common habitat and part of a serious of fragments across the plains providing linkage between Kapiti Island and the Tararua Ranges. Provides habitat for kereru. Protected under QEII Covenant.	Boundary change.	Yes
48	Mangaone Bush B	Manawatu Plains	Totara-matai-titoki forest	2.75	Regional	Indigenous vegetation on alluvial plain is nationally under-represented. One of the largest fragments of its type. Relatively small threat from pest plant species and ungrazed. Provides habitat for kereru. Part of a series of fragments across the plains that provide links between Kapiti Island and the Tararua Ranges.	Boundary change.	Yes
49	Te Horo Lodge	Manawatu Plains	Kohekohe-titoki forest	3.12	Regional	Indigenous vegetation on alluvial plain is nationally under-represented. One of the largest fragments of its type within Kapiti District. Provides habitat for *Streblus banksii.*	Boundary change.	Yes

Site No.	Site Name	Ecological District	Dominant habitat(s) or vegetation type	Area (ha)	Ranking	Justification	Recommendation	Eligible for Ecological Site designation?
50	Catley Road Bush	Manawatu Plains	Kohekohe-tawa forest	1.32	Regional	Small relatively good quality area of nationally under-represented habitat type. Part of a series of fragments across the plains that provide links between Kapiti Island and the Tararua Ranges.	Boundary change.	Yes
51	Hautere Bush A	Manawatu Plains	Tawa-kohekohe forest	0.82	Regional	Indigenous vegetation on alluvial plain is nationally under-represented. Fenced with good understorey although severe Tradescantia infestation. Part of a series of fragments across the plains that provide links between Kapiti Island and the Tararua Ranges. Provides habitat for kereru.	Boundary change.	Yes
52	Hautere Bush B	Manawatu Plains	Tawa-kohekohe-titoki forest	1.49	Regional	Nationally under-represented habitat type. Good regenerating example of its type. Part of a series of fragments across the plains that provide links between Kapiti Island and the Tararua Ranges.	Boundary change.	Yes
53	Hutton's Bush	Tararua	Tawa-kohekohe forest	4.91	National	Tawa forest. Provides habitat for *Powelliphanta traversi otakia* (Department of Conservation 1996) and kereru.	Boundary change.	Yes
54	Te Horo Bush	Manawatu Plains	Tawa-karaka-kohekohe forest	2.22	Regional	Site borders both Foxton and Manawatu Plains Ecological Districts and shows influences of both Districts. There are few remaining fragments on the boundary of the two Ecological Districts. The understorey is sparse and the site is under threat from pest plant species, mostly on the edges. Provides habitat for kereru.	Boundary change.	Yes
55	Te Hapua Road Swamp A	Foxton	Dune wetland	58.33	Regional	Wetland habitat is nationally under-represented. Large representative example of habitat that was formally characteristic of the area. Provides habitat for spotless crake. Also *Ranunculus macropus, Carex dipsacea, Potentilla anserinioides,* (Enright & John 2001). and other species becoming uncommon in the Wellington Region including *Gratiola sexdenta,* kapungawha and *Baumea articulata*. Protected in parts by QEII Covenant - with a further area under negotiation.	Boundary change.	Yes
56	Te Hapua Road Swamp E	Foxton	Dune wetland	1.41	Local	Wetland habitat is nationally under-represented. Small wetland habitat with constructed pond and exotic species common.	Boundary change.	Yes

Site No.	Site Name	Ecological District	Dominant habitat(s) or vegetation type	Area (ha)	Ranking	Justification	Recommendation	Eligible for Ecological Site designation?
57	Te Hapua Road Swamp C[3]	Foxton	Dune wetland	7.37	Regional	Wetland habitat is nationally under-represented. Of moderate size in relation to Foxton Ecological District. Provides habitat for bamboo spike-sedge. Contains open water-reedland-sedgeland-scrub wetland associations.	Boundary change.	Yes
58	Awatea Bush	Manawatu Plains	Kohekohe-tawa-titoki forest	7.47	Regional	Indigenous vegetation on alluvial plain is nationally under-represented. Part of a series of fragments across the plains that provide links between Kapiti Island and the Tararua Ranges. Below main block of forest is a population of *Streblus banksii.* Provides habitat for kereru. In process of protection under QEII Covenant.	Boundary change.	Yes
59	Awatea Scarp Bush Remnant	Manawatu Plains	Kohekohe-tawa forest, induced wetland	2.16	Local	Indigenous vegetation on alluvial plain is nationally under-represented. Fragment is very small and narrow. Area of wetland is small and induced.	Boundary change.	Yes
60	Pekapeka Road Swamp	Foxton	Harakeke wetland	4.27	Regional	Wetland habitat is nationally under-represented. Moderately sized wetland with small area of open water and harakeke flaxland-Juncus rushland-coprosma scrub associations. Protected under DOC Covenant.	Boundary change.	Yes
61	Waikanae Scenic Reserve/Waikanae Bush	Foxton	Kohekohe forest, kohekohe-tawa forest, titoki-mahoe treeland	7.59	Regional	Kohekohe forest at low altitude is uncommon within Tararua Ecological District. Provides habitat for kereru. Protected as Scenic Reserve.	Boundary change.	Yes
62	Hemi Matenga Reserve	Tararua	Kohekohe-tawa-titoki forest	334.98	Regional	The largest area of forest of its type within the Wellington Region, and one of the larger areas of this forest type in the North Island. Protected in part under Scenic Reserve and DOC covenant. Provides habitat for kereru.	Boundary change.	Yes

[3] Note: There is no site called Te Hapua Road Swamp B. Te Hapua Road D (K163) has been removed from the Heritage Register.

Site No.	Site Name	Ecological District	Dominant habitat(s) or vegetation type	Area (ha)	Ranking	Justification	Recommendation	Eligible for Ecological Site designation?
63	Huia Street Bush	Tararua	Kohekohe-tawa-titoki forest	1.63	Local	Very small fragment with considerable threat from pest plant species. Kohekohe forest on flat land at low altitude is uncommon within Tararua Ecological District. Separated from Hemi Matenga Reserve by a road.	Boundary change.	Yes
64	Paetawa Bush	Foxton	Titoki forest, tawa-kohekohe forest	1.87	Local	A very small example of a forest type that is under-represented within the ecological district.	Boundary change.	Yes
65	Waikanae North Shrubland	Foxton	Kanuka-manuka scrub	7.68	Regional	A relatively large area of kanuka-manuka scrub. Habitat of this type is uncommon within Foxton Ecological District.	Boundary change.	Yes
66	Te Harakeke Swamp	Foxton	Dune wetland	122.7	Regional	Wetland habitat is nationally under-represented. A moderately sized area of harakeke flaxland and raupo reedland - the second largest of its type in the Kapiti District. An important representation of habitat formally common in the area. Protected under QEII Covenant.	Boundary change.	Yes
67	Wi Parata Reserve	Foxton	Kohekohe forest	3.07	Regional	Under-represented habitat type within ecological region. Site is small and vulnerable to pest plant species encroaching from residential gardens. Provides habitat for kereru. Protected as Council Reserve.	Boundary change.	Yes
68	Osborne's Swamp	Foxton	Raupo-harakeke wetland	0.95	Regional	Wetland habitat is nationally under-represented. Wetland is small and modified. Protected under QEII Covenant.	Boundary change.	Yes
69	Waikanae Park Bush	Foxton	Kohekohe forest	0.51	Local	A s mall fragment with sparse understorey however, kohekohe forest uncommon in Foxton Ecological District. Provides habitat for *Korthalsella salicornioides* (Townsend *et al*. 1998).	Boundary change.	Yes
70	Russel Reserve	Foxton	Kohekohe-titoki forest	2.22	Regional	A small area of kohekohe-titoki forest that is uncommon in the Foxton Ecological District. Provides habitat for kereru and *Streblus banksii*. Protected as Recreation Reserve.	Boundary change.	Yes

Site No.	Site Name	Ecological District	Dominant habitat(s) or vegetation type	Area (ha)	Ranking	Justification	Recommendation	Eligible for Ecological Site designation?
71	Harris Bush	Tararua	Kohekohe-titoki-tawa forest, kamahi forest, kanuka scrub	6.68	Regional	A small representative example of kohekohe forest – uncommon on lowland within Tararua Ecological District. Very small area of kamahi forest and scrub successional to kohekohe forest. Provides habitat for kereru. Protected in part under QEII Covenant with a further area in the process of becoming protected.	Boundary change.	Yes
72	Reikorangi Road Bush A	Tararua	Tawa-titoki forest, kohekohe-titoki-tawa forest	6.60	Local	A small narrow example of tawa-titoki and kohekohe-titoki forest that is part of a series of fragments adjacent to the Waikanae River. Deer present. Provides habitat for kereru. Protected under DOC Covenant.	Boundary change.	Yes
73	Waikanae South Bush	Tararua	Kohekohe-tawa forest	4.91	Regional	A small example of tawa-kohekohe forest. Provides habitat for kereru. Protected under DOC Covenant.	Boundary change.	Yes
74	Reikorangi Road Bush B	Tararua	Kohekohe-tawa forest, mahoe forest	3.31	Regional	A small area of kohekohe-tawa forest with remnant podocarp and a small area of secondary forest that is part of a series of fragments adjacent to the Waikanae River. Provides habitat for kereru. Protected under DOC Covenant.	Boundary change.	Yes
75	Reikorangi Road Bush C	Tararua	Titoki-tawa-rewarewa forest	3.08	Regional	A small narrow area of titoki-tawa with some regeneration. Part of a series of fragments adjacent to the Waikanae River. Provides habitat for kereru.	Boundary change.	Yes
76	Reikorangi Road Bush D	Tararua	Tawa-titoki-kohekohe forest	7.66	Regional	A small example of indigenous vegetation in good condition – that is part of a series of fragments adjacent to the Waikanae River. A very small area of wetland present on floodplain. Provides habitat for kereru.	Boundary change.	Yes
77	Waikanae Gorge Bush	Tararua	Tawa-kohekohe forest	25.96	Regional	A relatively good quality example of indigenous forest on river terrace that is part of a series of fragments adjacent to the Waikanae River. Provides habitat for kereru. Protected under DOC Covenant and currently under process for protection under QEII Covenant.	Boundary change.	Yes

Site No.	Site Name	Ecological District	Dominant habitat(s) or vegetation type	Area (ha)	Ranking	Justification	Recommendation	Eligible for Ecological Site designation?
78	Bluff Hill Bush	Tararua	Tawa-kohekohe forest	13.24	Regional	A relatively good quality example of tawa-kohekohe forest that is part of a series of fragments adjacent to the Waikanae River. Provides habitat for kereru. Protected under QEII Covenant.	Boundary change.	Yes
79	Mangaone Road Bush	Tararua	Tawa forest, kamahi forest	23.18	Regional	Moderate size, relatively good quality example of tawa forest with small area of kamahi forest riparian margin. Provides habitat for kereru. Protected under QEII Covenant.	Boundary change.	Yes
80	Ngatiawa Road Bush	Tararua	Kamahi forest, tawa forest, mahoe forest	10.02	Local	Small, narrow areas of habitat types uncommon on lowland within the Tararua Ecological District. Mosaic with areas of exotic vegetation and of varying quality. Provides important links between other significant fragments and the Tararua Ranges.	Boundary change.	Yes
81	Waikanae River mouth	Foxton	Estuarine wetland, river mouth	71.85	Regional	Nationally under-represented habitat types. Good sequences between salt marsh, fresh water wetlands, dune lakes and dune systems (although degraded and modified). Linkages to Kapiti Island via Kapiti Marine Reserve. Provides habitat for numerous fauna species including Australasian bittern, Caspian tern and rare visits from reef and white heron. *Carex litorosa*, *Pimelea* aff. *arenaria*, *Coprosma acerosa*, *Spinifex sericeus,* and *Leptinella dioica* ssp. *monoica* present (Department of Conservation 1996). Also habitat for kapungawha and *Baumea articulata*. Protected as a Scientific Reserve.	Boundary change.	Yes
82	Turf Farm Bush B	Foxton	Kohekohe-titoki-mahoe forest	1.11	Regional	Habitat type is uncommon in Foxton Ecological District. A representative example of forest type formally common in the area. Part of a series of fragments that jointly illustrate the diversity of habitat formally common in the area. Vulnerable to effects of expansion of quarry and sub-division.	Boundary change.	Yes

Site No.	Site Name	Ecological District	Dominant habitat(s) or vegetation type	Area (ha)	Ranking	Justification	Recommendation	Eligible for Ecological Site designation?
83	Lion Downs Bush	Foxton	Kahikatea-pukatea swamp forest	1.68	Regional	Small area of nationally under-represented habitat type. Canopy fragmented and exotic species common in the ground layer. Part of a series of fragments that jointly illustrate the diversity of habitat formally common in the area. Protected under QEII Covenant.	Boundary change.	Yes
84	Turf Farm Bush Forest A	Foxton	Kahikatea swamp forest, manuka scrub	0.96	Local	Very small area of nationally under-represented habitat type. Lacking understorey. Narrow area of manuka scrub. Both habitat types are under-represented in the Foxton Ecological District. Part of a series of fragments that jointly indicate the diversity of habitat formally common in the area.	Boundary change.	Yes
85	Tini Bush	Foxton	Kohekohe-pukatea forest, kohekohe forest, kohekohe-titoki forest, semi-swamp forest	6.28	Regional	These fragments represent the only example of kohekohe-pukatea associations within Foxton Ecological District. Borders both Foxton and Manawatu Plains Ecological District. Good example of the gradation between wetland and dryland forest with small nikau grove. Representative of the former forest diversity likely to have occurred within the District. Part of a series of fragments providing connection between Kapiti Island and the Tararua Ranges. Provides habitat for kereru. Protected by DOC Covenant.	Boundary change.	Yes
86	Muaupoko Stream Bush	Tararua	Kohekohe-tawa forest	11.17	Regional	Moderately sized remnant of modified primary forest. Habitat type is uncommon on lowland in Tararua Ecological District. Part of a series of fragments that provide links between Kapiti Island and the Taraura Ranges. Provides habitat for kereru.	Boundary change.	Yes

Site No.	Site Name	Ecological District	Dominant habitat(s) or vegetation type	Area (ha)	Ranking	Justification	Recommendation	Eligible for Ecological Site designation?
87	Muaupoko Bush	Tararua	Kohekohe-tawa forest, tawa forest, kohekohe forest, kanuka forest, wetland	100.24	Regional	One of the largest forest fragments in the area containing good representative examples of the forest types present. Provides habitat for *Mazus novaezeelandiae* subsp. *novaezeelandiae* (Townsend *et al.* 1998), *Adelopetalum tuberculatum* (Forest & Bird Society), Northern rata and kereru. Protected in part by Scenic Reserve (Paraparaumu SR), DOC Covenant, and Forest and Bird Reserve.	Boundary change.	Yes
88	Otaihanga Road Bush	Foxton	Kohekohe-nikau forest	1.41	Regional	Kohekohe-nikau forest is uncommon in the Foxton Ecological District. Protected under QEII Covenant.	Boundary change.	Yes
89	Muaupoko Swamp Forest	Foxton	Kohekohe forest, mahoe forest, pukatea-maire tawake swamp forest, wetland	7.63	Regional	Nationally under-represented habitat. An example of ecological sequence between wetland, swamp forest and dry forest. Kohekohe forest and mahoe forest is uncommon in the Foxton Ecological District. Provides habitat for brown mudfish (Department of Conservation 1996) and kereru. This site contains a relatively large area of mahoe forest. Partly protected by Scenic Reserve (Paraparaumu SR).	Boundary change.	Yes
90	Ratanui Lakes	Foxton	Constructed lake	Not mapped	N/A	Constructed ponds. Riparian vegetation predominantly exotic including invasive pest plant species.	Recommend removal of Ecological Site designation from this site.	No
91	Nikau Reserve	Tararua	Kohekohe-nikau forest	13.62	Regional	Relatively large, representative area of semi-coastal forest with considerable area of nikau grove. This habitat type was formally characteristic of this area and is now uncommon within Tararua Ecological District. Protected as Council Reserve.	Boundary change.	Yes
92	Tower Lakes/Kapiti Road Wetland	Foxton		Not mapped	N/A	Ponds with exotic margin. Site contains low ecological values.	Recommend removal of Ecological Site designation from this site.	No

Site No.	Site Name	Ecological District	Dominant habitat(s) or vegetation type	Area (ha)	Ranking	Justification	Recommendation	Eligible for Ecological Site designation?
93	Andrew's Pond	Foxton	Manuka wetland	1.27	Local	Nationally under-represented habitat type. A small wetland amongst residential and commercial land-use. Provides habitat for kapungawha.	No change.	Yes
94	Norwood Bush C	Tararua	Kohekohe forest	1.58	Local	Small fragment that has been subject to grazing. Edge effects and browse reducing viability of fragment. Part of a series of fragments that provide links between Kapiti Island and the Tararua Ranges.	Boundary change.	Yes
95	Paraparaumu Coastal Scarp	Foxton	Kanuka-mahoe-gorse scrub, kohekohe-titoki forest	72.74	Regional	Coastal forest is nationally under-represented. Small fragments of kohekohe dominated coastal forest with relatively large area of kanuka scrub. Part of a series of fragments that provide links between Kapiti Island and the Tararua Ranges.	Boundary change.	Yes
96	Norwood Bush B	Tararua	Tawa-kohekohe forest	4.93	Regional	A moderately sized area of tawa-kohekohe forest with small area of swamp forest. Indigenous forest is uncommon on low undulating land within Tararua Ecological District. Provides an example of the gradation between wetland and dryland forest. Part of a series of fragments providing linkages between Kapiti Island and the Tararua Ranges.	Boundary change.	Yes
97	Norwood Bush A	Foxton	Kohekohe-tawa forest	Not surveyed	Not surveyed	-	Not surveyed. Permission to visit this site was unable to be obtained.	-
98	Wharemauku Stream Bush	Tararua	Kohekohe forest, kanuka scrub	83.2	Regional	Relatively large area of kohekohe forest and kanuka scrub successional to kohekohe forest. Habitat for *Mida salicifolia,* (Enright & John 2002b) kereru and northern rata.	Boundary change.	Yes
99	Whareroa Bush C	Tararua	Kohekohe-mahoe forest, mahoe-mamuku forest	39.69	Regional	A valuable area or early secondary forest with tawa forest covering a relatively substantial area. Protected by DOC Covenant.	Boundary change.	Yes
100	Whareroa Bush D	Tararua	Mahoe forest	5.64	Local	A small area of early secondary mahoe forest with kohekohe and occasional tawa. Part of a series of fragments that provide links between Kapiti Island and the Tararua Ranges.	Boundary change.	Yes

Site No.	Site Name	Ecological District	Dominant habitat(s) or vegetation type	Area (ha)	Ranking	Justification	Recommendation	Eligible for Ecological Site designation?
101	Whareroa Farm Bush E	Tararua	Kohekohe forest	1.36	Regional	Small area of kohekohe forest. Protected under DOC Covenant.	Boundary change.	Yes
102	Whareroa Farm Bush G	Tararua	Kohekohe forest	1.01	Regional	Small area of kohekohe forest. Protected under DOC Covenant.	Boundary change.	Yes
103	Whareroa Farm Bush F	Tararua	Tawa forest, raupo wetland	1.24	Regional	Small area of tawa forest with small area of wetland and swamp forest. Indigenous forest uncommon on low hills within Tararua Ecological District. One of a series of fragments that provide links between Kapiti Island and the Tararua Ranges. Provides habitat for kereru. Protected under DOC Covenant.	Boundary change.	Yes
104	Whareroa Farm Bush B	Tararua	Kohekohe-tawa-titoki forest	3.47	Regional	Small fragment of kohekohe-tawa-titoki forest. One of a series of fragments that provide links between Kapiti Island and the Tararua Ranges. Protected under DOC Covenant.	Boundary change.	Yes
105	Whareroa Farm Bush A	Tararua	Kohekohe-tawa-titoki forest	3.22	Regional	Small fragment of kohekohe-tawa-titoki forest. Indigenous forest on low hills is uncommon within Tararua Ecological District. One of a series of fragments that provide links between Kapiti Island and the Tararua Ranges. Protected under DOC Covenant.	Boundary change.	Yes
106	Mackay's Crossing Swamp	Foxton	Raupo reedland wetland	9.68	Regional	Wetland habitat is nationally under-represented. Moderately sized area of raupo reedland. Protected as a Wildlife Management Reserve.	Boundary change..	Yes
107	Railway Lakes	Foxton	Ephemeral wetland	Refer K108	Refer K108	This site overlaps with K108. The two sites have been merged.	Include in K108.	Refer K108
108	Queen Elizabeth II Park Bush and wetlands	Foxton	Kahikatea swamp forest, ephemeral wetland	16.81	Local	Wetland habitat is nationally under-represented. Kahikatea fragment very small, fragmented and lacking regeneration with area of macrocarpa canopy. Some restoration plantings. The wetland is highly degraded. Historic records of *Amphibromus fluitans* (Townsend *et al.* 1998) but hasn't been recorded from this site in recent years.	Boundary change.	Yes

Site No.	Site Name	Ecological District	Dominant habitat(s) or vegetation type	Area (ha)	Ranking	Justification	Recommendation	Eligible for Ecological Site designation?
109	Queen Elizabeth II Park Dunes	Foxton	Sand dune	109.52	Regional	Best representative example of sand dune habitat type in Foxton Ecological District. Good example of nationally under-represented habitat type. Provides habitat for pingao and *Coprosma acerosa* (Milne & Sawyer 2002). Protected as Regional Park.	Boundary change.	Yes
110	Fisherman's Table Foredune	Foxton	Sand dune, mahoe forest	5.28	Regional	Nationally under-represented habitat type. Although small, modified and with considerable threat from pest plant species, this area contains a representative example of mahoe treeland on sand dune. This vegetation type would have formally been typical of the Paekakariki area but is now uncommon within Foxton Ecological District.	Boundary change.	Yes
111	Wainui Stream Bush	Tararua	Kohekohe forest	15.13	Regional	Good example of kohekohe forest in gully. Some sheep grazing and feral goats. Provides habitat for kereru.	Boundary change.	Yes
112	Victor Weggery Reserve/Waimeha Lagoon	Foxton	Wetland	5.32	Regional	Wetland habitat is nationally under-represented. Wetland habitat with moderate area of open water and raupo reedland-coprosma scrub associations. Provides habitat for kapungawha. Protected as Wildlife Refuge.	Boundary change.	Yes
118	Waikanae Riverbank Riparian	Foxton	Pine-Eucalyptus-Norfolk pine-kohekohe forest	Not mapped	N/A	Very small (< 0.5 ha), fragment with limited understorey, exotic canopy species common and considerable presence of pest plant species in subcanopy and around margins.	Recommend removal of Ecological Site designation.	No
119	Waitohu Valley Stream Bush	Tararua		Refer K119	Refer K119	Site is contiguous with the Tararua foothills (K17). The two sites have been merged.	Include with K17	Refer K17
121	-	Tararua		Refer K119	Refer K119	Duplicate site numbering. Site is contiguous with the Tararua foothills (K17). The two sites have been merged.	Include with K17	Refer K17
121	Totara Reserve	Manawatu Plains	Totara forest	3.08	Local	Narrow corridor of trees. Limited understorey with some in-fill planting. Provides linkages between fragments. Council Road Reserve.	Boundary change.	Yes

Site No.	Site Name	Ecological District	Dominant habitat(s) or vegetation type	Area (ha)	Ranking	Justification	Recommendation	Eligible for Ecological Site designation?
123	Motuiti Scenic Reserve	Foxton	Kohekohe forest	1.30	Regional	A small area of kohekohe forest. Kohekohe forest is uncommon within Foxton Ecological District. The threat from pest plant species is increasing. Protected as a Scenic Reserve.	Boundary change.	Yes
124	Karn Reserve	Foxton	Kohekohe-karaka forest	0.7	Local	Small area of kohekohe forest. Kohekohe forest is uncommon in Foxton Ecological District. Provides habitat for kereru. Protected under Council Reserve.	Boundary change.	Yes
126	Russel Reserve	Foxton	Kohekohe-titoki forest	Refer to K70	Refer to K70	Refer to K70.	Include in K70.	Refer to K70
129	Everglade, Waikanae	Foxton		Not mapped	N/A	Mature kohekohe left in street as part of subdivision. Now part of gardens. This site is of low value as an ecological unit.	Recommend removal of Ecological Site designation from this site.	No
130	Russel Reserve	Foxton	Kohekohe-titoki forest	Refer to K70	Refer to K70.	-	Include in K70.	Refer to K70.
131	Raumati South Peatlands	Foxton	Kanuka-gorse scrub, manuka scrub wetland	11.09	Local	Small area of nationally under-represented habitat type. Relatively large area of kanuka-gorse scrub although it is highly fragmented and exotic species are common.	Recommend for Ecological Site designation.	Yes
132	Ngarara Bush	Foxton	Kohekohe forest, kahikatea-pukatea forest	2.59	Regional	Small fragment of kohekohe forest and a very small area of swamp forest. Protected under QEII covenant.	Recommend for Ecological Site designation.	Yes
132	Otaihanga	Tararua	-	Not mapped	N/A	Residential garden.	Recommend removal of Ecological Site designation from part of property (the fruit part). The natural area at the back of the property that is contiguous with K87 has been included in K87.	No

Site No.	Site Name	Ecological District	Dominant habitat(s) or vegetation type	Area (ha)	Ranking	Justification	Recommendation	Eligible for Ecological Site designation?
135	Pukerua Bay Coastal Scarp	Tararua	Kohekohe coastal forest, secondary scrub	44.7	Regional	Nationally under-represented habitat type.	Boundary change.	Yes
136	Reikorangi Road	Tararua	Tawa-kohekohe forest	Refer to K76	Refer to K76	Duplicate site numbering. This site overlaps with K77 and is now included in K76.	Include in K76.	Refer to K76
137	Clunie Road, Raumati	Foxton	Kanuka treeland	Not mapped	N/A	A small corridor of tall kanuka above road – part of residential garden. This site does not contain significant natural ecological values.	Recommend removal of Ecological Site designation from this site.	No
152	Paekakariki Hill	Tararua	Kohekohe-mahoe coastal forest	Refer to K135	Refer to K135	K152 and K135 overlap. K152 has been merged with K135.	Include in K135.	Refer to K135
160	QEII Wetlands	Foxton	Ephemeral wetland	Refer K108	Refer 108	Site overlaps with K108. The two sites have been merged	Include in K108.	Refer to K108
174	Waimea Stewardship	Foxton	Riparian margin	Not surveyed	N/A	-	Not surveyed.	N/A
178	Kiripiti Scientific Reserve	Manawatu Plains	Totara-matai-titoki forest	1.98	Regional	Indigenous vegetation on alluvial plains is nationally under-represented. Site is one of the best examples of this habitat type within Manawatu Plains. Part of a series of fragments across the plains that provide links between Kapiti Island and the Tararua Ranges. Protected as Scientific Reserve.	No change.	Yes
180	Rowan's Bush	Tararua	Kohekohe-titoki forest	2.8	Regional	Kohekohe forest on lowland hill country. Part of a series of fragments that provides links between Kapiti Island and the Tararua Ranges. Protected in part under QEII Covenant.	Boundary change.	Yes
181	Valley Road	Tararua	Kohekohe forest	2.02	Regional	A good quality representative example of indigenous forest at low altitude that is uncommon in Tararua Ecological District. Part of a series of fragments providing links between Kapiti Island and the Tararua Ranges. Provides habitat for kereru.	No change.	Yes

Site No.	Site Name	Ecological District	Dominant habitat(s) or vegetation type	Area (ha)	Ranking	Justification	Recommendation	Eligible for Ecological Site designation?
182	221 Valley Road	Tararua	Riparian margin	0.39	N/A	Very small, narrow riparian margin with some threat from pest plant species. Listed as a Natural Area due to heritage trees associated with original farm house. Was included (1995) in register at request of landowner. Provides habitat for kereru.	Boundary change.	No
183	between Crown Hill and Retirement Village	Foxton	Manuka scrub wetland	0.55	Local	Wetland habitat is nationally under-represented. Very small area of unprotected wetland dominated by manuka scrub.	Boundary change.	Yes
Proposed ecological sites								
133	Nga Manu Nature Reserve	Foxton	Wetland, swamp forest, kohekohe forest, tawa forest	43.92	Regional	Wetland habitat is nationally under-represented. One of largest and best examples of swamp forest within Foxton Ecological District. Good example of sequences between wetland, swamp forest and dry forest. Provides habitat for brown mudfish and kereru. Nga Manu Nature Reserve protected under Private Trust. Protected in part by QEII Covenant, with further area in the process of becoming protected.	Recommend for Ecological Site designation.	Yes
134	unnamed	Foxton	Wetland	0.74	Local	Wetland habitat is nationally under-represented. Provides habitat for kapungawha. Small wetland, grazed in part with a considerable threat from pest plant species. Units 02 and 03 are very small and of low ecological value.	Include Unit 01 in Ecological Site designation (shown on GIS layer). Units 02 and 03 are not recommended for Ecological Site designation.	Yes (in part)
136	700m SE of end Waiohanga Road, Otaki	Tararua	Kamahi forest, makomako forest, scrub	10.81	Regional	Small area of secondary makomako forest and kamahi forest with areas of scrub. Continuous with Otaki River riparian margin. Provides habitat for kereru. Protected under QEII Covenant.	Recommended for Ecological Site designation.	Yes
138	El Rancho	Foxton	Manuka wetland	Refer K170	Refer K170	K138 overlaps with proposed site K170.	Include in K170.	Refer K170
139	48B Huia Road, Waikanae	Tararua	-	Not mapped	N/A	Landscaped garden. Mixture of planted exotic and indigenous species. This site does not contain significant natural ecological values.	Not recommended for Ecological Site designation.	No

Site No.	Site Name	Ecological District	Dominant habitat(s) or vegetation type	Area (ha)	Ranking	Justification	Recommendation	Eligible for Ecological Site designation?
141	cnr Rimu and Ngarara Streets	Foxton	-	Not mapped	N/A	Gardens of unit. This site does not contain significant natural ecological values.	Not recommended for Ecological Site designation.	No
142	906 Otaki Gorge Road	Tararua	Mahoe-kaikomako scrub, tawa forest	Not mapped	N/A	A small area (< 1 ha)) of fragmented secondary scrub. Vulnerable to forestry operations.–	Not recommended for Ecological Site designation.	No
143	Country Ridge Close	Tararua	Kanuka-mahoe-gorse scrub	Refer to K95	Refer to K95.	This site has been merged with K95.	Include in K95.	Refer to K95.
144	unnamed	Tararua	Kawakawa-makomako-mapou shrubland	0.74	Local	Very small, vulnerable fragment of secondary vegetation with occasional rewarewa, rimu , kahikatea and totara. Considerable threat from pest plant species.	Not recommended for Ecological Site designation.	Yes
145	Lady of Lordes Statue Hill	Foxton	Kanuka scrub	1.41	Local	A very small of kanuka scrub successional to kohekohe forest. Kanuka scrub is uncommon in Foxton Ecological District. Provides habitat for kereru. One of several areas of kanuka scrub in the vicinity.	Recommend for Ecological Site designation.	Yes
146	Corner SH1 and Te Waka Rd, Te Horo	Manawatu Plains		Not mapped	N/A	A small site dominated by exotic trees, with a few scattered totara trees. This site does not contain significant ecological values.	Not recommended for Ecological Site designation.	No
147	unnamed	Tararua	Pine plantation	Not mapped	N/A	Pine plantation. This site does not qualify as a natural area.	Not recommended for Ecological Site designation.	No
149	Pekapeka Rear Dunes	Foxton	-	Not mapped	N/A	Several small ponds in paddocks. No indigenous species present except scattered *Juncus*. Dominated by exotic pasture grasses. This site does not contain significant ecological values.	Not recommended for Ecological Site designation.	No
150	Kaitawa Reserve	Foxton	Pukatea-maire tawake swamp forest, mahoe forest, kohekohe-kanuka forest	7.59	Local	Very small fragments of under-represented habitat types including swamp forest. Indicative of previous diversity of vegetation type in the area. Provides habitat for kereru. Active restoration plan is in place. Protected in part as Council Scenic Reserve and part Recreational Reserve.	Recommend for Ecological Site designation.	Yes

Site No.	Site Name	Ecological District	Dominant habitat(s) or vegetation type	Area (ha)	Ranking	Justification	Recommendation	Eligible for Ecological Site designation?
151	2 Forest Lake Road	Manawatu Plains	Kohekohe-mahoe forest	2.14	Local	Indigenous vegetation on alluvial plain is nationally under-represented. Small fragmented area of kohekohe-mahoe forest with considerable weed threat. Black beech present (uncommon in the Ecological District).	Recommend for Ecological Site designation.	Yes
153	Simon Brown Bush	Tararua	Kohekohe coastal forest	1.73	Local	Proposed site. Examples of coastal forest and kanuka forest successional to kohekohe, both forest types are uncommon within Tararua Ecological District. The fragment is small and unfenced.	Recommend for Ecological Site designation.	Yes
154	Cobb's Bush	Manawatu Plains	Kohekohe-titoki forest	1.74	Regional	Proposed site. Indigenous vegetation on alluvial plains is nationally under-represented. Good representative example of uncommon habitat type with good regeneration. Part of a series of fragments across the plains that provide links between Kapiti Island and the Tararua Ranges.	Recommend for Ecological Site designation.	Yes
155	behind Turf Farm	Foxton	Kohekohe-tawa forest	Not surveyed	Not surveyed	Kohekohe fragments are uncommon in Foxton Ecological District. Part of a series of fragments that illustrate the diversity of habitat formally common in the area. Has been excluded due to the request of land owner.	Not surveyed. Owned has requested that site be excluded.	N/A
156	51 Esplanade	Foxton	-	Not mapped	N/A	Landscaped residential garden including some indigenous species. This site is not of significant ecological value.	Not recommended for Ecological Site designation.	No
159	Pukenamu Swamp	Foxton	Wetland	Refer K55	Refer K55	Site overlaps with K55. The two sites have been merged.	Include in K55	Refer K55
161	Lion Park go cart track	Foxton	-	Not mapped	N/A	Unused go-cart track. Small, artificial landscape, dominated by invasive exotic species. Indigenous species sparse.	Not recommended for Ecological Site designation.	No

Site No.	Site Name	Ecological District	Dominant habitat(s) or vegetation type	Area (ha)	Ranking	Justification	Recommendation	Eligible for Ecological Site designation?
162	221 Valley Road	Tararua	-	Not mapped	N/A	Includes house gardens, plantation and heritage oak tree. Also includes a small piece of riparian vegetation that is recorded under K182.	Majority of site is not recommended for Ecological Site designation; small portion of riparian vegetation at 221 Valley Road is included within K182.	No
163	Te Hapua Road Swamp D	Foxton	-	Not mapped	N/A	Drained and partially filled wetland dominated by exotic species including eucalyptus plantation.	Not recommended for Ecological Site designation.	No
164	Pukehou Bush	Manawatu Plains	Kohekohe-tawa forest	1.29	Regional	Indigenous vegetation on alluvial plains is nationally under-represented. Small fragment of habitat under-represented within the District. Habitat for toro – the only site on the Manawatu Plain where this species has been recorded (Ravine 1995).	Recommend for Ecological Site designation.	Yes
165	Otaki River Bush C	Manawatu Plains	Totara forest	2.76	Local	Indigenous vegetation on alluvial plains is nationally under-represented. Small, mostly unfenced with considerable weed threat. Part of a series of fragments in the area that provide links between Kapiti Island and the Tararua Ranges.	Recommend for Ecological Site designation.	Yes
166	Waitohu Stream Bush B	Manawatu Plains	Kohekohe forest	2.1	Local	Indigenous vegetation on alluvial plains is nationally under-represented. Small and fragmented.	Recommend for Ecological Site designation.	Yes
167	67 Old Hautere Road	Manawatu Plains		Not mapped	N/A	Isolated totara trees in residential garden. This site does not contain significant ecological values.	Not recommended for Ecological Site designation.	No
168	unnamed	Foxton	Kanuka scrub	4.05	Local	Small area of kanuka scrub with regenerating early successional forest – an uncommon habitat type in Foxton Ecological District. One of several kanuka scrub fragments in the area.	Recommend for Ecological Site designation.	Yes
169	York Ave	Foxton	-	Not mapped	N/A	Residential garden. The site does not contain significant ecological value.	Not recommended for Ecological Site designation.	No

Site No.	Site Name	Ecological District	Dominant habitat(s) or vegetation type	Area (ha)	Ranking	Justification	Recommendation	Eligible for Ecological Site designation?
170	El Rancho	Foxton	Manuka wetland	8.77	Regional	Nationally under-represented habitat type. Relative large area of manuka dominated wetland with some open water. Buffered by considerable infestation of gorse and blackberry.	Recommend for Ecological Site designation.	Yes
171	Kapiti Airport	Foxton	*Spiranthes novae-zelandiae*	0.06	Regional	Very small area of greatly modified ephemeral wetland that provides habitat for *Spiranthes novae-zelandiae*. This is the only known natural population of this species within Wellington Region.	Recommend inclusion of orchid habitat for Ecological Site designation.	Yes
173	Tini Bush B	Foxton	Pukatea-kohekohe-tawa-maire tawake forest	Refer to K85	Refer to K85	Assessed as part of K85.	Include in K85.	Refer to K85
175	Waimanu Lagoons	Foxton	Dune lake	8.02	Local	Wetland habitat is nationally under-represented. Highly modified, with artificial assemblage of species and some inappropriate enhancement plantings. However, this site has linkages to Waikanae River Mouth and provides continuation of open water habitat. High use by water bird species.	Recommend for Ecological Site designation.	Yes
176	Otaki Stewardship	Foxton	Wetland, dune system	28.44	Local	Nationally under-represented habitat type. Both dune and wetland habitats are modified and invasive exotic species common. Protected under Stewardship.	Recommend for Ecological Site designation.	Yes
177	Mangaone River Marginal Strip	Tararua	Tawa-kamahi-mahoe scrub	Not mapped	N/A	Very small (< 0.5 ha)), narrow and highly fragmented area of early secondary forest with kamahi. Considerable weed threat and indigenous vegetation interrupted by pine plantation.	Not recommended for Ecological Site designation.	No
179	Keeling's Bush	Manawatu Plains	Kahikatea swamp forest	2.38	Regional	Wetland habitat is nationally under-represented. Representative habitat type uncommon in Manawatu Plains Ecological District. Several species uncommon within the district are present including kamahi and swamp maire. This fragment has been excluded at the owners request.	Landowner has requested that this site be excluded from the Heritage Register.	Yes

KAPITI COAST ECOLOGICAL SITE SURVEY 2002 FIELD SHEET

SITE NAME | SITE NO.

RECORDER | DATE | ECOL. DISTRICT

NZMS 260 | GRID REF./GPS | ALT. RANGE

BIOC. ZONE

Ecological pattern:

Table 1: Vegetation and Habitats – mapped on attached aerial photograph

Unit Number	Landform	Hydroclass	Character	Dynamics	Structural Class	Vegetation/Habitat Type (Dominant Species)	Gen. Condition

Table 2: Information From Previous Studies

	Rank	Reference/Notes
Fauna		
Botanical		
Ecological		

Notes:

Table 3: Other Features of Interest

Prominent or Notable Plant Species:	
Birds:	
Native fish:	**Exotic fish:**
Other fauna:	

Distribution limits	
Uncommon or rare vegetation or habitat types	
Uncommon or rare taxa	
Other	

Table 4: Pest Plants

Unit No.	Pest Plant Species	Distbn	Effects		Response Suggested/Notes
			Current	Potential	

Notes:

Table 5: Animal Pests

Unit No.	Feature	Pest Species	Effects	Vuln.	Response Required/Notes

Notes:

Table 6: Ecological Rankings

Evaluation Criteria	H	M	L	Notes
Representativeness				
Diversity and pattern				
Naturalness				
Size and shape				
Rarity and special features				
Buffering and connectivity				
Viability				

Table 7: Human Activities (positive/negative effects)

Unit No(s)	Activity	Effects (+ve	Effects (-ve)	Vuln.	Response suggested/notes
	Domestic stock				
	Vegetation clearance				
	Drainage				
	Weed control				
	Dumping of inorganic waste				
	Dumping of organic waste				
	Recreational impact				
	Domestic pets				
	Erosion				
	Topdressing				
	Herbicide application				
	Animal pest control				
	Harvest practice				
	Roading works				
	Fire				
	Planting				
	Restoration works				
	Other				

Table 8: Management Requirements **Site No./Name**

Unit Number	Management Required	Relative Priority	Notes

Table 9: Monitoring Requirements **Site No./Name**

Unit Number	Monitoring Required	Relative Priority	Notes

DEFINITIONS TO BE USED FOR SCORING

Table 1: Names and definitions used in the vegetation and habitat classification system

Level	Name	Definition
1	Hydroclass	A hydrological classification of a particular site, e.g. estuarine (refer below).
2	Structural class	The vegetation structural class (e.g. forest), following Atkinson (1985), based on the growth forms of the canopy species[1](refer below).
3	Character	The state of the vegetation in terms of the relative proportions of indigenous and exotic species in the canopy (refer below).
4	Dynamics	Essentially an assessment of the successional state of the vegetation, including a category for primary vegetation which has been modified. This was applied to scrub and forest only (refer below).
5	Vegetation/ habitat type	An abbreviated name for a vegetation/habitat type including the dominant species, following Atkinson's (1985) method for vegetation classification (refer below).

Landform

1.	flat-undulating land	13.	floodplain	25.	rock/talus slope
2.	undulating-low hills	14.	river/stream terrace	26.	landslide
3.	undulating-hummocks-tors	15.	bedrock steepland	27.	earthflow
4.	hill(s)	16.	cliff	28.	lava flow/pyroclastic flow
5.	range(s)	17.	ridgetop	29.	volcanic cone
6.	local very steep slope(s)	18.	plateau/pumice plain	30.	active crater
7.	very steep hill(s)	19.	alluvial plain	31.	dormant crater
8.	gorge	20.	fan - alluvial	32.	geothermal field
9.	plateau scarp	21.	fan - volcanic	33.	beach - sand
10.	gully - flowing waterway	22.	lake/pond/tarn	34.	beach - rocky
11.	gully - ephemeral stream	23.	wetland		
12.	river/stream channel	24.	scree		

Hydroclasses

1-Terrestrial	All areas on land that are not wetlands (c.f. other hydroclass categories).
2-Estuarine	Tidal and non-tidal saline wetlands associated with a coastal body of water with a free connection to the open sea and where fresh water, derived from land drainage (usually rivers) is mixed with sea water (Allaby 1994).
3-Palustrine	Small open-water bodies, vegetated wet ground, and all other non-tidal wetlands not covered by riverine or lacustrine (Buxton 1991).
4-Riverine	Flowing waters contained within a channel e.g., streams, rivers and their margins (Buxton 1991).
5-Lacustrine	Dams or lakes with open water (Buxton 1991).

[1] The only variation from Atkinson's structural class classification is for *Leptocarpus similis* (oioi) which was classified as sedgeland, rather than rushland.

Vegetation/Habitat Structural Classes (From Atkinson 1985)

01-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.
02-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.)
03-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.
04-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 <10cm dbh.
05-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.)
06-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*.
07-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).
08-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.
09-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.
10-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.

11-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 *Baumea articulata.*

12-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*.

13-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.

14-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.

15-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.

16-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.

17-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%.

18-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%.

19-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%.

20-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%.

21-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.

22-Waterfield

Character

1-Indigenous	>50% of the plant species in the canopy are indigenous.
2-Exotic	>50% of the plants species in the canopy are exotic.
3 - N/A	For example, open water.

Dynamics

1-Primary	Forest or scrub which has never been logged or cleared in any part. Applied to scrub and forest only.
2-Modified	Primary forest or scrub in which the structure or composition of the vegetation has been changed by human activities. Applied to scrub and forest only.
3-Secondary	A stage of vegetation succession characterised by the disruption (clearance) of previously existing forest or scrub leading to a marked change in the composition of the vegetation (Allaby 1994). This term was only applied to scrub and forest.
4-N/A	Not applied - all classes other than scrub and forest.

Vegetation/Habitat Type Names

Compositional names were derived from the major canopy species and includes information on both the composition and structure of the canopy. Species that comprise 20% or more of the canopy were usually included in the type name. Where conspicuous species, such as emergent trees, comprise less than 20% of the canopy, they can be included in the compositional name as their exclusion would not convey a realistic picture of the vegetation. In cases where no species comprise 20% of the canopy, the two most abundant species are used. The range of % cover any one species contributes to the total cover is noted in the compositional name using the following notation:

tawa	over 50% cover of the double underlined species
tawa	between 25-49% cover of the underlined species
tawa	between 5-24% cover of non-underlined species
(tawa)	less than 5% cover of the bracketed species

Canopy structure is conveyed using the following approach:

rimu/tawa	indicates that rimu and tawa differ significantly in height and form separate layers, with the rimu emergent above the tawa.
rimu-tawa	indicates rimu and tawa occur in the same layer.

Summary of hierarchical classification system for vegetation and habitats

Classification Levels							
1. Hydroclass		**2. Structural class**		**3. Character**		**4. Dynamics**	
1	Terrestrial	01	Forest	1	Indigenous	1	Primary
2	Estuarine	02	Treeland	2	Exotic	2	Modified
3	Palustrine	03	Vineland			3	Secondary
4	Riverine	04	Scrub			4	N/A
5.	Lacustrine	05	Shrubland				
		06	Tussockland				
		07	Fernland				
		08	Grassland				
		09	Sedgeland				
		10	Rushland				
		11	Reedland				
		12	Cushionfield				
		13	Herbfield				
		14	Mossfield				
		15	Lichenfield				
		16	Rockland				
		17	Boulderfield				
		18	Stonefield/gravelfield				
		19	Sandfield				
		20	Loamfield/peatfield				
		21	Flaxland				

GENERAL CONDITION

6. N/A
5. Excellent
   - Canopy and understorey is made up only of indigenous species, with no exotic species present. As for 'good' but with intact structure and regenerative processes, and few if any introduced animals or pests (e.g. offshore islands or limited number of mainland sites).
4. Good
   - Relatively intact canopy of mainly indigenous species, lacking invasive weeds, but some exotic species present
   - Key canopy or understorey species regenerating
3. Mod
   - Canopy is a mixture of indigenous and exotic species with some invasive weed species present or obvious animal pests
   - Limited regeneration of key canopy or understorey species
2. Poor
   - Significantly modified canopy; a mixture of indigenous and exotic species
   - No regeneration of key canopy or understorey species
1. Very poor
   - Exotic species
   - No regeneration of indigenous species

TABLE 6: PLANT PESTS

Distribution

-8 Common throughout vegetation unit.
-7 Patches throughout vegetation unit.
-6 Scattered throughout vegetation unit.
-5 Local patches in two or more vegetation/habitat types.
-4 Local patches confined to one vegetation/habitat type.
-3 Locally scattered in two or more vegetation/habitat types.
-2 Locally scattered in one vegetation/habitat type.
-1 One small infestation.
0 Infestation no longer present.

Other (specify): _____
_____

(Note: assign a score to other from -8 (most negative effect) to 0 (least negative effect).

Effects

0 No significant impact on regeneration of indigenous species, does not significantly affect composition and structure of habitat.
-1 Some limited impact on regeneration of limited component of system; or minor change to basic structure and/or species composition.
-2 Major impact on the regeneration of a limited component of system; or some impact on regeneration of important species; or medium impact on composition and structure including important species.
-3 Major impact on the regeneration of many indigenous species or on the species composition or density of important species.

TABLE 7: ANIMAL PESTS

Effects

1. None present. No effect on vegetation/habitat.
2. Minor effects related to small populations of feral pigs, possums and deer, or localised domestic stock trespass.
3. Relatively minor, but obvious effects from low populations of pests such as feral goats, possums, pigs, deer and domestic stock.
4. Noticeable browse on canopy and understorey by pests such as feral goats, possums, deer and domestic stock.
5. Severe effects by possums, feral goats, deer, pigs and domestic stock. Canopy collapse in evidence. Severe depletion of the understorey.

Vulnerability

Possums

1. The predominant plant community within the management unit is expected to remain intact at current possum population levels.
1.5 The predominant plant communities within the management unit are declining in quality because of possums, but continued decline is likely to be gradual.
2. The plant community has suffered significant canopy and structural losses, with further damage expected.
2.5 The plant community is at risk of major canopy and structural loss, but is so far unaffected or little affected by possums.
3. The plant community or some plant or animal species within it is at risk of local extinction because of possums - for example, coastal pohutukawa/broadleaf communities or mixed broadleaf communities, including kokako habitat.
3.5 The vegetation or some plant or animal species within it is at risk of national extinction because of possums.

Goats, Deer, Wallabies and Pigs

0.5 If the pests pose no threat to the biota of value, e.g. goats pose no threat to Mahoenui giant weta living in a gorse habitat.
1. If the pests threaten other less important elements of the biota but have no impact on the biota of special value, e.g. goats may affect the regeneration of some species in beech forest, but may have little impact on mistletoes in the canopy.
1.25 If the pests threaten other less important elements of the biota and will have indirect impacts on the biota of special value, e.g. goats affect the regeneration of vegetation on slips which may impact on the stream bed habitats of rare native frogs.
1.5 If the pests directly threaten the biota of special value, e.g. goats limit regeneration of pohutukawa.

Predators

Ranking sites for vulnerability to predators.

3. Highly vulnerable - the species of value at these sites would most likely be extinct within 20 years without predator control.
2. Moderately vulnerable - the species of value at this site will show a slow decline due to predation and are likely to be extinct within 100 years if no predator control is implemented.
1. Population will persist in the presence of predators but is unlikely to increase.

TABLE 8: ECOLOGICAL RANKING CRITERIA

Representativeness: The primary criterion, based on a comparison of present vegetation cover vs past extent, diversity and pattern, naturalness, and size.

H Best, relatively large, good quality example; only example of type which was formerly more extensive
M Similar to other areas that occur elsewhere in the ecological district
L Degraded, small, better quality examples exist elsewhere in the ecological district.

Diversity and pattern: The diversity of ecological and physical features, and the patterns that exist within an area under consideration.

H More than two landforms or bio-climatic zones; more than 7 vegetation classes
M More than one landform or bio-climatic zone; 4-7 vegetation classes
L Only one landform and bio-climatic zone; 1-3 vegetation classes

Naturalness: The degree to which the vegetation and habitats reflect likely natural character. Most mainland ecosystems are modified but the degree of naturalness is an important consideration.

H Low-level or nil human disturbance (includes secondary vegetation established following natural disturbance)
M Moderate level of human 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 logged

Size and shape: Areas which are relatively large (i.e. compared to the mean size of remaining areas of indigenous vegetation in an Ecological District) are preferred to small areas. Small areas can be affected strongly by edge effects. A compact single area is generally preferable to long narrow areas or small separate remnants.

H Primarily compact, no major constrictions; large size
M Irregular or convoluted; moderate size
L Highly convoluted or discontinuous; small size

Rarity and special features: The relative rarity of physical landscape features, vegetation, habitats and species within an ecological region or district or on a national basis.

H Nationally threatened species present.
M Nationally or regionally uncommon species present; nationally or regionally uncommon vegetation classes or types present.
L No rare or uncommon species present.

Buffering and connectivity: The degree to which a natural area is protected or buffered by the surrounding landscape, or provides a buffer to other areas. A site may play an important role by connecting other areas of indigenous vegetation or habitat, or providing a riparian buffer.

H Part of a continuous natural landscape
M Part of a semi-continuous natural landscape/one of many discrete natural areas - some linkages
L Very isolated from other areas

Viability: The likelihood of an area remaining ecologically viable over time. Larger areas are generally more likely to remain viable with lower levels of management input.

H Large areas that will require relatively little active management to remain viable.
M Areas that will require some active management.
L Small or vulnerable ecosystem types, high degree of active management required.

TABLE 9: HUMAN ACTIVITIES

+ve/-ve Effects

-3 major negative impacts such as large scale vegetation clearance, widespread dumping of refuse
-2 moderate negative effects
-1 minor negative effects
0 neutral, no change evident, unknown
1 minor positive works/effort
2 moderate positive works/effort
3 major positive works/effort

Score each effect.

Vulnerability

1 Low vulnerability
2 Moderate vulnerability
3 Highly vulnerable to threat agent

TABLE 10: MANAGEMENT REQUIREMENTS

Very High (VH)	Requires immediate attention/action.
High (H)	Action within the next year.
Moderate (M)	Action to be prioritised as part of a 5-10 year management programme.

ECOLOGICAL RANKING CRITERIA

Table 1: Ecological Sites - Key Ecological Features

Criteria[1]	Site Features/Evaluation	Significant Site	Justification/Notes
1. It is indigenous vegetation or habitat for indigenous fauna that has either been set aside by statute or covenant for protection, or has been recommended for protection by a committee of the Nature Heritage Fund or Nga Whenua Rahui or by the Queen Elizabeth II Trust Board of Directors.	Specify type of legal protection: _____ _____ _____	Y / N	
2. It is vegetation or habitat that is currently habitat for an indigenous species or a community that is threatened or naturally uncommon or endemic to the Wellington Region.	Identify species present (include threat category): _____ _____ _____	Y / N	
3. It is indigenous vegetation or habitat type that is under-represented (10% or less of its known or likely original extent remaining) in an Ecological District, or Ecological Region, or nationally.	List under-represented vegetation/ habitat type(s) and state whether rare at the national, regional, or ecological district scale? _____ _____ _____	Y / N	

[1] Criteria are adapted from the Draft National Policy Statement on Indigenous Biodiversity, and Appendix 3 of Waikato Regional Policy Statement - Criteria for Determining Significant Indigenous Vegetation and Significant Habitats of Indigenous Fauna.

Criteria[1]	Site Features/Evaluation	Significant Site	Justification/Notes
4. It is an area of indigenous vegetation or naturally occurring habitat that is large relative to other examples in the Wellington Region of similar habitat types, and which contains all or almost all indigenous species typical of that habitat type.	Broad habitat types present: _____ _____ Area (ha): Notable flora or fauna: _____ _____ How does the size compare with other similar habitat types in the Region? *e.g. the site is part of one of the largest examples of similar habitat types in the Region.* _____ _____	Y / N	
5. It is important aquatic habitat that is critical to the self-sustainability of an indigenous species within a catchment and which contains healthy representative populations of that species.	Catchment: _____ Breeding species present: _____ _____	Y / N	
6. It is an area of indigenous vegetation or habitat that forms part of an indigenous ecological sequence that is either uncommon in the Wellington Region or an ecological district, or is a good representative example of its type.	Does the site include or is it part of one of the best or only examples of this type of ecological sequence nationally (Y/N), regionally (Y/N), or in a particular ecological region/district (Y/N)? Location: _____	Y / N	

Criteria[1]	Site Features/Evaluation	Significant Site	Justification/Notes
7. It is an area of indigenous vegetation or habitat that is a healthy, representative example of its type because: (i) its structure, composition, and ecological processes are largely intact, and (ii) if protected from the adverse effects of plant and animal pests and of adjacent land use (e.g. stock, discharges, erosion), can maintain its ecological sustainability over time.	Rank the following factors High (H), Medium (M) or Low (L): ___ structural intactness ___ ratio of indigenous:exotic species ___ connectivity to other natural areas ___ size of the area in the context of the relevant ecological district ___ degree of protection from likely threats (e.g. fenced, buffered) ___ species diversity List number of responses to the above questions: _____ H _____ M _____ L Indicate overall ecological quality of the site: _____ Would you consider this to be among the best examples of its type nationally (Y/N), regionally (Y/N), or in a particular ecological region/district (Y/N)? Provide justification: _____ _____ _____	Y / N / NS	

Criteria[1]	Site Features/Evaluation	Significant Site	Justification/Notes
8. It is an area of indigenous vegetation or habitat for indigenous species (which is either naturally occurring or has been established as a mitigation measure) that forms, either on its own or in combination with other areas, an ecological buffer, linkage or corridor to other areas or habitats identified as significant under criteria (1)-(7).		Y / N / NS	

Table 2: Ranking of Ecological Sites
(Adapted from the Environment Waikato Guide for Applying Significance Criteria.)

Criterion (See Table 1)	**INTERNATIONALLY SIGNIFICANT**	**RESPONSE**	**NOTES**
	Internationally significant natural areas have usually been identified in previous assessments. These sites are so important that some of them are already protected by international conventions. Other natural areas may be internationally significant if they contain high quality vegetation or habitat that is unique in the world (e.g. Fiordland National Park). Internationally significant sites attract the interest of scientists and tourists from other countries.		
?	Has it been recognised under international legislation or convention as an internationally significant area (e.g. as a World Heritage Site or a RAMSAR site)?	Y / N / NS	
1	Has it been recommended for protection as a World Heritage Site or Wetland of International Importance (RAMSAR site) by QEII or NWH, or NHF?	Y / N / NS	
2	Is it currently habitat for an indigenous species which is threatened with extinction (in the categories Nationally Critical, or Nationally Endangered or Nationally Vulnerable) and endemic to the Wellington Region?	Y / N / NS	
?	Is it a key habitat for the completion of the life cycle of species that migrate internationally and that would be threatened if these habitats weren't sustained?	Y / N / NS	
3,7	Is the site the best or only remaining large representative example in New Zealand of a suite of relatively intact indigenous ecosystems and ecological sequences (wetlands may be included).	Y / N / NS	

Criterion (See Table 1)	**NATIONALLY SIGNIFICANT**	**RESPONSE**	**NOTES**
	Nationally significant natural areas include sites that contain healthy populations of threatened species or are very good examples of nationally rare habitat or vegetation (e.g. Lake Wairarapa) They also include sites that are the only location where certain species occur (e.g. Chatham Islands) Nationally significant sites tend to attract the interest of scientists, technical specialists, and eco-tourists from other parts of New Zealand. The site is **at least** Nationally Significant if the answer to any of the following criteria is 'Yes'.		
	Is it protected, or recommended for protection, under the Conservation Act 1987 (Ecological Area, Forest Sanctuary), National Parks Act 1980, Marine Reserves Act 1971, or Reserves Act 1977 (Nature Reserve, Scientific Reserve).	Y / N / NS	
	Is it habitat for an indigenous species which is under serious threat in the categories Nationally Critical, Nationally Endangered, Nationally Vulnerable, Serious Decline, or Gradual Decline?	Y / N / NS	
	Is it indigenous vegetation or habitat for indigenous species that is under-represented nationally (10% or less remains), or nationally uncommon (including wetland) that is a good quality example that is representative of its type? *Good quality examples would receive mostly highs or mediums for Criterion 7 in Table 1 (taking into account size, presence of plant and animal pests, stock damage, other damaging effects).* *For the definition of vegetation types refer to Criterion 4 in Table 1 above - Column B, Definitions and Further Information.*	Y / N / NS	List no. of responses to criterion 7 in Table 1: H _____ M _____ L _____

Criterion (See Table 1)	REGIONALLY SIGNIFICANT	RESPONSE	NOTES
	Regionally significant *natural areas include the best examples in the Wellington Region of habitats that may be common elsewhere in New Zealand - for example, our best dune systems, or the large areas of more common vegetation types. They may also include examples of nationally rare features that are not in good condition.* The site is **at least** Regionally Significant if you can respond 'Yes' to any of the following criteria.		
1	Is it protected under the Reserves Act 1977, as a Wildlife Management Reserve, Wildlife Refuge, Scenic Reserve, Nga Whenua Rahui Kawenata, or for any conservation purpose under the Conservation Act such as a Conservation Area or Conservation Park, with significant fauna and/or flora values.	Y / N / NS Status: _____ Recommended Status: _____	
1	Is it protected under the Queen Elizabeth the Second National Trust Act 1977 as an Open Space Covenant?	Y / N / NS	
1	Is it a site that has been recommended for protection by NHF, NWR, or QEII?	Y / N / NS	
2	Is it currently habitat for an indigenous species that is threatened, in the categories Sparse or Range Restricted, or endemic to the Wellington Region?	Y / N / NS Species: _____ Threat Status: _____	
3, 7	Is it indigenous vegetation or habitat for indigenous species that is under-represented regionally (i.e. within relevant ecological regions and districts) and which is a good quality example that is representative of its type (taking into account size, plant and animal pests, stock damage, other damaging effects)? *Good quality examples would receive highs or mediums for*	List no. of responses to question 7 in Table 1: H _____ M _____ L _____	

Criterion (See Table 1)	**REGIONALLY SIGNIFICANT**	**RESPONSE**	**NOTES**
	Criterion 7 in Table 1. *Assessment must be justified by a well qualified and experienced ecologist.*	Y / N / NS	
3	Is it a relatively large example of indigenous vegetation or habitat for indigenous species that is under-represented nationally, or nationally uncommon (including wetlands), but which is degraded in quality (taking into account presence of plant and animal pests, stock damage, other damaging effects)? *Assessment must be justified by a well qualified and experienced ecologist. Use the results from Criterion 7 in Table 1 to determine the relative quality of the site.*	Y / N / NS	
3	Is it the Regions' only remaining representative example (irrespective of its size) of a particular indigenous vegetation type or indigenous species habitat that is degraded in quality? *Representative areas are the best examples of indigenous vegetation and habitats that comprise a network covering the full range of landforms, soil sequences, vegetation and fauna communities within an ecological district (c.f. Shaw 1994). The reality for many landscapes, particularly throughout much of Wellington, is that a 'representative example' will be the largest and most diverse remaining examples of indigenous vegetation and habitats.* *Degraded sites would receive mostly Low scores for the factors listed in Criterion 7.*	List no. of responses to question 7 in Table 1: H _____ M _____ L _____ Y / N / NS	
6, 7	Is it one of the best representative examples in the Wellington Region of indigenous vegetation or habitat for indigenous fauna or an ecological sequence? *Assessment must be justified by a well qualified and*	Y / N / NS	

Criterion (See Table 1)	**REGIONALLY SIGNIFICANT**	**RESPONSE**	**NOTES**
	experienced ecologist.		
4, 7	Is it a good quality example of indigenous vegetation or habitat for indigenous species representative of the ecological character typical of the Wellington Region? *This may include examples of indigenous vegetation that are large or moderately large relative to other similar habitats in the region or within the relevant ecological district. They should be relatively intact and retain the main elements of their original composition structure. Examples would include relatively large tracts of indigenous forest and habitats on the ??.*	Y / N / NS	
8	Is it a buffer (or a key part of a buffer) to a site that is of international or national significance? *The site buffered must have first been shown to be of national or international significance using relevant sections above in Table 2.*	Y / N / NS	

LOCALLY SIGNIFICANT	RESPONSE	NOTES
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 criterion 7 as healthy, functioning, and ecologically viable sites.		
Did the site receive a 'Yes' response to **any** of the criteria in the plan?	Y / N / NS	

RELATIVE ECOLOGICAL RANK? Circle the highest level for which you allocated at least one 'Yes' response in Table 2. This indicates the rank of the site.	INTERNATIONAL, NATIONAL, REGIONAL, LOCAL

ADDITIONAL SITES WHICH MAY QUALIFY AS ECOLOGICAL SITES

Grid Ref	Dominant Habitat Type	Notes
R25 914514	Kanuka treeland	Very small area on same property as K6.
R26 762231	Kohekohe forest	SH1, Paekakariki. Near K111.
R26 768277	Manuka scrub wetland	Poplar Avenue, Raumati South. Refer Wildland Consultants Ltd. Contract Report No. 669.
R26 787279	Kohekohe forest	Two very small fragments on same property as K94.
R26 814325	Tawa-kohekohe forest	Very small area adjacent to constructed pond. On property at 2 Greendale Road.
R26 826342	Kohekohe forest	Behind Waikanae Bowling Club.
R26 831339	Kohekohe forest	Waikanae River Riparian, behind Riverglade.
R26 855373	Titoki forest	Small area on same property as K64.
S25 855409	Raupo-manuka scrub wetland	Te Hapua Road. Refer Wildland Consultants Ltd. Contract Report No. 669.
S25 906537	Dune lake	South of Waikawa Beach. Refer Wildland Consultants Ltd. Contract Report No. 669.
S25 923515	Manuka scrub wetland	Waiorongomai Road. Refer Wildland Consultants Ltd. Contract Report No. 669.
S25 933507	Tawa forest	Small area at Forest Lakes Camp.

STATUS OF THREATENED FLORA AND FAUNA SPECIES MENTIONED IN THE TEXT

SPECIES	COMMON NAME	REGIONAL RANKING	NATIONAL RANKING
FLORA:[1]			
Adelopetalum tuberculatum	epiphytic orchid	Rare in Wellington Conservancy	Not threatened
Baumea articulata	jointed twig-rush	Uncommon in Ecological District	Not threatened
Carex dipsacea		Sparse	Not threatened
Carex litorosa		Regionally Critical	Serious decline
Doodia australis		Sparse	Not threatened
Eleocharis sphacelata	bamboo spike-sedge	Uncommon in Wellington Region	
Hemiphaga novaeseelandiae	kereru	Gradual Decline	Gradual decline
Hypolepis distans		Sparse	Not threatened
Korthalsella lindsayi	mistletoe	Sparse	Not threatened
Korthalsella salicornioides	mistletoe	Gradual Decline	Sparse
Korthasella lindysii		Sparse	Not threatened
Leptinella dioica subsp. monoica		Gradual Decline	Gradual decline
Mazus novaezeelandiae subsp. novaezeelandiae	dwarf musk	Regionally Endangered	Serious decline
Metrosideros robusta	Northern rata	Locally rare	Not threatened
Mida salicifolia		Regionally Endangered	Gradual decline
Myrsine salicina	toro	Uncommon in Ecological District	Not threatened
Nestegis montana		Uncommon in Wellington Region	
Nestegis montana	roro	Uncommon in Wellington Region	
Pittosporum cornifolium		Sparse	Not threatened
Potentilla anserinioides		Sparse	Not threatened
Ranunculus macropus		Serious Decline	Serious decline
Schoenpletus tabernaemontani	kapungawha	Sparse	Not threatened
Spiranthes novae-zelandiae		Regionally Critical?	Not threatened
Streblus banksii	large-leaved milk tree	Regionally Endangered	Sparse
FAUNA[2]**:**			
Anguilla dieffenbachii	long-finned eel	Gradual Decline	Gradual decline
Botaurus poiciloptilus	Australasian bittern	Nationally Endangered	Nationally Endangered
Charadrius bicinctus bicinctus	banded dotterel	Gradual Decline	Gradual decline
Egretta alba modesta	white heron	Nationally Critical	Nationally critical
Egretta sacra sacra	reef heron	Nationally Endangered	Nationally endangered
Eudynamys taitensis	long-tailed cuckoo	Gradual Decline	Gradual decline
Neochanna apoda	brown mudfish	Gradual Decline	Gradual decline

[1] Source: Sawyer (Unpublished Document); Hitchmough 2002; Pat Enright *pers. com*.
[2] Source: Hitchmough, 2002.

SPECIES	COMMON NAME	REGIONAL RANKING	NATIONAL RANKING
Phalacrocorax carbo novaehollandiae	black shag	Sparse	Sparse
Phalacrocorax sulcirostris	little black shag	Sparse	Sparse
Phalacrocorax varius varius	pied shag	Sparse	Sparse
Platalea regia	royal spoonbill	Coloniser	Coloniser
Poliocephalus rufopectus	New Zealand dabchick	Sparse	Sparse
Porzana tabuensis plumbea	spotless crake	Sparse	Sparse
Powelliphanta traversi otakia (Powell, 1946)	land snail	Nationally Critical	Nationally critical
Sterna albostriata	black-fronted tern	Serious Decline	Serious decline
Sterna caspia	Caspian tern	Nationally Vulnerable	Nationally vulnerable