

TASMAN DISTRICT COASTAL ENVIRONMENT INLAND BOUNDARY AND
NATURAL CHARACTER MAPPING: METHODOLOGY AND SUMMARY RESULTS

Report prepared for Tasman District Council



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Executive Summary

Following on from a 2012 Envirolink project Tasman District Council contracted Pacific Eco-Logic Ltd to map the inland boundary of the coastal environment and to map and assess areas of high and outstanding natural character within the coastal environment. This project arose from requirements specified in the New Zealand Coastal Policy Statement 2010.

This report describes the context, policy and case law used to develop a decision-tree for defining the inland boundary of the coastal environment. The seaward boundary is defined in the Resource Management Act. The inland boundary was refined from an indicative draft during the field work undertaken to assess natural character.

A major part of this report describes the process and methodology used to assess and map natural character in the terrestrial, freshwater and marine coastal environments of Tasman. It addresses: national policy requirements; the concept of natural character; and the methodology used to define the spatial extent and ranking of areas of high and outstanding natural character. The report also evaluates natural character restoration priorities for different types of Tasman coastal environments.

The report's appendices contain:

- The justifications for the coastal environment inland boundary for each tile; and
- Descriptions of each of the units used for assessing natural character- including a summary of factors contributing to the high and outstanding ranking; the environment type, the natural character index and the ranking.

More detail including the scoring data and formulae are in a separate spreadsheet not included within this report

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Chris Richmond of Pacific Eco-Logic digitised the draft indicative coastal environment line, provided field support (including skippering the boat), scanned the tiles for digitising, provided additional advice on estuary scoring and checked the draft report.

Disclaimer

While every care has been taken in the preparation of this report and the underlying data collection processes Pacific Eco-Logic is not responsible for decisions or actions taken using the contents of this report.

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Introduction

In 2011-2012 Pacific Eco-Logic Ltd completed an Environlink project² that used the varied coastal environments of Tasman District to test and refine a new methodology developed for measuring the natural character of New Zealand coastal environments. This new methodology is called “QINCCE” (Quantitative indices for measuring the natural character of the coastal environment) (Froude 2011a). The methodology which was originally developed in northern New Zealand, involves the measurement of a set of parameters that are used to calculate natural character indices. Use of the reference condition *present-potential natural state* facilitates: the comparison of natural character levels between different environment types and locations; and the tracking of changes over time. A consistent framework is used to measure natural character in all types of terrestrial and aquatic³ coastal environments.

One outcome of the Environlink project was that the natural character of a range of locations was mapped and assessed. This project focused on the estuaries and dunes, especially for Golden Bay. The catchments within an “approximate coastal environment” were assessed for the Ruataniwha and Whanganui Inlets.

The current project has mapped the inland boundary of the coastal environment for the entire Tasman Region, mapped the spatial extent of areas of high and outstanding natural character within that coastal environment and provided justification for these rankings. There has been some modification to some of the mapping and scoring in the Environlink trials. This has occurred where better information has become available and where it was necessary to change unit boundaries because the entire coastal environment was being mapped. In some cases changes have been made because of the different scale of the current project (e.g. for Farewell Spit).

Policy context

Under section 6(a) of the Resource Management Act all those exercising powers and functions under the Act are to recognise and provide for the preservation of the natural character of the coastal environment. This is amplified further in the 2010 New Zealand Coastal Policy Statement. Here, policies 13 and 14 are of particular relevance.

Under policy 13 the adverse effects of activities in areas with outstanding natural character are to be avoided; while significant adverse effects are to be avoided, remedied or mitigated in all other areas. This is to be achieved by

- assessing the natural character of the coastal environment of the region/district, and by mapping or otherwise identifying at least areas of high natural character;
- ensuring that regional policy statements and plans identify areas where preserving the natural character requires objectives, policies and rules, and include those provisions

² Froude, V.A.; Richmond, C. 2012. *Refining the QINCCE methodology for measuring coastal natural character using case studies in Tasman District*. Environlink Project 1009-TSDC80 for Tasman District Council. Pacific Eco-Logic Ltd, Bay of Islands.

³ Including out to the seaward boundary of the coastal marine area which is 12 nautical miles offshore from land

Policy 14 requires that the natural character of the coastal environment be restored or rehabilitated (using a variety of approaches).

Policy 1 in the 2010 New Zealand Coastal Policy Statement is titled *extent and characteristics of the coastal environment*. This policy identifies a range of attributes that are included in the coastal environment. It is not a complete list and it includes some attributes that are listed for the avoidance of doubt rather than because they define the coastal environment. The seaward extent of the coastal environment (as the outer extent of the coastal marine area) is defined in the Resource Management Act. The New Zealand Coastal Policy Statement does not specifically require Councils to map the inland extent of the coastal environment, but a number of councils have decided to map this boundary. Reasons for this include providing certainty as to the application of plan provisions and for providing the inland boundary for the purposes of mapping natural character.

Regional policy statements and Resource Management Act plans are required to give effect to the operative New Zealand Coastal Policy Statement (Resource Management Act s62(3),s67(3)(b) and s75(3)(b)). Section 35 of the Act requires councils to monitor the state of the environment within their region/district (to the extent that is appropriate to carry out their functions) and to monitor the effectiveness of their policies, rules and other methods in regional policy statements and plans.

Environmental context

The geology in Tasman District is highly diverse. This has led to a diverse array of ecosystems and a high number of plant species, including a number that are unique to Northwest Nelson.

The District contains the largest and most diverse range of karst landscapes in New Zealand. The main karst areas within the coastal environment are on the Northwest Coast and the Pohara-Tarakohe area. There are also areas where the underlying geology (e.g. granite and some sandstones) produce soils and marine sediments of low fertility. Examples of this are found at Puponga and in the Abel Tasman National Park.

The main remnant areas of active dunes in the District are found at Farewell Spit and on the western coast. The Farewell Spit vegetated area was burnt and farmed until the early 1970's. Today this area and the surrounding intertidal flats (which on the east are particularly extensive) form a nature reserve with very limited public access. The alien marram grass has largely replaced native sand binders on the district's more active dunes. The dynamics of native sand binders versus alien marram grass has affected the ecological natural character and the dynamics of dunes. There are still some areas of native shrubland and forest on dunes on the Northwest Coast (e.g. Wharariki Beach, Kaihoka Lakes). In Tasman Bay there are very few areas of duneland not dominated by alien species.

Tidal ranges are relatively large in Tasman and Golden Bay resulting in extensive areas of intertidal flats in the estuaries and on the more open coast. In Golden Bay estuaries catchment geology means that mean particle size is relatively coarse. Tasman District contains the second and third

largest tidal lagoons⁴ in the South Island (Waimea and Whanganui), large tidal rivers with extensive and productive intertidal deltas (Motueka, Takaka & Ruataniwha), many small tidal river estuaries and several relatively unmodified tidal river and tidal lagoon estuaries (in western Tasman) (Robertson & Stevens 2012). Part of Whanganui Inlet is a marine reserve.

Robertson and Stevens (2012) divided the open rocky coast into:

- The very exposed high energy Western Tasman shores with sandstone rock to the north of Whanganui Inlet and mudstone and sandstone to the south. Here the biota is diverse and abundant with mussels and barnacles dominating the intertidal rocky shore
- Tasman and Golden Bay with variable rock types including granite, sandstone, mudstones and limestone. While mussels and barnacles dominate, the diversity and abundance was lower than for the West Tasman coast

The open coast subtidal is less well known. The West Tasman coastal marine area includes rock reefs and soft sediment substrates that experience high levels of natural disturbance in the shallows. In the east there are lower levels of natural disturbance. Here there are bryozoan beds on soft substrates as well as relatively extensive areas of shellfish although their abundance appears to have declined in some areas in recent years. There is a marine reserve around Tonga Island in the Abel Tasman National Park.

What is natural character?

While the preservation of the natural character of the coastal environment and various freshwater environments and their margins has been a long-standing New Zealand policy-goal (since 1973), the relevant legislation and policies have not contained a definition of natural character. The first step in the development of a methodology for measuring coastal natural character and its change (Froude 2010) was to develop a robust definition of natural character (Froude et al. 2010). Since this definition was published the 2010 New Zealand Coastal Policy Statement (Department of Conservation 2010) has been made operative. While this policy does not contain a definition of natural character, it does list some matters (in policy 13.2) which may be part of or contribute to natural character.

The process used to develop the definition in Froude et al. (2010) included analysing literature from a wide variety of disciplines to distil a set of interpretations and perspectives of natural character/ environmental naturalness. These interpretations were assessed against criteria which address New Zealand's environmental, legal and policy context. No previous interpretation addressed all criteria and so several of the "best-matched" interpretations were combined and refined to develop a comprehensive definition that fully addressed all the criteria as follows:

"Natural character occurs along a continuum. The natural character of a "site" at any scale is the degree to which it:

- *is part of nature, particularly indigenous nature*
- *is free from the effects of human constructions and non-indigenous "biological artefacts"*⁵

⁴ Term used by Robertson & Stevens 2012. They are more commonly described as Inlets.

⁵ The term biological artefact is used in international scientific literature to represent human constructed and managed biological systems such as pasture for grazing, lawns, gardens, plantations and orchards. In the application of the methodology for measuring natural character such a distinction is not necessary

- *exhibits fidelity to the geomorphology, hydrology⁶ and biological structure, composition and pattern of the reference conditions chosen*
- *exhibits ecological and physical processes comparable with reference conditions*

Human perceptions and experiences of a “site’s” natural character are a product of the “site’s” biophysical attributes, each individual’s sensory acuity and a wide variety of personal and cultural filters.”

The definition has been compared with an analysis of the collective interpretations of natural character distilled from 100 Court decisions on appeals made under the Resource Management Act. This comparison showed that the comprehensive definition of natural character was generally consistent with (the sometimes variable) Court interpretations of natural character (Froude 2011).

The second New Zealand Coastal Policy Statement (Department of Conservation 2010) was gazetted in November 2010. Policy 13(2) states that “...*natural character is not the same as natural features and landscapes or amenity values and may include matters such as:*

- a) *natural elements, processes and patterns;*
- b) *biophysical, ecological, geological and geomorphological aspects;*
- c) *natural landforms such as headlands, peninsulas, cliffs, dunes, wetlands, reefs, freshwater springs and surf breaks;*
- d) *the natural movement of air, water and sediment;*
- e) *the natural darkness of the night sky;*
- f) *places or areas that are wild or scenic*
- g) *a range of natural character from pristine to modified;*
- h) *experiential attributes, including the sounds and smell of the sea; and their context or setting*

These matters are a mixture of biophysical attributes including those that contribute to “experiential attributes”. Some of the listed attributes provide guidance about what constitutes natural character (e.g. a, b, d, and e). Others identify particular components of the coastal environment which are likely to possess natural character (e.g. c and f). Item (h) gives examples of biophysical attributes that contribute sensory information to human experiences, while item (g) contains the observation that natural character occurs along a continuum. Item (h) conflates two items that were separate but related items in the Board of Inquiry’s report (Proposed NZCPS (2008) Board of Inquiry 2009). Policy 13(2) clearly does not constitute a definition.

The 2010 New Zealand Coastal Policy Statement introduced thresholds for policy and management of coastal natural character for the first time. Policy 13(1)(a) requires any adverse effects of activities on natural character in the coastal environment be **avoided** in areas of “**outstanding** natural character”. For all other areas in the coastal environment policy 13(1)(b) requires that **significant** adverse effects on natural character be avoided and that **other** adverse effects of activities be avoided, remedied or mitigated. The threshold of high was introduced in policy

⁶ In aquatic systems this includes water quality including nutrient levels

13(1)(c). This policy requires that natural character be assessed by mapping or otherwise identifying at least areas of “**high** natural character”

These thresholds have not been formally defined in legislation or national policy. The QINCCE⁷ methodology used to determine areas of high and outstanding natural character scores a number of variables. These scores are combined to give an overall score which is assessed against numerical thresholds for high and outstanding. The following preliminary working definitions have developed to assist Council and public to understand the differences between areas in the coastal environment that have outstanding or high natural character or where natural character is less than high. These working definitions are primarily based on factors affecting natural character scores and address matters listed in New Zealand Coastal Policy Statement policy 2. The definitions apply to both terrestrial and aquatic coastal environments.

Areas of outstanding natural character

- Consist entirely or almost entirely, of indigenous nature⁸
- Relative to other Tasman coastal sites, there is a very high level of matching to reference conditions⁹ for all or most of:
 - Biological structure & composition and ecological processes¹⁰
 - Geomorphology, hydrology, hydraulics, water quality and physical processes
 - Sound and odour environment , darkness regimes
- Exhibit minimal or no impacts from buildings, structures, paved surfaces, roading or vehicle tracks

Areas with high natural character

- Almost entirely consist of nature, especially indigenous nature¹¹
- Relative to other Tasman coastal sites, there is a moderate to high level of matching to reference conditions¹² for:
 - Biological structures & composition and ecological processes¹³
 - Geomorphology or landform, hydrology, hydraulics, water quality and physical processes
 - Sound and odour environment, darkness regimes
- Exhibit minimal impacts from buildings, human built structures, paved surfaces, roading or vehicle tracks

Areas where natural character is less than high:

⁷ Quantitative Indices for measuring the Natural Character of the Coastal Environment (described in the next section of this report)

⁸ This can include surfaces with minimal or no obvious biological cover

⁹ Reference conditions are compiled using a variety of information sources to represent a particular time or target. In the New Zealand context the reference conditions used is that of present-potential natural state. This is what would be expected if humans and their tools had not impacted an area but natural processes (e.g. earthquakes, tsunamis, storms, coastal erosion and accretion) had still occurred. High levels of natural disturbance characterise many coastal environments.

¹⁰ For the regional and district scale these are assessed based on various attributes of the biological cover and/or natural surface; and the level of animal pest control or freedom from animal pests or human harvest (depending on the environment type). Attributes relating to cover/ natural surface have greater impact on the scoring.

¹¹ This can include surfaces with minimal or no obvious biological cover

¹² Refer to equivalent footnote for outstanding natural character

¹³ Refer to equivalent footnote for outstanding natural character

- May have low levels of nature (versus human constructed environments)
- Typically have moderate to low levels of indigenous nature
- May be dominated by human constructed and managed biological systems such as pasture for grazing, lawns, gardens, plantations and orchards which are typically dominated by introduced species
- May include moderate to high levels of invasive species
- Relative to other Tasman coastal sites, there is usually a low level of matching to reference conditions for one or more of :
 - Biological structures & composition and ecological processes¹⁴
 - Geomorphology or landform, hydrology, hydraulics, water quality and physical processes
 - Sound and odour environment, darkness regimes
- May exhibit a variety of impacts from buildings, human built structures, paved surfaces, roading or vehicle tracks

Some areas of coastal environment sit just below the numerical threshold for high. Typically such areas are dominated by nature but may include higher levels of non-native species (often pest plants) and/or the biological cover is in the very early stages of development to what would be expected on the site if natural processes (including disturbance) had occurred in the absence of human impacts¹⁵. Such areas may develop high natural character over time, especially if there is appropriate management of non-native species in those areas where they are a problem.

Areas of coastal environment with high or outstanding natural character, and sometimes less than high natural character, may also be places that are wild or scenic (New Zealand Coastal Policy Statement policy 13(2)(e)).

Methodology

Defining the inland boundary of the coastal environment

Neither the Resource Management Act, nor its predecessors, nor the New Zealand Coastal Policy Statements (Minister of Conservation 1994, 2010) specifically define what constitutes the coastal environment. NZCPS (2010) Policy 1(2)(a) and (b) makes it clear that the coastal marine area and any islands within it are part of the coastal environment. The extent of the coastal marine area is defined in the Resource Management Act. The ambiguity is over what constitutes the landward boundary of the coastal environment.

Guidance provided by case law

There are relatively few court decisions that provide guidance of what might constitute the inland extent of the coastal environment boundary. Table 1 summarises relevant decisions

¹⁴ For the regional and district scale these are assessed based on various attributes of the biological cover and/or natural surface; and the level of animal pest control or freedom from animal pests or human harvest (depending on the environment type). Attributes relating to cover/ natural surface have greater impact on the scoring.

¹⁵ The concept of present potential cover and measuring progress towards this is discussed further in the next section

Table 1: Court decisions addressing the inland boundary of the coastal environment

Key points relating to the inland extent of the coastal environment	Decision
<i>“Where there are hills behind the coast, it (the coastal environment) will generally extend to up to the dominant ridge behind the coast”.</i>	Northland Regional Planning Authority v Whangarei County Council [1976] A63/76
<p>The site of a proposed subdivision <i>“lying between the dominant ridge and the coast, can be considered as being within the coastal environment for the purpose of the Resource Management Act”</i></p> <p>The Court also observed that the site did not have a coastal interface and that there was no coastal element in the vicinity of the site.</p>	<i>S Martin-Weber and S Martin-Weber v Hutt City Council and Jourdan Developments Limited (WW23/03)</i> Environment Court
<i>The whole locality from the foreshore to the highest ridge of the Mt Manaia Range undoubtedly qualifies as “coastal environment” as described...in Northland Regional Planning Authority v Whangarei County Council.</i>	<i>Dudin v Whangarei District Council [2007] A22/07</i>
<i>“A variety of matters must be taken into account [in determining the coastal environment] , including on the facts of this case the significant residential development between the foreshores at Governors Bay and the proposed building site We are satisfied that it was not part of Parliament’s intention in enacting s.3(1)(c) to apply that provision in a blanket way to an area the size of those parts at Lyttelton Harbour which have some (albeit distant) vista of the sea</i>	<i>Hay v Banks Peninsula District Council [1990] C44/90</i>
Three areas between Kaipara South Head and Bethells Beach were all deemed to be within the coastal environment and included land extending back from the coast for a distance of between 1.5 and 2.5kms which was <i>“moderately rolling and mostly in improved pasture.”</i> , another area of sand hills extended back approximately 2 kms and was planted in pine forest, and the remaining area was described as <i>“a complex and fragile environment comprising ...in-land lakes, in-land dunes, and a significant wetland area all contiguous with or close to the actual coastline.”</i> . Each had unique features that the Court considered representative of situations where the coast was a significant part or element.	<i>Coutanche v Rodney DC [1993] W94/93,</i>
<i>It is set back from the sand dunes which we consider form the limit of the coastal environment and is largely rurally modified land with little affinity to the coastal environment other than physical proximity.</i>	<i>In Canterbury Regional Council v Waimakariri District Council [2002] C5/02,</i>
<i>“(T)he coastal environment is just that, an environment. It is not a zone which might readily be identified by lines on a</i>	<i>Kaupokonui Beach Soc Inc v South Taranaki DC EnvC W030/</i>

Key points relating to the inland extent of the coastal environment	Decision
map. In defining that environment there will frequently be grey areas and blurred edges” In the circumstances, it was determined that the coastal environment included the river basin together with the sand hills and escarpments. It ceased at the escarpment ridgeline and did not extend across the elevated terrace land	
“It is also obvious that the area at the mouth of the river is part of the coastal environment. The coastal environment is generally accepted as extending to the crest of the nearest skyline.”	Wilkinson vs Huranui 2000 EnvC C50/00
A logged (previously a pine plantation) spur with regenerating mixed native and alien species and drained flats with alien grasses adjoining a small urban settlement is within the coastal environment	Longview Estuary Estate v Whangarei District Council 2012 NZEnvC 172

Ecological guidance

The ‘coastal environment’ can be broadly defined based on bioclimatic conditions and landforms affected by coastal processes. Bioclimatic zones are commonly used to refer to the broad distribution of vegetation zones along both altitudinal and coastal-inland gradients where a particular climatic regime dictates the character of the natural ecosystem (Leathwick et. al., 1995).

Waikato Regional Council used bioclimatic criteria to broadly define the coastal environment as the area with an elevation of less than than 300m above sea level and/or less than 1km from the coast. These boundaries were based on major climatic influences that drive vegetation pattern – primarily temperature and moisture balance (which there roughly corresponded with altitude). This area delineated the environments which are typified by frequent windblown salt and/or a marked reduction in the severity of frost (Leathwick et. al., 1995)

Guidance from NZCPS 2010

Policy 1(2) from the 2010 NZCPS states that that the coastal environment includes:

- a) *The coastal marine area;*
- b) *Islands within the coastal marine area*
- c) *Areas where coastal processes; influences or qualities are significant, including coastal lakes, lagoons, tidal estuaries, saltmarshes, coastal wetlands, and the margins of these;*
- d) *Areas at risk from coastal hazards;*
- e) *Coastal vegetation and the habitat of indigenous coastal species including migratory birds;*
and
- f) *Elements and features that contribute to the natural character, landscape, visual qualities or amenity values*
- g) *Items of cultural and historic heritage in the coastal marine area or on the coast*
- h) *Inter-related coastal marine and terrestrial systems, including the intertidal zone*
- i) *Physical resources and built facilities, including infrastructure, that have modified the coastal environment*

This is, as previously noted, not a definition of the coastal environment. Some of the listed matters are clearly mandatory (e.g. the coastal marine area and the islands within it). Other listed matters, are “for the avoidance of doubt” reminders not to exclude areas with cultural values (e.g. built environments that have modified the coastal environment; items of cultural and historic heritage within the coastal marine area or on the coast). Some items are elements that require the exercise of judgement about the degree to which the presence of an attribute may make it relevant to the coast (e.g. *inter-related coastal marine and terrestrial systems* where land sourced sediment and nutrients clearly affect the marine environment). Lastly there is a rather circular matter. “*elements and features that contribute to the natural character, landscape, visual qualities or amenity values*”).

Clearly, not all of these matters have value in determining the inland boundary of the coastal environment. Indeed the criterion most used/ referred to in the case law is omitted from Policy 1- namely the first visually-prominent ridge. Accordingly, there appears to be an opportunity to rework the matters in Policy 1, the case law and the bioclimatic zone concept into a practical and defensible decision-tree to determine the landward boundary of the coastal environment. The relative importance of some of the criteria may vary according to the type of coastal environment, especially in dunelands and alluvial floodplains.

A primary purpose for defining the coastal environment is to map areas of high & outstanding natural character within it. While this boundary is used in the administration of other New Zealand Coastal Policy Statement policies, it should be noted that the influence of the land on the sea and, the influence of the marine environment on the land varies for different environmental attributes. In some contexts (e.g. the historical roosting and/or nesting of some sea birds in some mountain areas) the inland extent of marine influence (e.g. high fertility soil from guano deposition) may occur further inland than what has been mapped as a general boundary.

Decision trees used for defining the inland boundary of the coastal environment

Figures 1 and 2 summarise the decision trees used for defining the inland coastal environment boundary for open and sheltered waters contexts. The first step for both contexts uses contours (as indicated by case law and bioclimatic zone science). Where the top of the escarpment or the first prominent ridge exceeds 300m for open waters and 200m for sheltered waters a specific contour line is adopted as the boundary (as indicated by bioclimatic zone science). This is 300m and 200m respectively. There are some peninsulas where all the land is coastal environment (e.g. Kina Peninsula).

In areas where the land near the coast line is relatively flat other criteria are used. Areas that are formed by recent coastal processes (e.g. dunes including swales, dune lakes and associated wetlands) are part of the coastal environment. There are also areas formed by fluvial processes and subject to coastal influences. These include rivers, streams and associated wetlands that are subject to tidal influences. Also included are drained coastal wetlands & alluvial plains which could be re-inundated in certain climatic and sea conditions if sea level rises or floodgates are removed or fail;

and/or are subject to 100+ yr coastal hazards including tsunamis. In this the approximate 10m contour is used where possible.

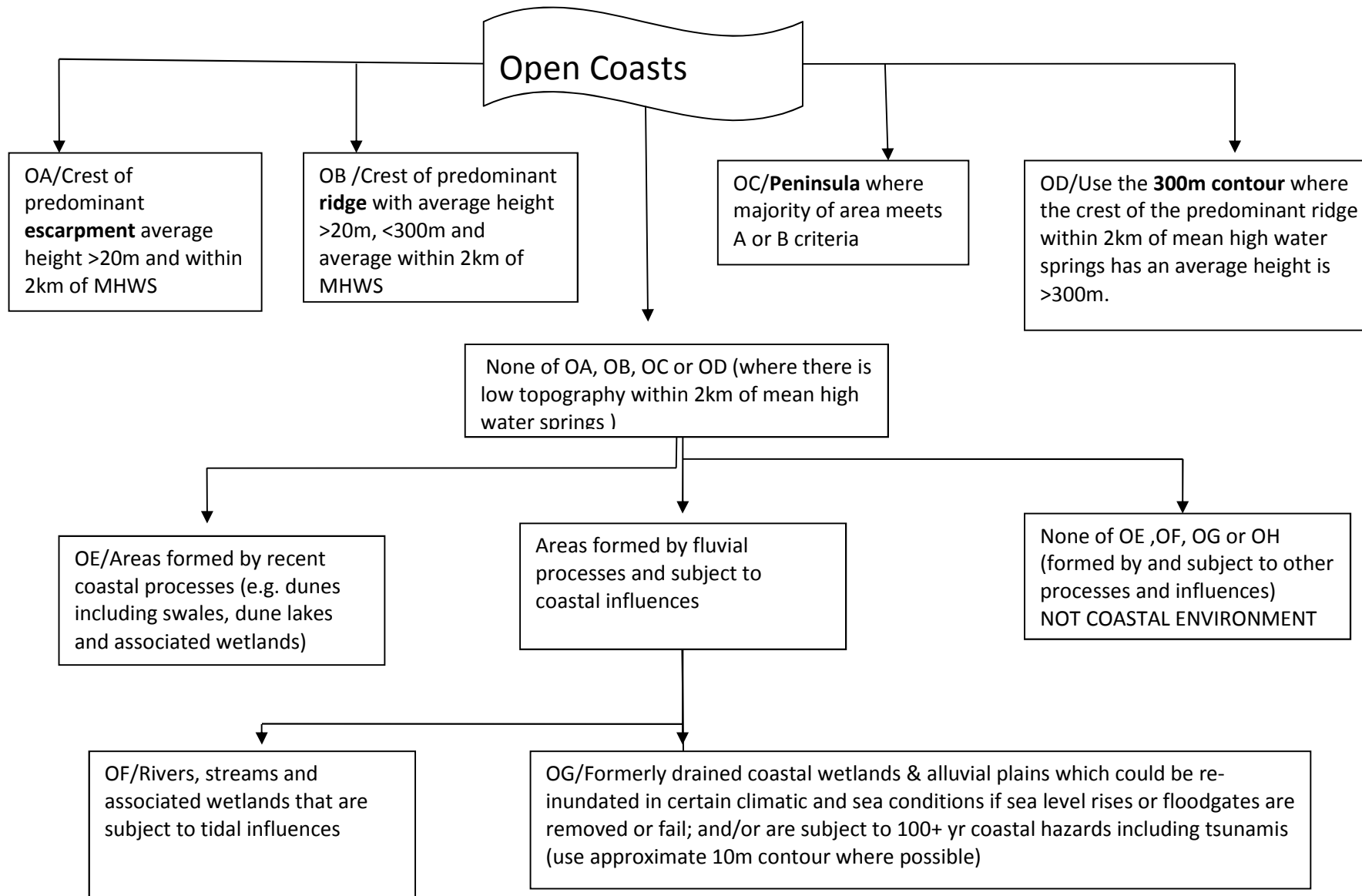


Figure 1: Decision tree for defining the inland coastal environment boundary for the open coast

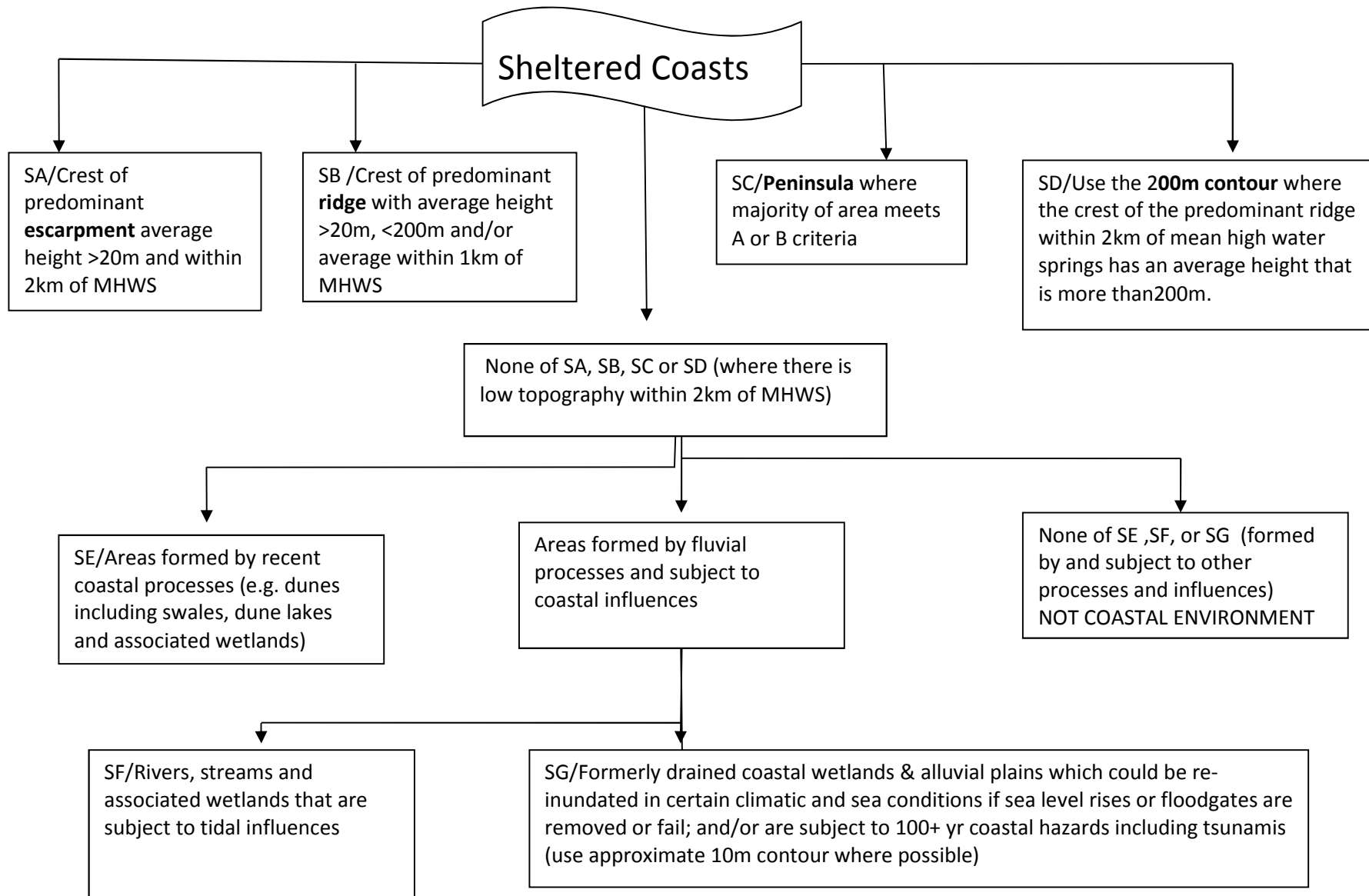


Figure 2: Decision tree for defining the inland coastal environment boundary for sheltered waters

Depicting the coastal environment boundary

An initial boundary was defined using a variety of data layers and aerial photography for the District. The contour data-layer was particularly useful, with the 10m contour having been defined for various parts of the large alluvial flats within the District (e.g. Motueka and Waimea). This initial boundary depiction using Q-GIS software included any potential areas so as to ensure that we had aerial image tiles for all the areas where we might need it.

Council prepared a map grid with the draft inland coastal environment boundary, the existing 200m coastal management line used in the Tasman Resource Management Plan, Department of Conservation administered lands, existing marine farms, the coast line and NIWA bathymetry. The A3 tiles were printed by Council and where necessary laminated for field use. The inland coastal environment boundary was refined as part of the field assessment process to measure coastal natural character. This resulted in some large reductions and a few small additions to the draft inland coastal environment line.

The natural character assessment methodology

Overview

The Tasman coastal natural character assessment was based on the QINCCE (Quantitative indices for measuring the natural character of the coastal environment) methodology. This was developed by and described in Froude (2011) with subsequent refinements based on work in Tasman, Waikato and Northland regions (e.g. Froude 2012; Froude & Richmond 2012).

The application of the QINCCE methodology was adapted to address a requirement to map areas of high and outstanding natural character for the 3200km of the Northland Region coastline. Instead of measuring natural character for units covering the entire coastal environment, a set of screening criteria were developed and applied so as to identify areas that were clearly not of high natural character. The QINCCE methodology was not applied in these areas. This approach was used for this Tasman project.

Key steps used in measuring coastal natural character in Tasman included:

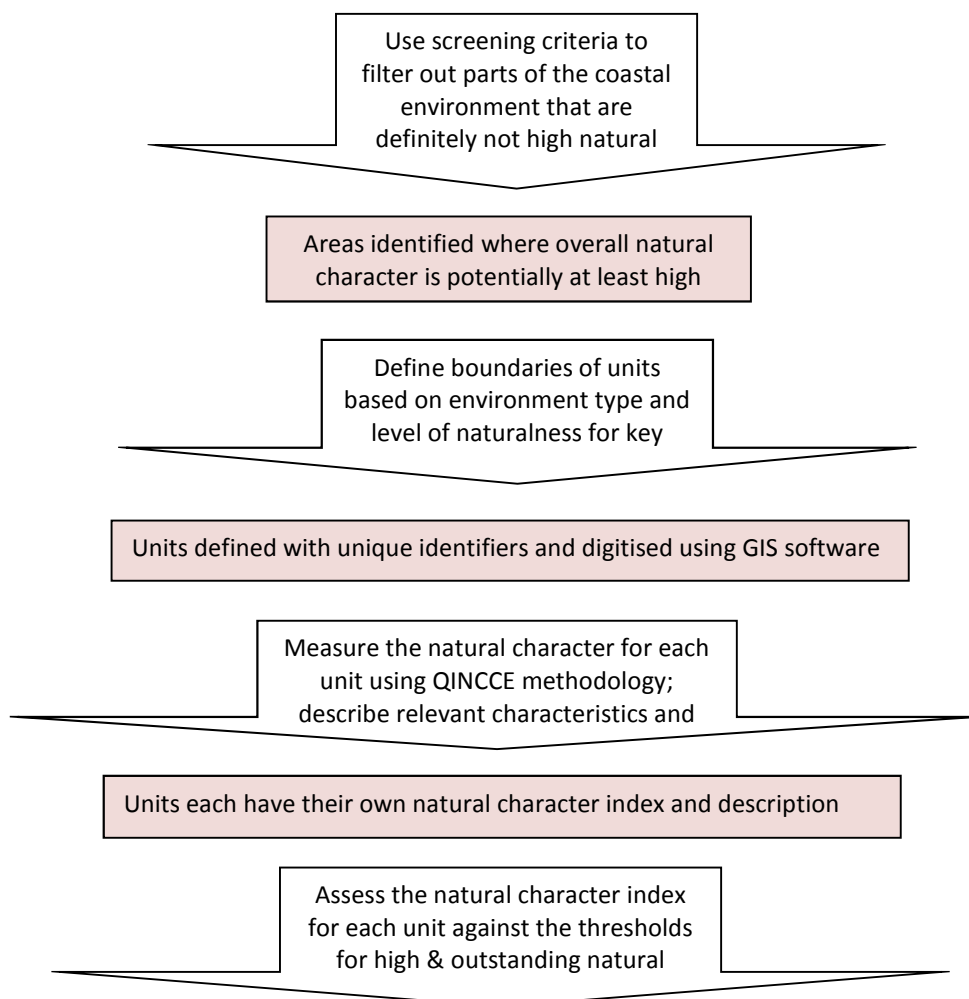
- A comprehensive set of criteria¹⁶ were used to determine which areas were definitely not of high natural character
- For those areas which were potentially of high natural character units (based on environment type and relatively homogeneous levels of natural character) were depicted manually on aerial images or marine charts. Each unit received a unique identifier. In some case a unit might have several distinct parts that were spatially separated
- The completed images were scanned and sent to Council (via Dropbox)
- Council then geo-referenced the scanned images, and digitised and labelled the manually depicted units

¹⁶ Screening criteria used to assess whether areas **may be of at least high natural character** require that an area meet minimal levels for ecological, hydrological, geomorphological, and sound and light naturalness. The criteria also require that high levels of human structures be absent. The full set of criteria is in Box 2

- Each identified unit was scored using the QINCCE methodology after collecting relevant descriptive and other evaluative information about those units. This included field evaluations, and assessments of remote (satellite) imagery and existing technical documents
- The natural character indices were calculated for each unit to determine which units were of high & outstanding natural character. This was based on whether they met numerical thresholds (initially based on work in three equivalent regions and adjusted progressively during the natural character assessment of the Northland coastal environment). After this several additional screening criteria relating to the naturalness of the auditory environment and the night lighting/darkness were applied
- All the calculated scores were manually reviewed and the ranking confirmed. In some cases where the score was close to a threshold a unit was moved up or down a rank based on other information that might not have been specifically addressed in the scoring

Figure 3 provides an overview of the process followed for this project

Figure 3: Process used to assess natural character for those parts of the Tasman coastal environment that had not been previously assessed



The QINCCE methodology

The QINCCE methodology uses a consistent framework for measuring natural character for different types of terrestrial and aquatic environments. Units are depicted based on environment type and level of overall naturalness. For each broad class of coastal environment there is a *core* set of parameters that is used to calculate three sub-indices for each unit:

- Ecological naturalness index;

- Hydrological and geomorphological/landform naturalness index;
- Freedom from buildings and structures index.

The three sub-indices for each unit are combined multiplicatively into an overall index of natural character for each unit.

The parameters used to calculate these indices have been derived from a comprehensive definition of natural character (Froude et al (2010)¹⁷ and emphasise state indicators (as in the Pressure-State-Response model) where practical.¹⁸ . The definition of natural character in Froude et al (2010) is consistent with an analysis of 100 Resource Management Act Court decisions¹⁹. Where possible measured data (e.g. % cover) is used and standardised to fit within the range of 0 to 1. Those parameters which use categorical data are supported by comprehensive scoring tables. The relevant parameters are directly scored between 0 and 1 for some key parameters or a more limited range for those parameters that have tended to have a lesser impact on the overall natural character index.

The methodology and formulae can be used for terrestrial, freshwater and marine environments, although there are some differences in the specific parameters measured. Data and descriptive/evaluative information about each unit is stored in spreadsheets that can be electronically linked to the digitised units.

Parameters measured

Table 2 contains the indicators and the measured parameters for each of the three natural character sub-indices for each unit. Definitions of key terms used in the indicator and parameter descriptions are in Box 1.

¹⁷ Froude VA, Rennie HG, Bornman JF 2010 The nature of natural: defining natural character for the New Zealand context. *New Zealand Journal of Ecology* 34(3): 332-341

http://www.newzealandecology.org/nzje/new_issues/NZJCol34_3_332.pdf

¹⁸ E.g. Ministry for the Environment, 2010. International reporting pressure-state-response (PSR) framework. <http://www.mfe.govt.nz/environmental-reporting/international/index.html> accessed 19 November 2010; OECD, 1993. OECD core set of indicators for environmental performance reviews. A synthesis report by the Group on the State of the Environment. Paris, OECD. 39p

¹⁹ See footnote 1

Table 2: QINCCE methodology: core indicators and parameters arranged by sub-index

Ecological naturalness index (ENI)	
Indicator	Parameter(s)
Cover type extent (natural area, natural surface and biological artefact cover) ¹	% of unit with each cover type
Impact of alien mammals on native flora and fauna (terrestrial & freshwater)	Score representing the level of pest control for terrestrial and the level and diversity of alien fish species for freshwater environments
Level of protection/ naturalness mobile biota (marine)	Score representing the level of freedom/protection from human harvesting pressure
Progress towards present-potential-cover ¹	Score for <i>progress to present-potential cover</i> for each natural cover type
Hydrological and geomorphological naturalness index (HGNI) HGNI=1-HGIS (Hydrological and Geomorphological Impact Score)	
Indicator	Parameter(s)
Hydrological and geomorphic impacts	<ul style="list-style-type: none"> Score representing the magnitude of each human-mediated change to the hydrology, hydraulics, water quality and/or geomorphology/landform compared to the <i>present-potential natural state</i> % of unit area affected by each human-mediated hydrological and/or geomorphological change
Freedom from buildings and structures index (FBSI) FBSI=1-BSIS (Buildings and Structures Impact Score)	
Indicator	Parameters
Building, structure, paved or surfaced cover	% area/100 in buildings % area/100 in structures % cover in paved/surfaced or tracked areas
Building & structure height/volume	Score for maximum height (terrestrial or intertidal) of buildings; structures; paved Score for structure volume (subtidal)
Building colour naturalness, reflectivity and prominence (terrestrial & intertidal and water surface)	Score for colour naturalness and reflectivity of buildings; structures; paved/surfaced areas Score for prominence (from public places) of buildings, structures and paved/surfaced areas
Alien cover on structures (subtidal)	Score representing the level of alien cover on structures only

¹ Descriptions of special purpose terms are in Box 1

² Paved or surfaced areas include sealed and unsealed roads as well as hard surfaced areas which may or may not be sealed

Box 1: Special purpose terms used in the QINCCE methodology

Cover type (CT): This includes different types of land and benthic biological cover. It includes natural areas, natural surfaces and biological artefacts (e.g. garden, plantation)

Natural areas (NA) have vegetation or benthic cover (including marine encrusting fauna) and are where natural processes predominate. The species are not necessarily native and may include ecological pest plants and/or alien encrusting fauna.

Natural surface (NS) do not have a readily visible biotic cover (e.g. very steep cliffs, highly mobile sands) and are where natural processes predominate and the biota might be cryptic (e.g. lichen) or subsurface (e.g. the invertebrate infauna of intertidal flats).

Present potential state (PPS) is the state or condition that would be present today had humans, their tools and technology and the introduced species they brought with them not arrived in New Zealand. This can apply to hydrology, geomorphology, and cover (including vegetation and encrusting fauna). It can also be used for fauna (e.g. fish and birds). When used for biological components extinct species are not included as the return of such species is not possible.

Present-potential cover (as in “Progress to PPC”). Present-potential cover for a site is the cover that would be present had humans and the introduced species they brought with them not arrived in New Zealand. It differs from historical vegetation /cover in that it incorporates the effects of geological, climatic disturbances and other natural changes that have occurred since human arrival and so is not necessarily the “climax” cover, particularly for areas where there are high levels of natural disturbance.

The concepts of *present-potential natural state* (and *present-potential cover*) have been developed to facilitate comparisons of levels of natural character present in different environment types and contexts. *Present potential state* (PPS) is the state or condition that would be present today had humans, their tools and technology and the introduced species they brought with them not arrived in New Zealand. This can apply to hydrology, geomorphology, and cover (including vegetation and encrusting fauna).

The reason for comparing present day state with the *present-potential natural state* is that this provides a standard reference condition that can be applied to all environment types and contexts. It allows natural character levels in different types of environment to be aggregated or compared as appropriate. In some situations it can be difficult to determine the appropriate *present-potential natural state* (including *present-potential cover*). Examples of such situations include environments subject to frequent natural disturbance (e.g. coastal cliffs, estuarine environments, wetlands and dunes with their associated swales). In these types of situation, determining *present-potential natural state* requires a good understanding of hydrological, geomorphological and ecological processes and history for the area being assessed.

Ecological naturalness index

The key parameters for this index are the percentage of the unit having each cover type; and the score for *progress to present-potential cover* for each natural cover type. Present-potential cover is a special form of *present-potential natural state*. Earlier work had prepared scoring tables for

determining the score that represents *progress to present-potential cover* for a variety of Northland terrestrial environments (Froude 2011). As part of this project scoring tables were developed and refined for other environments (e.g. dunelands and steep and/or exposed locations with skeletal soils, dry alluvial plains and wet alluvial plains). The compilation of these scoring tables drew on experience with applying the methodology elsewhere in New Zealand. The theory underpinning the concept of present-potential cover and scoring progress towards this is described in Froude (2011).

Present-potential cover is typically described in relatively general terms as often the precise species composition (especially on land) would be the product of the characteristics of the site, broad scale environment patterns and processes (e.g. factors affecting broad-scale distribution patterns for individual species) and stochastic factors (e.g. which colonising species arrived first after a disturbance event).

The steps for determining *progress to present-potential cover* are as follows:

- Describe the current cover or covers in a unit (e.g. low mixed broadleaved forest, intertidal flats with dense sea grass)
- Determine the *present-potential cover* based on the environment type, known natural processes and location-specific environment conditions
- Use the scoring tables to determine the score for *progress to present-potential cover* for each described cover category in the unit

Tables for scoring progress to present-potential cover address wet and dry alluvial flats; erosional surfaces generally and where there are steep slopes, skeletal soils and/or highly exposed sites, dunelands (foredunes, intermediate and back dunes and dune swales); sheltered waters (primarily inlets, harbours and estuaries with saltmarsh and salt herbfields, intertidal flats, subtidal reefs). The tables include scores for different levels of alien species invasion in natural areas of any type. They also include the scoring for human-managed biological systems (e.g. plantation forests, pastoral farming).

The third component of the ecological naturalness index is a parameter that represents the level of naturalness of the fauna (or animal communities). This has less impact on the index than the cover parameters. A different parameter is used in each of terrestrial, freshwater and marine coastal environments. This reflects the different pressures on faunal naturalness and the practicalities of assessment for a regional scale project. As it is not practical to obtain *state* or condition information for the fauna in a regional scale assessment, *pressure* indicators and associated parameters were used. Froude (2011) provided the rationale and scoring protocols for the following *pressure* parameters²⁰:

- Score for freedom from alien mammalian species as represented by the long-term pest eradication/control strategy (terrestrial)
- Score for freedom from alien freshwater fish species as represented by the known absence of alien fish species (freshwater)
- Score representing the level of protection from human harvesting pressure (marine)

²⁰ As in the OECD pressure-state-response model for indicators Organisation for Economic Co-operation and Development 1993. OECD core set of indicators for environmental performance reviews. Environmental Monographs No 83. Paris. 39 p.

Since the initial methodology development, experience has shown that the scoring protocols initially used for terrestrial environments had too large an impact on the ENI scores at the regional or sub-regional assessment scale. The terrestrial scoring range for this parameter has been modified to lie within a range of 0.8-1 with the same four options as set out in Table 6.2 in Froude (2011). For marine environments the score representing the level of protection from human harvest pressure is as set out in Table 6.3 in Froude (2011) although this table has now been expanded to incorporate the potential impacts of different levels of fishing restrictions using information from Froude & Smith (2004) and elsewhere. The scoring range used for this parameter in marine environments ranges from 0.7-1.

Hydrological and geomorphological naturalness index

The parameters for human-induced hydrological and geomorphological change address the magnitude of each impact and the proportion of a unit affected by that impact. Hydraulic changes are also addressed as are aspects of water quality (from the perspective of the environment rather than human health). Table 6.4 in Froude (2011) contains the scoring system for on-site changes while Table 6.5 addresses the protocols for scoring off-site impacts. Some additional matters (including those relating to water quality) have been added to these tables. The proportion of the unit affected by each change is estimated using ortho-rectified aerial images or marine charts, field inspection as required and other sources of information where these are available.

Hydrological and geomorphological naturalness is assessed relative to the equivalent *present-potential natural state*. Scoring tables have been developed to measure the magnitude of different human-mediated hydrological and geomorphological changes (Froude 2011). A special category of these changes is those that result from human activities outside of the mapped unit. Such changes include:

- Increased levels of or changes in the type of sediment reaching aquatic environments from human activities in the catchment;
- Increased nutrients and/or other contaminants reaching aquatic environments from human activities in the catchment;
- Changes in sedimentation patterns resulting from changed hydraulics (especially scour velocity and fetch-limited resuspension) created by causeways and similar structures

Scoring tables have been developed in Froude (2011) and since expanded.

Protocols for addressing interactions between the hydrological (including hydraulics and water quality), geomorphological (including the characteristics of sediment), and cover parameters have been developed. This includes distinguishing between natural versus human-induced disturbance, and on-site versus off-site sources of disturbance. These protocols are particularly important for assessing natural character in areas where there has been an especially wide range of human impacts on hydrological, water quality and sediment characteristics that have a major impact on land/benthic cover. Protocols have been developed to avoid double-counting of impacts.

To avoid inappropriate double counting of impacts caused by off-site human activities, Table 7.1 in Froude (2011a) sets out the protocols for addressing different types of disturbance. This is

particularly relevant to aquatic environments where up-catchment activities can result in changes in the types and amounts of sediment and nutrients reaching downstream or down-current aquatic environments. There can be a long period of off-site adjustment following hydrological, hydraulic and geomorphological disturbance at a site that is typically up-stream or up-current.

For example, in the Firth of Thames, an area that was previously intertidal sand flat was transformed into mangrove forest by the deposition of millions of cubic metres of mud following catchment deforestation and later floodplain isolation. Deforestation largely occurred from the 1850's to the 1920's. Floodplain isolation occurred from the 1920s to the 1970s. Mangrove colonisation began in the 1950's when the surface elevation reached 0.5m above mean sea level. Mangroves now extend 1km seaward of their 1952 seaward boundary and in places more than one metre of fine mud has accumulated on top of former sand flat (Swales & Bentley 2008).

In the context of the QINCCE methodology, the impacts of the changed hydrology and geomorphology resulting from human actions at another location are addressed directly in the hydrological and geomorphological naturalness parameters for the off-site location(s). To avoid double counting the impacts, the *present-potential cover* for the biotic or surface cover is *reset* to that which is appropriate for the changed hydrology and geomorphology. This *reset* only applies where the human actions that led to the changes are off-site ones (Table 7.1 in Froude 2011).

Freedom from buildings and structures index

The rationale and assessment protocols for the relevant parameters are addressed in Chapter 6 of Froude (2011). This includes the scoring protocols for:

- building and structure height
- building and structure colour naturalness and reflectivity scores for terrestrial and intertidal environments

Subsequently, building and structure colour naturalness and reflectivity scores have been combined and averaged with a new score given for building prominence. These parameters do not have a large impact on the score and are so are scored over a small range. The building prominence score uses the same scoring range as building reflectivity and colour naturalness (0.8 when there is a low level of prominence from public places to 1 when prominence is high). Public places include reserves and other public space and the coastal marine area.

In subtidal environments the colour naturalness and reflectivity of structures are not especially relevant since structures are rapidly covered by encrusting organisms unless antifouling paints are used and regularly reapplied. A major potential impact of structures in subtidal environments is that they provide a new surface that can be colonised by alien invasive flora and fauna. This specific impact is not addressed in the ENI and is therefore included in the BSIS for subtidal environments.

Defining natural character units

Criteria for delineating unit boundaries were developed to distinguish discontinuities in environment type, management regime (e.g. management for conservation versus production purposes), cover including density of alien species, and especially to distinguish between different levels of naturalness at the scale of mapping. The purpose of this was to try and ensure that the natural

character levels within a unit were relatively homogeneous, but it was not always possible to do this and also recognise discontinuities in other factors such as environment type, cover type or management regime.

Units were delineated manually on printed aerial imagery and on bathymetric charts for the marine environment away from the near shore. Aerial imagery printed at a scale of 1:10,000 was used for the manual delineation of units. Units were subsequently digitised as polygons with geo-referencing. Each geo-referenced unit has a unique identifier that links it electronically to a database containing that unit’s description and a variety of parameter data.

The size of the units varied depending on the complexity of environment types (Table 3) in an area and the variability in natural character at scales appropriate to the scale of the project. For example, there were large units covering extensive areas of indigenous forest at a similar stage of maturity or extensive areas used for a similar intensity of agriculture. Conversely, small units were used where the environment type was limited in extent in a particular location or a small feature (e.g. quarry or mature forest remnant) was significantly different from its surrounding matrix. In some areas the complexity of the local environment meant that a unit had to contain more than one environment type. This project built on earlier work²¹ which included some fine scale mapping. Where it was deemed unnecessary to extend or amalgamate units mapped at a fine scale those locations still contain a number of smaller units (e.g. Wharariki Beach, north of Parapara Estuary)

The “environment type” was used to assist in the assigning the appropriate *present-potential cover*. For some environment types there are different *present-potential covers* that reflect a gradient in environmental conditions and/or age of formation. For example there would be different present-potential covers for each of the foredune, intermediate and back dunes, and dune swales/wetlands within a broad environment type of dunelands. Table 1 defines the coastal environment types used. This typology is applicable throughout New Zealand (although *present-potential cover* will vary to address local bioclimatic and geological differences as well as species distributions). The classification covers both terrestrial and aquatic coastal environments.

Table 3: Environment types used in assessing natural character in Tasman

Environment type	Definition	Code
Alluvial	Where sediment has been moved by water. This includes some coastal features (e.g. chenier plains) as well as river features	AL
Aeolian (dunelands and associated features)	Where sediment has generally been moved by wind. While supratidal sands are usually initially transported by water, supratidal sediments are generally included as part of the inland adjoining duneland environment	DU
Erosional Erosional steep	These are surfaces formed by erosional processes. A sub-group of “steep” erosional surfaces that includes areas such as coastal cliffs and faces where a different <i>present-potential cover</i> is used because of the steepness of the site	ER ER-s

²¹ Froude, V.A.; Richmond, C. 2012. Refining the QINCCE methodology for measuring coastal natural character using case studies in Tasman District. *Envirolink Project 1009-TSDC80 for Tasman District Council. Pacific Eco-Logic Ltd, Bay of Islands.*

Environment type	Definition	Code
Erosional open coast	and skeletal soils A further subgroup of “open coast” erosional surfaces includes those directly exposed to the impacts of oceanic swells and open ocean climate and sea conditions (and the associated winds and salt-spray). A different <i>present-potential cover</i> is used to recognise the impacts of natural disturbance processes.	ER-o
Erosional steep open coast	Some areas are both steep/have skeletal soils and are subject to the effects of oceanic swells, sea conditions and climatic conditions. <i>Present-potential cover</i> is adjusted to recognise these combined impacts.	Er-s-o
Island	This is a secondary environment sub-type used in addition to the core environment type (e.g. erosional). Islands on the open coast can be isolated from seed sources and pest reinvasion and are often exposed to extreme disturbance regimes. It includes large rockstacks.	IS
Lake	This includes lakes and lagoons – where the later may have brackish rather than fresh water.	LA
Sheltered waters	These are marine units where the waters are protected from open ocean swells	SW
Marine- near shore	Marine areas less than 30 metres in depth that are not sheltered waters	MN
Marine -offshore	Marine areas deeper than 30 metres out to the Regional Council coastal marine area boundary	MO
Reclamation	Reclamations. No high or outstanding areas are reclamations	R

Calculating the natural character index

Froude (2011) contains a detailed evaluation of the rationale and the approach used to construct the natural character indices. For a regional scale assessment the three primary sub-indices (Ecological naturalness index (ENI); Hydrological and geomorphological naturalness index (HGI); and Freedom from buildings and structures index (FBSI)) are multiplied to give the Natural character index (NCI). Each of these sub-indices and the NCI has a calculated value between 0 and 1.

Determining areas of high and outstanding natural character in Tasman

A set of screening criteria (as set out in Box 2) were used to identify areas that may meet the criteria for at least high natural character.

Box 2: Screening criteria used to assess whether areas may be of at least high natural character

- **FBSI (all required)**
- Absence of a moderate density or bulk of structures and/or buildings unless part of a mature predominantly indigenous forest unit
- Absence of a large paved or surfaced area
- Absence of moderate intensity of roads or vehicle tracks
- **ENI (1 required)**
- Absence of an apparent high proportion of the vegetative cover or surface dominated by human production systems or weed species
- OR There is intensive predator control (terrestrial) OR an absence of a variety of alien fish

- species (freshwater); OR the harvest of marine species is significantly restricted
- **HGNI: (all required)**
- Absence of quarries, open cast mines, landfills, reclamations, stop-banking, major drainage, dredging, dumping, major land re-contouring
- **Sounds, light and odours (all required)**
- Absence of significant non-natural sounds and odours from industrial, commercial, residential, or recreation/ entertainment activities
- Absence of regular intensive outdoor artificial light at night

Areas that met these criteria were then assessed using the modified QINCCE methodology (as previously described). Descriptive and evaluative information was also collected using a combination of remote imagery (primarily satellite) assessment, field assessment, and review of other sources of information. Descriptive material was entered into Microsoft Word tables. Data was entered into Microsoft Excel spreadsheets and the sub-indices and NCI were calculated.

The numerical thresholds selected for high and outstanding natural character were those used in Northland²² after several reviews. These were 0.43 and above for *high* and 0.62 and above for *outstanding*. Areas (in hectares) were calculated for each unit. These were summed by environment type to show the relative proportion of each environment type that was assessed as being of high natural character and outstanding natural character.

Results and analysis

Coastal environment inland boundary

The recommended coastal environment boundary is available in a digital form format in Council's GIS system. Appendix 1 provides the tile grid while Appendix 2 provides the rationale for the position of the boundary line for each tile on the grid.

The codes in brackets in the text are those from the decision trees figures 1 (open coast) and 2 (sheltered coast). While the division into open (more exposed) and sheltered coasts worked well for Golden Bay, the West Coast and outer Tasman Bay, an intermediate category would have been useful for inner Tasman Bay. In the absence of such a category the inner most parts of Tasman Bay were treated as sheltered coast even though the fetch can be large in some circumstances.

Natural character

The boundaries and identifiers for the mapped units are available in a digital format in Council's GIS system. The mapped units generally include those mapped as part of a 2012 Envirolink study (Froude & Richmond 2012) although in some cases these units have been combined (e.g. Farewell Spit) to reflect the large area being mapped. Where appropriate the unit description and scoring has been updated – either to reflect additional information and/or changed boundaries. Most of the mapped units are new reflecting the much larger coverage.

²² For more information on the process refer to Froude, VA, 2012. Northland Regional Council Northland Mapping Project. Natural character methodology report. Pacific Eco-Logic Ltd, Bay of Islands. 29pp.

Appendix 3 contains the descriptive summary for each of the mapped units along with the environment type, natural character index and the natural character ranking (high, outstanding or not high). The data used to calculate the indices is in a separate Excel spreadsheet.

On the open coast away from the coast-line there are relatively few units. This reflects the lack of spatially based data for the marine environment. Areas where the marine ecosystem has been protected and allowed to recover are identified in separate units as are areas of intensive development (e.g. marine farms). Given the absence of spatially explicit information on the location of commercial dredging for shellfish, it has not been specifically possible to identify these areas in separate units at this stage.

Care is needed when interpreting natural character indices. Given the extensive human-mediated hydrological, geomorphic and ecological changes that have taken place in most New Zealand coastal environments, and the structure of the formula used to calculate natural character indices, few units can be expected to receive a NCI of more than 0.75. Indices greater than 0.75 in the coastal environment are most likely to occur in locations subject to high levels of natural disturbance (e.g. mobile dunes with native sand binders, coastal cliffs and river mouths) as this disturbance can regularly reset the present-potential cover and humans often avoid attempting development in such areas. Other areas where very high natural character indices are possible include remnant mature indigenous forest, relatively mature indigenous vegetation on islands, lakes without alien species, and marine reserves.

Where humans do undertake development in areas with high natural disturbance levels, the development is usually associated with high levels of modification intended to significantly reduce the risk/effects of natural disturbance. These profound changes typically remove most of the remaining natural character. An example of such profound change is the Hauraki Plains where the original forest has been removed; the rivers have been channelized and stop-banked to prevent flooding of the floodplain; and the land has been drained and is now mostly used for intensive dairying. Natural character scores for these parts of the Hauraki Plains are less than 0.04. A local example is the drained alluvial flats in the catchment of the Ruataniwha Inlet where most of the original forest has been removed and there is a pasture cover. Here natural character scores are less than 0.07, reflecting the slightly lower level of human impacts on natural character.

Some people may be surprised by what seems to be low natural character scores for some units. This is usually because they are unaware of the types and extent of human-mediated changes that have occurred. It could also be the result of some people interpreting natural character as primarily being an absence of buildings and structures (Fairweather & Swaffield 1999). In addition some people conflate wild with natural. These people are likely to consider that areas subject to more rugged conditions but with a modified cover to be more natural than the QINCCCE scoring would indicate. An example would be pastoral farmland on a wind-swept open coast. This is accentuated where the topography is more rugged. Conversely the QINCCCE methodology will score alluvial and estuarine wetlands with few or no weed species as more natural than do those who conflate wild and natural. Laypersons are not necessarily aware of the variety of components that make up natural character and many lack knowledge about what is natural in a particular environmental context. For example, most people do not necessarily know which organisms are native to an area.

There can be major differences in perception as to what is natural, particularly with some types of coastal environment (e.g. subtidal rocky reefs, former dune and wetland complexes). In heavily developed or exploited areas this can lead people to accept as “natural” quite high levels of anthropogenic modification. This may be appropriate in the context of protecting the best of what is left, but not so helpful for restoration. In this context the lower expectations of naturalness may be a result of the shifting baselines syndrome as described by Pauly (1995) for fisheries scientists. The ‘shifting baseline’ syndrome can be observed in many other environments and contexts.

An analysis of the area calculations by environment type shows clear differences between the environment types as the proportion that has been ranked as high natural character (HNC) or outstanding natural character (ONC). There is a relatively high proportion of marine environment with either the high or outstanding natural character rank with the sheltered waters category having a higher proportion of area within the ONC rank. Existing information limitations mean that only a relatively small proportion of the open coast out to the 12 nautical mile territorial sea boundary can be confidently be ranked as ONC at this time.

Terrestrial coastal environments have been more highly modified. Only a very small proportion of the District’s alluvial flats remain in relatively natural state and so there are very few such areas ranked as ONC or HNC. Little of the District’s dunelands could be ranked as ONC²³ although there are some relatively extensive areas ranked as HNC at Farewell Spit and on the West Coast. There are some moderately extensive areas of semi-natural coastal vegetation²⁴ dominated by alien species that have not been ranked as HNC or ONC. Tasman District has a relatively high proportion of coastal environment that is within a national park²⁵ and in almost all cases these areas are ranked as HNC or ONC²⁶.

There are some environment types which because of the high levels of human modification should be a priority for natural character restoration in Tasman’s coastal environment. This is discussed in the next section.

Natural character restoration priorities

Policy 14 of the New Zealand Coastal Policy Statement 2010 requires that restoration or rehabilitation of the natural character of the coastal environment be promoted by:

- Identifying areas and opportunities for restoration or rehabilitation
- Providing appropriate policies, rules and other methods in regional policy statements and plans
- Imposing or reviewing (where practical) restoration or rehabilitation conditions on resource consents and designations

²³ There are some notable exceptions such as the dune forest around the Kaihoka Lakes

²⁴ In southern Golden Bay and Tasman Bay

²⁵ Kahurangi or Abel Tasman

²⁶ Exceptions include the Totoranui campground and the immediate modified surrounds, the modified area at the Anchorage, and the macrocarpa stand and associated young vegetation near the old homestead and hut at Wharewharangi Beach

The assessment of coastal natural character made in this project has identified key restoration and rehabilitation priorities. These priorities are not linked with specific sites as it is recommended that landowners and administering agencies be actively involved in any process which might do this. The following restoration and rehabilitation priorities for the coast are divided into marine, freshwater and terrestrial environments. They address matters that could be directly influenced by Resource Management Act related processes as well as those that fall outside the influence of that Act.

Terrestrial restoration priorities

The loss of natural character has not been spread evenly across different terrestrial coastal environments. As is the case for most of New Zealand, Tasman's terrestrial coastal natural character (especially the ecological component) has been considerably modified in places. Much of the terrestrial coastal environment in Tasman Bay is highly modified – especially that associated with the Waimea, Motueka and Riwaka Plains. While the extent of alluvial plains in the Golden Bay coastal environment is more limited they have still been heavily modified.

However, Tasman District is fortunate in retaining a variety of terrestrial coastal areas that have a very high or outstanding level of natural character (e.g. small mature indigenous forest patches in Golden Bay, the dune forest around the Kaihoka Lakes, and more extensive areas of indigenous forest of higher quality in the parts of the coastal Whanganui Inlet catchment/Kahurangi National Park and Abel Tasman National Park). While only part of the terrestrial coastal vegetation has a structure and composition approaching that which existed prior to human impact, this is a larger proportion than is found in most other regions²⁷.

Most of the coastal alluvial flats and other low-lying coastal areas have been subject to considerable hydrological and/or geomorphological/landform change. Stop-banking of rivers, drainage of wetlands (using drains and flapgates) has led to considerable change in soil moisture levels (i.e. wet to dry). This, and the loss of the periodic flooding from the river, has led to other changes in soil properties. Those few floodplain forest remnants that remain in these areas can be vulnerable to weed invasion and stock grazing. It is recommended that the retention of the remaining forest remnants on coastal alluvial flats, and restoration activities to address the impacts of alien species be a priority in Tasman District.

The area of dunelands in Tasman is relatively limited. However, the extent of active dunelands has reduced by 78% since 1950's and now occupies only 650ha.²⁸ Much of the remaining vegetated dunes are dominated by alien species with marram grass replacing the native sand-binders (Spinifex and pingao) in most locations. There were few areas in Tasman District where native sand binders were found, with the main exceptions being an area of mobile dunes south of the Turimawivi River on the West Coast, some small areas of plantings associated with dune care projects and several

²⁷ Regions with more terrestrial coastal vegetation that has a structure and composition approaching that which existed prior to human impact include the West Coast and Southland.

²⁸ Hilton M, Macauley U, Henderson R (2000) found that in the 1950's (time of the first aerial photographs) there were about 3000ha of active dunelands in Tasman District, approximately 2.3% of the national total at that time.

small areas of very recent accretion (e.g. a small area at Collingwood). There were some areas of more mature indigenous shrubland and forest associated with dunes at Wharariki Beach, Kaihoka Lakes and the base of Farewell Spit. In Tasman Bay and to a lesser extent in Golden Bay pines have been planted on dunelands (e.g. Rabbit Island, Jacket Island); and other areas have been affected by residential development (e.g. Motueka) and /or road or residential barriers to landward migration (Golden Bay). Robertson and Stevens (2012) recorded 275ha of dunelands outside of Abel Tasman National Park and West Tasman, with virtually none of that being in a native cover. Overall the active dunes of Tasman District have been considerably reduced in extent and there are relatively few areas that are dominated by native rather than alien vegetation.

There are coastal hills with poor quality soils where the regeneration of woody vegetation following farming can be slow. In many cases the current regeneration is largely to indigenous vegetation. During the early stages weed invasion can be a major problem, with the cover and variety of weed species increasing significantly near areas that have long been settled by Europeans. There are also areas where alien tree species (often pines) have been planted and have spread into other areas of regenerating indigenous vegetation. Fire is a significant risk in some locations. As with much of New Zealand animal pests have a major impact on indigenous birds and other wild life. In Tasman District there are animal pest control programmes managed by public agencies applying to much of northern coastal Golden Bay and parts of the northern West Coast.

The first key restoration priority for terrestrial coastal environments is the effective management of plant and animal pest species. Particular priorities include:

- Eradicating key plant pest species where they are present at low levels, especially in sites that otherwise display a relatively high level of naturalness.
- Investigate more effective and economical methods for controlling widespread coastal pest plant species in terrestrial coastal environments (e.g. pampas, gorse in environments dominated by low stature vegetation, marram grass).
- Maintaining and enhancing the areas subject to animal pest control
- Consider the development of weed management plans for selected priority coastal locations. This is because effective long-term control often involves landowners working together to manage existing populations and reduce reinvasion and spread
- Expand the assistance available to landowners for (environmental) weed management and animal pest control in coastal natural areas

In some areas the fencing of forest remnants and other indigenous vegetation from stock browsing is the most important terrestrial restoration action. Finance for fencing can be a major impediment and so the continuation and expansion of various funding sources to assist landowners would be a priority. It is suggested that priority areas for fencing (from a natural character perspective) would be native forest remnants on alluvial plains; mature native forest patches elsewhere (where grazing is a threat); wetlands and indigenous vegetation on dunes.

Given the minimal area of coastal dunes with native sand binders and native shrubs (in contrast to being dominated by marram , other weed species or pines) it is recommended that a restoration priority be to increase the naturalness of dunes in the District. Council is already undertaking some restoration through its dune care programme. However the area involved to date has been small.

While the dunes of Farewell Spit beyond the Spit's base are largely free from human visitation, a history of fire and farming has led to modified vegetation patterns. It may be appropriate to develop a strategy with the other parties involved in dune management which identifies priority areas and actions. A particular challenge will be to increase the extent of native sand binders and reduce the dominance of marram. Work being done to remove marram from an extensive area of dunes in Mason Bay in Stewart Island²⁹ may provide useful guidance.

Marine restoration priorities

Estuaries and inlets

Robertson and Stevens (2012) identified a number of threats to Tasman District estuaries (Table 4) and made a series of recommendations (by way of targets for 2021) to address those threats (Table 5).

²⁹ Department of Conservation. Mason Bay dune restoration
<http://www.doc.govt.nz/Documents/about-doc/concessions-and-permits/conservation-revealed/mason-bay-dune-restoration-lowres.pdf>

Table 4: Risks to estuaries identified by Robertson & Stevens (2013)

Threat /risk	Explanation and comments
Increasing muddiness	<ul style="list-style-type: none"> This is due to the increased fine sediments resulting human activities in developed parts of catchments. They considered that 50% of the Tasman and Golden Bay estuaries were excessively muddy with more than 10% of the estuary filled with soft muds. Waimea was the most affected at 55% and Motupipi had 25% They stated that increases in sedimentation above low natural rates can profoundly alter the structure and functioning of estuarine and embayment ecosystems (including degrading shellfish habitat) “Excessive muddiness” is defined to be a standard measure (>10% estuary with soft muds) that is not specifically related to the characteristics of a particular catchment. This contrasts with the parameter “accelerated sedimentation (above the natural baseline for a particular estuary)”. The natural sedimentation baseline for a particular estuary depends primarily upon the relative size of the catchment and the parent materials (e.g. granite versus mudstone). In some estuaries muddiness might be relatively natural, in others it would be largely anthropogenic.
Eutrophication	<ul style="list-style-type: none"> Some estuaries receive moderate-high nutrient levels which are offset by relatively high rates of local flushing Nutrient enrichment problems (nuisance algal growths and low oxygen levels) have identified in the upper Motupipi and a number of small tidal outlets that become constricted or blocked Waimea has the most extensive macroalgae blooms Eutrophication leads to changes in plant and animal communities favouring rapidly reproducing opportunistic species that can adversely affect ecosystems
Disease risk	For humans from swimming and/or eating contaminated sea food- not really a natural character matter
Loss of sea grass	<ul style="list-style-type: none"> Change in sea grass extent reflects increasing fine sediment and/or increase in nutrients While large beds in estuaries and open coasts in Tasman and Golden Bay are stable, many smaller beds are declining
Loss of saltmarsh	<ul style="list-style-type: none"> Robertson and Stevens (2012) recorded a 30% loss since 1900 for the Tasman Bay and Golden Bay estuaries excluding those of Abel Tasman National Park. This included a 50% loss in the Moutere catchment and a 40% loss in the Ruataniwha catchment Sea level rise and excess sediment/flooding leads to saltmarsh losses and/or deterioration

Table 5: 2021 targets to address threats to estuaries from Robertson & Stevens (2013)

Threat /risk	Robertson and Stevens (2012) target for 2021
Increasing muddiness	<ul style="list-style-type: none"> • Decrease the mean sedimentation rate in estuaries with developed parts in the catchments to approximately 1mm/yr • Identify catchment sediment source “hot spots” and ensure best management practices are adopted in those locations
Eutrophication	<ul style="list-style-type: none"> • Decrease the mean area of nuisance algae by 10% to 110ha • Decrease nitrogen areal loads to tidal lagoon estuaries to less than 50mgN/m²/day • Requires decreases to Onekaka, Onehau and Motupipip • Identify catchment nutrient source “hot spots” and ensure best management practices are adopted in those locations
Disease risk	N/a for natural character
Loss of sea grass	<ul style="list-style-type: none"> • Increase the area of sea grass outside of Farewell Spit and Abel Tasman National Park and adjoining waters by 10%. This would increase the area to 100ha in estuaries and 1750ha on the coast overall (excluding the list areas) • Recommended expansion through habitat improvements and maybe planting • Reduce fine sediment to 1mm/yr • Define nutrient thresholds for sea grass
Loss of saltmarsh	<ul style="list-style-type: none"> • Increase the area of saltmarsh by 10%. The target was an increase from 1185ha to 1300ha excluding Abel Tasman National Park and Farewell Spit • Expand saltmarsh by planting and facilitating inland migration in response to sea level rise • Decrease levels of fine sediment

The recommended targets in Robertson and Stevens (2012) as set out above are generally appropriate methods that could contribute to the restoration of natural character in estuaries. As discussed in Table 4 excessive muddiness using a fixed level of muds in an estuary would need modification to recognise that some estuaries are naturally muddier than others. Other relevant restoration actions include:

- Managing the catchment and especially riparian margins in a way that reduces the amount of sediment, contaminants and nutrients reaching estuarine and other near shore waters to more closely match the natural state. This recognises that different estuaries naturally have different nutrient regimes dependent on the nature of the catchment (geology, wetlands, catchment size etc)
- Providing opportunities for upper estuarine ecological communities (e.g. saltmarsh) to migrate inland as a response to sea level rise and other environment changes. Upper estuaries have shallow gradients and very small increases in sea level can lead to noticeable changes in these areas. Where the estuarine margins have been drained and/or stopbanked there is little opportunity for these ecological communities to move inland.

- Allow the full re-flooding of partly drained coastal wetlands. In a number of areas drainage attempts have led to areas that are not able to be profitably used for agriculture but are at the same time are vulnerable to weed invasion

One threat in Tasman that affects both estuaries and the open coast is shoreline armouring. Robertson and Stevens (2012) found that armouring affected 65km (28%) of Tasman Bay, 21km (12%) of Golden Bay, and 4km (2%) of West Tasman. The armouring included seawalls, causeways, stopbanks and reclamations. Robertson and Stevens (2012) recommended that there be no further armouring and that soft shore defences be used where possible. This is supported. The removal of armouring in some strategic locations as a managed retreat may allow saltmarsh to move inland as sea level rises.

Open coast

A noticeable feature of the open coast out to the 12 nautical mile limit is the low proportion of the area where a ranking of outstanding could be confidently assigned. This is primarily because only a few areas of open coast in Tasman District are closed to potentially damaging fishing activities and/or are effectively protected from high levels of harvest of key species of marine biota. Key species are those where changes in their abundance and mean size can lead to a cascade of effects throughout the marine ecosystem. For example the removal of large snapper and rock lobster has been shown to have a major impact on the naturalness of near-shore rocky reef ecosystems in north-east New Zealand. Where snapper and rock lobster populations are able to recover over time following the establishment of a no-take marine reserve, their predation of sea urchins can lead to a dramatic recovery in shallow benthic communities from ones dominated by kina to ones dominated by macro-algae (Shears & Babcock 2003).

In locations close to population centres recreational fishing can significantly affect marine ecosystems even where commercial fishing is not allowed. For example, at Mimiwhangata (north-east New Zealand) the marine park status with no-commercial-fishing has not led to the recovery of a more natural marine ecosystem compared to that found in nearby areas without such restrictions (Shears et al. 2006). In areas that are more remote and difficult to access by recreational fishers, such status would be likely to lead to improved recovery towards a more natural state.

The primary restoration priority for the Tasman District open coast is to restrict the extent of locations where fishing practices can damage benthic habitats and ecological communities. This is particularly important for those benthic communities and habitats that are most vulnerable to physical trauma and for which the recovery period is extremely lengthy, if at all. An area to the north of Separation Point is an example of an area where some of the key damaging activities have been prohibited to protect sensitive bryozoan communities.

Another restoration priority for the marine open coast is to set aside more of the Tasman Coast as either “no-take areas” or locations where only a few species (e.g. Kina) can be harvested using restricted methods. At present the only area on the open coast that has such a fully protected status on a long-term basis is the Marine Reserve around Tonga Island. The no-take protection

provided by the Nature Reserve status at Farewell Spit does not generally extend beyond the intertidal into the subtidal.

In summary the restoration priorities for the open coast are to:

- Restrict the extent of locations where fishing practices can damage those areas of seabed with highly vulnerable benthic habitats and ecological communities
- Establish additional areas of Tasman Coast as either “no-take areas” or locations where only a few species (e.g. Kina) can be harvested using restricted methods

Freshwater priorities

Coastal lakes and lagoons

There are relatively few coastal lakes in Tasman District. These lakes are relatively small. Key threats to coastal lakes are nutrient enrichment, grazing of margins, weed species and pest fish.

Restoration priorities would be:

- Containment or preferably removal of pest fish species in lakes where infestation is recent and/or there is risk of spread to other lakes that are free from those species
- Containment of pest plant species and removal in locations where there is risk of spread to lakes of particularly high levels of natural character (i.e. only native plants (or at least no significant pest plants) & only native fish species)
- Fencing off a buffer zone around lakes that are vulnerable to grazing to allow natural emergent vegetation and lake shallow-zone herbfield to regenerate
- Managing catchment land use practices to reduce levels of nutrients reaching the lake to more closely match the natural state. This recognises that lakes naturally have different nutrient regimes.

Rivers

Restoration priorities for the estuarine components of rivers have been addressed under marine environments. For the coastal stretches of rivers that have not been extensively modified by stop-banking and channelization the key threats to natural character include: invasive species; increased sediment and nutrients from catchment land use activities (especially riparian and seep areas).

Restoration priorities would be:

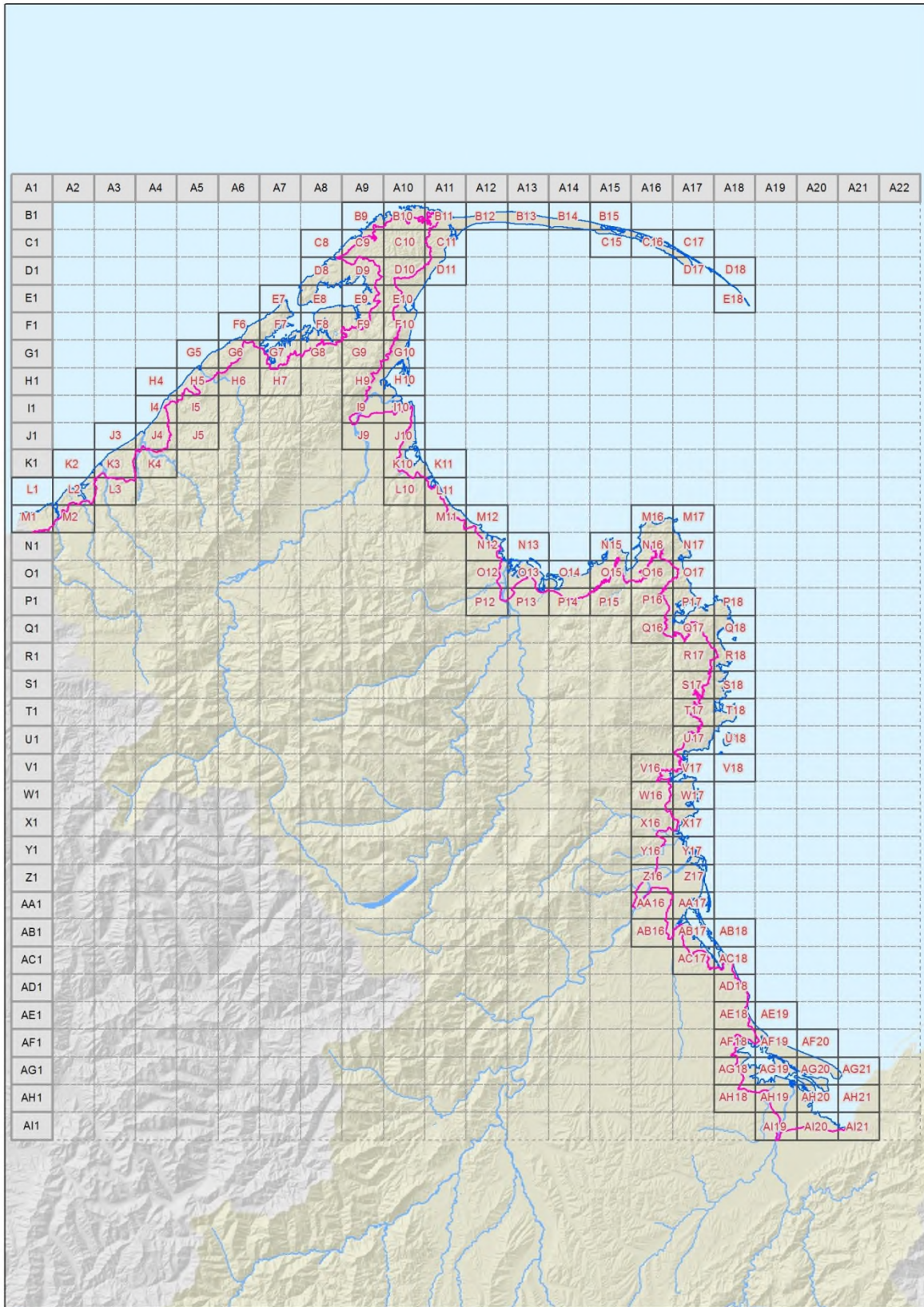
- Managing catchment land use practices to reduce levels of sediment and nutrients reaching the river to more closely match the natural state. This recognises that rivers naturally have different sediment and nutrient regimes
- Fencing riparian margins in areas where there is stock grazing. Priority areas would be those where indigenous vegetation, especially wetlands and seeps, already directly provide natural character benefits and where it helps to reduce nutrient inputs to the river
- Planting (fencing and maintaining) indigenous riparian vegetation in those locations that contribute proportionally larger amounts of sediment and nutrients to the river

Priority rivers for action would be those that still have high levels of natural character and those that flow directly into estuaries and harbours that have outstanding or very high levels of natural character.

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Appendix 1: Map grid used for describing the reasons for the inland boundary of the coastal environment



Coastal Environment - Overview Map Index — MHWS — Coastal Environment Boundary 0 5,000 10,000 m

Appendix 2: Tasman coastal environment boundary – reasons for proposed position of the inland boundary line

Map sheet	Locality details	Reasons
B9	Nguroa Bay	<ul style="list-style-type: none"> The line follows [OB] Crest of predominant ridge with average height >20m, <300m and average within 2km mean high water springs The line link to [OE] Areas formed by recent coastal processes (e.g. dunes including swales, dune lakes and associated coastal wetlands) in the NE On this tile the line is part of the link to [OH] Alluvial flats subject to 100+ year coastal hazards (including tsunami) in SW
B10	Wharariki	<ul style="list-style-type: none"> The line links to [OE] Areas formed by recent coastal processes (e.g. dunes including swales, dune lakes and associated coastal wetlands) in W Otherwise the line follows the inland edge of [OE] Areas formed by recent coastal processes –e.g. dune system including swales, dune lakes and associated coastal wetlands
B11	Puponga	<ul style="list-style-type: none"> In the west the line follows the inland edge of [OE] Areas formed by recent coastal processes –i.e. coastal wetlands It then links to a prominent ridge (short distance) For a short distance it then follows [OB] Crest of predominant ridge with average height >20m, <300m and average within 2km mean high water springs For the remainder of the area on this tile the coastal environment line provides the inland boundary for the “peninsula” that includes Farewell Spit and the adjoining low hills and Puponga Estuary. The area seaward of this line meets the OC criteria for a: Peninsula as most of the area meets one of the OA, OB or OE criteria
B12	Farewell Spit	All of tile is within the coastal environment (OE)
B13	Farewell Spit	All of tile is within the coastal environment (OE)
B14	Farewell Spit	All of tile is within the coastal environment (OE)
B15	Farewell Spit	All of tile is within the coastal environment (OE)
B16	Farewell Spit	All of tile is within the coastal environment (OE)
C8	Mount Lunar	<ul style="list-style-type: none"> The line follows [OB] Crest of predominant ridge with average height >20m, <300m and average within 2km mean high water springs

Map sheet	Locality details	Reasons
C9	Mount Lunar	<ul style="list-style-type: none"> • The line follows [OB] Crest of predominant ridge with average height >20m, <300m and average within 2km mean high water springs in west • The line then links to and follows the inland boundary of [OH] Alluvial flats subject to 100+ year coastal hazards (including tsunami)
C10	Green Hills Stream	Virtually all of this tile is excluded from the coastal environment
C11	Puponga	<ul style="list-style-type: none"> • In the north of this tile the coastal environment line provides the inland boundary for the “peninsula” that includes Farewell Spit and the adjoining low hills and Puponga Estuary [criterion OC] • For most of this tile the coastal environment line follows [criterion OB] the crest of predominant ridge with average height >20m, <300m and average within 2km mean high water springs. In some places the line is further inland because that was where a ridge approximately parallel to the coast lies • In the southern-most section of the tile the coastal environment line extends down a spur to cross Taupata Stream (before following a spur up to and along another ridge running parallel with the coast – on tile D11)
C15	Farewell Spit	<ul style="list-style-type: none"> • All of tile is within the coastal environment (OE)
C16	Farewell Spit	<ul style="list-style-type: none"> • All of tile is within the coastal environment (OE)
C17	Farewell Spit	<ul style="list-style-type: none"> • All of tile is within the coastal environment (OE)
D7	Kaihoka	<ul style="list-style-type: none"> • All of tile is within the coastal environment (most is in coastal marine area)
D8	Kaihoka Lakes	<ul style="list-style-type: none"> • At the top of the tile the coastal environment line follows the southern- most part of the [OB] predominant ridge used in tile C8. It then follows a link from near the end of this ridge to the valley floor. • The line then follows the inland boundary around the partly drained wetland [OG]. • To the south of this line on this tile is the coastal environment (most of the tile). This line provides the inland boundary for the Kaihoka Lakes peninsula [OC] which is all in the coastal environment
D9	Northern Whanganui Inlet Inlet	<ul style="list-style-type: none"> • From tile C8 the coastal environment line follows the inland boundary of the alluvial flats before heading up along a ridge/spur heading north [OG]. For this section the coastal environment forms the inland boundary for the Kaihoka Lakes peninsula (SC) • At the northern tip of this spur the line heads east following a ridge before dropping down to the Ngaroa Rd [SB and SC]. • After crossing this road the line follows a spur that connects with prominent ridges and spurs to form the inland coastal environment boundary around northern side of Westhaven Inlet [SB].

Map sheet	Locality details	Reasons
D10	Billy King Creek	<ul style="list-style-type: none"> The line enters the tile in the NE following the crest of predominant ridge with average height >20m, <200m and average within 1-2km mean high water springs (SB/OB) To avoid heading too far inland when the ridge direction changes the coastal environment line then follows a spur to cross Billy King Creek and head up another spur to follow a ridge between Billy King Creek and Ontaue Creek and around the head of Ontaue Creek and along the ridge on the south (true right) side of Flowers Creek (SB/OB)
D11	Te Rae (Pakawau north)	The coastal environment line follows the crest of predominant ridge with average height >20m, <200m and average within 1-2km mean high water springs (SB/OB). This links to the line in the NE of tile D10.
D17	Farewell Spit	All of tile is within the coastal environment
D18	Farewell Spit	All of tile is within the coastal environment
E7	Whanganui Inlet entrance	All of tile is within the coastal environment
E8	Northern Whanganui Inlet	All of tile is within the coastal environment
E9	Northern Whanganui Inlet	<ul style="list-style-type: none"> North of the Pakawau Bush Road the coastal environment boundary partly follows a predominant ridge with an average height >20m, <200m and average within 1-2km mean high water springs (SB). As the ridges run in different directions it is not possible to follow them continuously and so the coastal environment also contains links along spurs and across valleys. South of Pakawau Bush Road the coastal environment largely follows a predominant ridge with an average height >20m, <200m and average within 1-2km mean high water springs (SB)
E10	Pakawau	<ul style="list-style-type: none"> North of the Pakawau Bush Road the coastal environment boundary follows a predominant ridge with an average height >20m, <200m and average within 2km mean high water springs (OB) before following a spur down to Pakawau Bush Road South of Pakawau Bush Road the coastal environment largely follows a predominant ridge with an average height >20m, <200m and average within 2km mean high water springs (OB)
E11	Pakawau	All of tile is within the coastal environment (most is in coastal marine area)
E18	Farewell Spit	All of tile is within the coastal environment
F6	Te Hapu	All of tile is within the coastal environment
F7	Te Hapu	All of tile is within the coastal environment

Map sheet	Locality details	Reasons
F8	Whanganui Inlet	<ul style="list-style-type: none"> • Virtually all of tile is within the coastal environment. • In the vicinity of the Wairoa River the coastal environment line primarily follows the 200m contour around part of Whanganui Inlet as the predominant ridges are often higher than this. As many of the spurs at this elevation trend at oblique angles to the coastline there are also linking sections where the coastal environment line follows down minor spurs to cross rivers and streams
F9	Whanganui Inlet	<ul style="list-style-type: none"> • The coastal environment line primarily follows the 200m contour around Whanganui Inlet as the predominant ridges are often higher than this. • As many of the spurs at this elevation trend at oblique angles to the coastline there are also linking sections where the coastal environment line follows down minor spurs to cross rivers and streams
F10	Pakawau	<ul style="list-style-type: none"> • From tile E10 the coastal environment line continues along a ridge (OB). • As the ridge begins to climb above 300m the line crosses to follow the 300m contour (OD) into tile G10
G5	Paturau River	All of tile is within the coastal environment
G6	Mangarakau	<ul style="list-style-type: none"> • The coastal environment line follows the low ridge between Mangarakau wetland (which is not naturally part of the Whanganui watershed) and the Whanganui Inlet (SB), up to the main ridge crest between Mangarakau and the open coast (OB). • The coastal environment line then follows along this ridge crest with limestone outcrops and below 300m elevation (onto tile H6) continues until the edge of the escarpment (OB)
G7	Whanganui Inlet catchment	<ul style="list-style-type: none"> • The coastal environment line primarily follows the 200m contour around Whanganui Inlet (SD) as the predominant ridges are often higher than this. • As many of the spurs at this elevation trend at oblique angles to the coastline there are also linking sections where the coastal environment line follows down minor spurs to cross rivers and streams
G8	Whanganui Inlet catchment	<ul style="list-style-type: none"> • The coastal environment line primarily follows the 200m contour around Whanganui Inlet (SD) as the predominant ridges are often higher than this (SD). • As many of the spurs at this elevation trend at oblique angles to the coastline there are also linking sections where the coastal environment line follows down minor spurs to cross rivers and streams • From about 1 km east of Island Creek the coastal environment line crosses several creeks and streams, following spurs and prominent ridges for short distances (SB & links). • From about 1 km west of Coal Creek the coastal environment largely follows the main ridge between the Maungarakau and Whanganui Inlet catchments (SB). • It then crosses Dry Road and follows a low ridge between the catchment heads averaging about 20 m in elevation

Map sheet	Locality details	Reasons
		(SB). <ul style="list-style-type: none"> • It being crosses Te Hapu Road and follows up a spur
G9	Ruataniwha	The coastal environment line follows the 200 m contour above Ruataniwha Inlet (SD)
G10	Ruataniwha	<ul style="list-style-type: none"> • The coastal environment line follows the 300 m contour (OD), before dropping down a spur into Plumbago Creek • It then heads up another spur to follow the 200 m contour (SD) around Ruataniwha Inlet
H4	Patarau south	All of tile is within the coastal environment
H5	Patarau south	<ul style="list-style-type: none"> • The coastal environment line continues from tile H6 down a couple of spurs (OB) to the edge of the escarpment. • It then links across the Patarau Valley and then proceeds up the steep southern slopes of the valley to the main ridge which runs parallel with the coast and separates the small coastal stream catchments from the inland river basins (OB). This ridge starts at 220m elevation. • The coastal environment line then follows a spur running NW to a ridge running parallel with the open coast close to Cowin Road. • It then links across a narrow constriction of the valley floor (which obscures the stream valleys inland) then runs up a prominent spur to join the main ridge again at 240m elevation (OB). • It then drops down a prominent spur towards the coast meeting another low ridge running south parallel to Cowin Road (OB). It continues on this ridge between 120m and 140m to tile I5. (OB)
H6	Mangarakau	The coastal environment line continues from tile G6 along the prominent ridge crest between Mangarakau basin and the open ocean (OB)
H7	Whanganui Inlet catchment	The coastal environment on this tile is an extension of that on tile G7, and follows a series of ridges peaking at 140m (SB) that are separated by stream crossings
H9	Ruataniwha catchment	The coastal environment line follows the 200 m contour around Ruataniwha Inlet (SD)
H10	Ruataniwha catchment & Inlet	All of this tile is within the coastal environment
H11	Ruataniwha	All of this tile is within the coastal environment
I4	Kowhai Creek catchment	<ul style="list-style-type: none"> • The coastal environment line continues from tile I4 along the lower prominent ridge (OB) to a spur running down to Sandhills Creek where a narrow constriction in the valley obscures the catchment of Lake Otuihe and Sandhills Creek. • It links across the valley floor at that point then climbs up to a ridge running south at 60m to 90m elevation (OB) which separates the Sandhills Creek catchment from the smaller coastal stream catchments, the into tile J4.

Map sheet	Locality details	Reasons
I5	Kowhai Creek catchment	The coastal environment line continues from tile H5 along the lower prominent ridge (OB) to a spur which extends into tile I5.
I9	Ruataniwha catchment	The coastal environment line drops down a spur from the 200 m contour on Tile H9 to the Aorere River margin where it largely follows the 10 m contour or the base of the escarpment (SG).
I10	Collingwood	<ul style="list-style-type: none"> • The coastal environment line continues along the 10 m contour or the base of the escarpment on the floodplain (SG) to SH60 on the outskirts of Collingwood. • It then follows the top of an escarpment (SA) on the south bank of Aorere River. • it then follows around a small valley head to meet the low coast ridge (OB) that runs south from Collingwood varying in elevation from 60-90 m.
J3	Anatori south	All of tile is within the coastal environment
J4	Anatori catchment	<ul style="list-style-type: none"> • The coastal environment line continues from the low ridge on tile I4 up to join the main coastal ridge at elevation 260m (OB). • This continues south then turns west to run down towards a prominent spur on tile K4 along the top of the escarpment on the northern margin of the Anatori River (OB). • The line re-enters tile J4 then drops down to link across the valley floor, following the 20m contour (OH) around the floodplain of the Anatori and its tributary Webb Stream, onto tile K4.
J5	Anatori catchment	Tile is not within the revised coastal environment boundary
J9	Aorere catchment	A small extension from tile I9 follows the 10 m contour on the alluvial flats (SG)
J10	Milnthorpe	<ul style="list-style-type: none"> • From tile I10 the coastal environment line follows the low coast ridge/change of contour (primarily the boundary between the native vegetation on the slopes and the more gentle topography of the upland pasture) (OB) • At the end of the ridge the coastal environment line drops down through a saddle where it crosses state highway 60. It then climbs another spur to a coastal ridge cresting at 160 m elevation (OB).
K2	Turimawivi south	All of tile is within the coastal environment
K3	Turimawivi	<ul style="list-style-type: none"> • The coastal environment line continues south from tile J4 along the ridge west of the Anatori River into tile L3 (OB). • It then reappears in the west of the tile on the flats associated with the Turimawivi River, where it follows the edge of the floodplain (OG) before rising up a spur to coastal ridge running south west (OB) onto tile L3
K4	Anatori catchment	<ul style="list-style-type: none"> • The coastal environment line extends from tile J4 along the top of the escarpment on the northern margin of the Anatori River (OA), re-entering tile J4 for a short distance. • It then links across the valley floor, following the 20m contour (OG) around the floodplain of the Anatori and its

Map sheet	Locality details	Reasons
		tributary Webb Stream, before climbing up the western escarpment edge (OB) which runs into tile K3.
K10	Parapara catchment	<ul style="list-style-type: none"> • From tile J10 the coastal environment line follows a ridge up to 180 m (SB). • It then follows a spur to cross the Parapara River, and then follows an escarpment to the south west of a small lake (SB) • The line then drops down a spur to follow the 10 m contour at the head of the floodplain (SG) • It then crosses the Parapara Valley Road and climbs a spur to a ridge crest at approximately 140 m and then drops down another spur to cross and follow state highway 60 as a linking section. This was done because the first ridge was thought to be a long way inland
K11	Parapara south	All of tile is within the coastal environment
L1	Big River Estuary	All of tile is within the coastal environment
L2	Anaweka	<ul style="list-style-type: none"> • The coastal environment line continues following a series of ridges and spurs up to 200 m elevation in the eastern catchment of the Anaweka. • And then drops down a spur to cross the Anaweka River upstream of the saltmarsh (OG). • The coastal environment line then climbs another spur to a ridge running to the south (OB) before dropping down a spur to the Raukawa Stream. • It then climbs up another spur to a ridge running into tile M2 (OB)
L3	Turimawivi south	<ul style="list-style-type: none"> • The coastal environment line continues along a ridge (OB) heading south of tile K3, and then turns to run westward along a ridge (OB) then down a spur to the Turimawivi Valley. • It follows the floodplain contour into tile K# (OG). • It then reappears south of tile K3 running up a ridge closer to the shore line (OB). • It then follows a series of ridges parallel to the coast running south around the Anaweka catchment.
L10	Mount Rinopai	All of the previously marked coastal environment has been removed from this tile
L11	Onekaha	<ul style="list-style-type: none"> • From tile K10 the coastal environment line follows the road (SH60) to the 10 m contour around Otere River Estuary (OG/SG). • The line then heads up a spur to a coastal ridge that run south at an elevation of approximately 50 m (OB).
M1	Kahurangi Point	The coastal environment line continues south west along the 300 m contour (OD) to the Tasman District Council boundary line which it follows to the coast at Kahurangi Point lighthouse
M2	Big River	<ul style="list-style-type: none"> • The coastal environment line runs south, then west along a ridge (OB). • It then drops down a valley face to the head of the Big River Estuary. It then climbs up a spur to the 300 m contour on tile M1.

Map sheet	Locality details	Reasons
M11	Paton's Rock north	<ul style="list-style-type: none"> The coastal environment line continues from the coastal ridge on tile L11 (OB) dropping down a spur to 20 m elevation and then linking across an alluvial plain associated with the Pariwhakaoho River. The line then climbs a spur and follows a long ridge up to 60 m elevation west of Paton's Rock settlement (OB). When the ridge ends the coastal environment line drops down a spur.
M12	Paton's Rock	The coastal environment line drops down a spur from tile M11, crosses an unnamed stream flowing to the coast at the south end of Paton's Rock settlement.
M15	North of Abel Tasman Point	All of tile is within the coastal environment (and the coastal marine area)
M16	Wharewharangi	All of tile is within the coastal environment
M17	Separation Point	All of tile is within the coastal environment, includes the Separation Point peninsula (OC)
N12	Rangihaeata	<ul style="list-style-type: none"> The coastal environment line traverses the alluvial plain along the approximate 10 m contour (SG) to cross the Purimahaia River and then traverse inland of the saltmarsh at the head of the Onahau Estuary. It then heads east across the alluvial flats (SG) to the Rangihaeata Beach where it heads up to a low coastal ridge at approximately 30 m elevation (OB/SB). And then climbs another coastal spur to the South onto tile O12.
N13	Takaka River Mouth	All of tile is within the coastal environment
N15	Abel Tasman Peninsula-Tata Beach	The coastal environment line continues on the 300 m contour from tile O15 (OD) before dropping to the 200 m contour around part of the Wainui inlet (SD)
N16	Wainui Inlet eastern catchment	<ul style="list-style-type: none"> The coastal environment line follows the 200 m contour heading north and east (SD). It then heads up a spur to 300 m contour where it heads east, then south along the 300 m contour (OD). It then runs east along a fire break along a ridge with crests of 300 m, decreasing to 260 m (OB).
N17	Anapai Bay	All of the tile is within the coastal environment
O12	Takaka catchment	<ul style="list-style-type: none"> The coastal environment line continues south on a ridge west of the Takaka Estuary (SB). It crosses SH60 at a saddle and then runs up a spur to a ridge west of the Takaka River Bridge. It then drops South down a spur to the edge of the floodplain and follows the alluvial flats at a contour of approximately 10 m (SG).
O13	Takaka catchment	The coastal environment line continues north-east from tile P13 across the alluvial flats on the approximate 10m contour to Tangamere Rd and then heads south-east to link to the Motupipi floodplain (all SG)

Map sheet	Locality details	Reasons
O14	Pohara	All of tile is within the coastal environment
O15	Tarakohe-Wainui	The coastal environment line continues north-east following the 300 m contour (OD) before travelling north along a coastal ridge between 240-280 m elevation (OB) it then heads east towards the 200 m contour and travel south along that contour around the head of Wainui Inlet (SD) it then head south east down a spur to meet the top of the alluvial floodplain and largely follows the 10 m contour around the edge of the alluvial flats (SG).
O16	Wainui Inlet catchment	<ul style="list-style-type: none"> • The coastal environment line heads east from the Abel Tasman Road up a spur to the 200 m contour and continues east along this contour (SD). • It then crosses the Totoranui Road and Totoranui Stream at about the 200 m contour and continues east along this contour (SD). • It then heads north to tile N16 (SD). • On the eastern side of tile O16 the coastal environment line from tile N16 drops down a spur across the corner of tile O16 and heads into tile O17 (SB). • In the South corner of the tile the coastal environment line crosses and from Tile O17 and climbs up a ridge to the Awaroa Saddle and crosses the road and the ridge at the Saddle into the Awaroa catchment following the 200 m contour (SD) at the back of the catchment before entering tile P16.
O17	Totoranui	The coastal environment line head south east down the spur from tile O16 to the valley floor where it crosses the Totoranui Campground Road, then heads east up another spur to an ascending coastal ridge that run south and then west (OB) and then crosses to tile O16 again
P12	Takaka catchment	<ul style="list-style-type: none"> • The coastal environment line run south following an escarpment on the edge of the Takaka River (SA). • It then crosses the river at the uppermost tidal extent (SG).
P13	Takaka catchment	After crossing the Takaka River the coastal environment line runs north-east across the alluvial plain near low escarpments (SG) and crosses state highway 60. In the east of the tile the coastal environment line enters back from tile O13 and traverses the Motupipi alluvial plains (SG) into tile P14
P14	Clifton	The coastal environment line travels east across the floodplain of the eastern Motupipi Arm (SG). It then rises up a spur to the south of "The Grove" and continues east along a coastal ridge (OB) until it reaches the 200 m contour. It follows that contour for a short distance (SD) before dropping into a saddle to cross Bird Road before following another spur to the 300 m contour (OD). It follows this contour north-east into tile P15
P15	Pohara	The coastal environment line continues north-east following the 300 m contour into tile O15 (OD)
P16	Awaroa	<ul style="list-style-type: none"> • From tile O16 the coastal environment line follows the 200 m contour around the Awaroa catchment (SD).

Map sheet	Locality details	Reasons
	catchment	<ul style="list-style-type: none"> It then heads down a prominent spur, dropping to cross the Awapoto River on the flats, and then heads up another spur heading south onto tile Q16.
P17	Awaroa Estuary	All of the tile is within the coastal environment
P18	Awaroa Head	All of the tile is within the coastal environment
Q16	Awaroa Catchment	<ul style="list-style-type: none"> From tile P16 the coastal environment line meets the 200 m contour and continues south along this contour (SD) until it drops down a spur to cross the Awaroa River in a saddle. It then runs east up another spur to the 200 m contour where it crosses into tile Q17 (SD)
Q17	Awaroa Catchment	<ul style="list-style-type: none"> The coastal environment line runs and south along the 200 m contour (SD). It then heads north and west down a spur to 40 m where it crosses an unnamed stream valley, then heads north up another spur running north and east to the 200 m contour (SD). It then runs east and south along a ridge on the open coast which peaks at about 380 m until it reaches tile R17 (OB) (so treating Awaroa Head as a peninsula- OC)
Q18	Onetahuti Beach	All of tile is within the coastal environment
R17	Bark Bay	<ul style="list-style-type: none"> From tile Q17 the coastal environment line follows a ridge south and east (OB), dropping down a spur to a lower elevation ridge at 260m, continuing onto tile R18 (OB). There is a second section in the south-east where the coastal environment line follows a spur into an unnamed stream and then up another spur heading south. It then runs south along a ridge at the top of Bark Bay catchment (SB). It then heads up a spur to the 300 m contour and into tile S17 (OB).
R18	Bark Bay	<ul style="list-style-type: none"> The coastal environment line on the coastal bridge continues south (OB) and then south-east down a spur to an unnamed stream valley at about 100 m elevation. It then heads up a spur onto the other side back into tile R17.
S17	Torrent Bay	<ul style="list-style-type: none"> The coastal environment line initially follows the 300 m contour (OD). It then drops down a spur to cross Falls River and then up another spur to Bare Knob at approximately 300 m elevation. It then descends another spur to Tregida Creek before ascending yet another spur to the 300 m contour. The line then follows along the 300 m contour (OD) along a tributary of the Torrent River onto tile T17
S18	Sandfly Bay	All of the tile is within the coastal environment
T17	Torrent River	The coastal environment line follows the 300 m contour heading south (SD/ OD), then up the main Torrent River Valley, and then south-east to tile U17
T18	The Anchorage	All of the tile is within the coastal environment

Map sheet	Locality details	Reasons
U17	Nort of Marehau	<ul style="list-style-type: none"> The coastal environment is still following the 300 m contour (OD). It then heads down a spur into the Marehau Valley where it follows the approximate 10 m contour around the head of the alluvial plain (SG) and crosses into tile V17
U18	Adele Island	All of the tile is within the coastal environment
V16	Otuwhero	<ul style="list-style-type: none"> The coastal environment line drops down a spur into the head of the Otuwhero saltmarsh and follows around the northern alluvial floodplain (SG) at approximately a 10 m contour. It then runs up a spur to a coastal ridge at about 80 m elevation, before dropping down another spur to the south lobe of the Otuwhero floodplain which it follows around at approximately the 10 m contour (SG). The line being crosses the Sandy Bay Road and runs south up a spur towards Tile W16.
V17	Marehau	The coastal environment line follows the 10 m contour around the coastal terrace to the south of Marehau (SG). The line heads south up a spur, then west along a coastal ridge (SB), then onto tile V16.
V18	Fisherman Island	All of the tile is within the coastal environment, with most in the coastal marine area
W16	Kaiteriteri	<ul style="list-style-type: none"> The coastal environment line runs south from tile V16 and up a spur on to and along a coastal ridge that rises to approximately 260 m and then onto tile X16 (OB). The coastal environment line then goes west up the Riwaka Valley, then south to the state highway, before crossing onto tile Y16 (SG)
W17	Kaiteriteri	All of the tile is within the coastal environment
X16	Riwaka North	The coastal environment line continues south and east along a coastal ridge from tile W16 (OB) before heading onto tile X17.
X17	Riwaka	<ul style="list-style-type: none"> From tile X16 the coastal environment line extends south and east down a spur to link with a lower elevation coastal ridge that runs due Ssuth parallel with the shore (SB), before dropping down a spur onto the Riwaka floodplain. The line then follows west along the floodplain into tile X16 (SG)
Y16	Riwaka	From tile X16 the coastal environment follows the 10 m contour of the floodplain heading east, then south west (SG)
Y17	Motueka River	All of the tile is within the coastal environment
Z16	Motueka	From tile Y16 the coastal environment line follows the 10 m contour around the true left bank of the Motueka River (SG) and then into tile AA16
Z17	Motueka	All of the tile is within the coastal environment
AA16	Motueka	<ul style="list-style-type: none"> From tile Z16 the coastal environment line follows the true left bank of the Motueka River, including a low area fringed by stopbanks (SG), before crossing the Motueka River close to a gravel extraction site. It then follows down the true left bank of the river close to the base of an escarpment (SA) and then south across

Map sheet	Locality details	Reasons
		the alluvial plain on approximately the 10 m contour (SG) into tile AB16
AA17	Motueka	All of the tile is within the coastal environment
AB16	Lower Moutere	<ul style="list-style-type: none"> • The coastal environment line continues south from tile AA16 along the 10 m contour (SG) until it reaches a tributary of the Moutere River. • It follows the true left bank of that tributary and then runs east to connect with the 10 m contour and then north up the true right bank of a Moutere tributary into tile AB17 (SG)
AB17	Moutere	<ul style="list-style-type: none"> • From tile AB16 the coastal environment line runs north and east along the true right bank of the Moutere River, its tributaries and estuary following the 10 m contour where it is officially mapped (SG). • It then turned south, heads up a spur onto and then along a low coastal ridge (SB) into tile AC17
AB18	Kina Peninsula	All of the tile is within the coastal environment
AC17	Moutere	<ul style="list-style-type: none"> • From tile AB17 the coastal environment line heads south along the crest of a low coastal ridge (SB) until it reaches a cleared pine plantation where it turns north and east to run down a spur onto the alluvial plain. • It then follows the 10 m contour around part of the Moutere Inlet (SG). • It then heads up another spur and then down again onto the alluvial plain. • There it follows the 10 m contour towards the southern lobe of the Moutere Inlet (SG)
AC18	Kina	<ul style="list-style-type: none"> • The coastal environment line travels east from tile AC17 onto tile AC18 along the 10 m contour (SG). • It crosses state highway 60 and then follows south around a southern lobe of the Moutere Inlet on the approximate 10 m contour. • The line then crosses the neck of the Kina Peninsula (SC) and runs South along a low coastal ridge (OB) with elements of escarpment, up to the golf course where the line crosses into tile AD18.
AD18	Moutere Bluff	<ul style="list-style-type: none"> • The coastal environment line continues south up a ridge to a peak of 65 m (OB). It then drops down a spur to a saddle at approximately 40 m and then continues along a ridge at approximately 20 m elevation (OB) before rising up another spur to the 60 m elevation of the Moutere Bluff escarpment (OA). • It then runs south-west along the top of this escarpment (OA) onto tile AE18.
AE18	Ruby Bay	<ul style="list-style-type: none"> • The coastal environment continues along the top of this escarpment on the seaward side of the coastal highway until the 20 m contour is reached. • The line then crosses the highway and rises up to the top of the Ruby Bay escarpment (OA) which then peters out (OA). • The line then runs south-east up a spur to and along a coastal ridge (OB) through a new subdivision, before dropping down a spur to the 20 m contour.

Map sheet	Locality details	Reasons
		<ul style="list-style-type: none"> The line then follows the approximate 10 m contour over an alluvial plain (SG). It then continues south up another spur on to a coastal ridge (SB) surrounding another new subdivision, before dropping down another spur to cross the coastal highway at tile AF18
AE19	Ruby Bay	All of the tile is within the coastal environment
AF18	Mapua	<ul style="list-style-type: none"> From tile AE18 the coastal environment line runs south-east across an industrialised part of the alluvial plain (SG) onto tile AF19. It then comes back onto tile AF18 to run west up a spur onto a coastal ridge on the north side of Waimea Inlet (SB). The coastal environment line follows this ridge as it heads towards the north-west of the inlet, before dropping down a spur to state highway 60 and an unnamed stream. The line then follows the approximate 10 m contour around the edge of an alluvial plain (SG). It then heads south up spur and then down another spur into Apple Valley. The line then follows the approximate 10 m contour in Apple Valley (SG). It then heads south up another spur onto tile AG18
AF19	Mapua	From tile AF18 to the coastal environment line continues across the floodplain into the Mapua urban area (SG). It then rises up a spur into tile AF18
AF20	Rabbit Island	All of the tile is within the coastal environment
AG18	Waimea catchment	<ul style="list-style-type: none"> The coastal environment line continues south from tile AF18 rising up along a coastal ridge to 60 m (SB). It then drops down a spur to cross the alluvial plain before heading south up another narrow spur onto a rising ridge to 80 m elevation (SB) where the line enters tile AH18.
AG19	Waimea Inlet	All of the tile is within the coastal environment
AG20	Rabbit Island	All of the tile is within the coastal environment
AG21	Rabbit Island	All of the tile is within the coastal environment
AH18	Waimea catchment	From tile AG18 the coastal environment line heads up coastal spur at 80 m. It then turns east to run down another coastal ridge at 60-70 m elevation (SB) before dropping down a spur to 40 m at tile AH19
AH19	Waimea Plains	<ul style="list-style-type: none"> From tile AH18 the coastal environment line continues east on a discontinuous coastal ridge at an average of 40 m elevation (SB). It then heads down a spur onto the Waimea Plains at O'Connor Creek, before turning south and traversing the alluvial plain on the approximate 10 m contour into tile AI19
AH20	Waimea Inlet	All of the tile is within the coastal environment
AH21	Waimea Inlet-	That part tile that includes Tasman District is all within the coastal environment

Map sheet	Locality details	Reasons
	Richmond	
AI19	Waimea Plains	<ul style="list-style-type: none"> • From tile AH19 the coastal environment line follows the 10 m contour, heading south along stopbanking in the Waimea River to a shingle pit where it crosses the river and further follows the stopbanking. • The line then cuts across the alluvial plains on the approximate 10 m contour (SG) to join tile AI20
AI20	Richmond	<ul style="list-style-type: none"> • From tile AI19 the coastal environment heads east across the Waimea Plains at the approximate 10 m contour to the Richmond Racecourse (SG). • The line then heads along the seaward side of the state highway to the regional council boundary (SG)
AI21	Waimea Inlet	The coastal environment line heads north into the Waimea Inlet along the regional council boundary

Appendix 3: Summary of the natural character unit data

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
A10/01	Tasman open coast	The balance of the open coast of Tasman District that is not included in other units. It extends from Kahurangi Point to the boundary with Nelson City and generally extends to 12 nautical miles offshore. It excludes all marine farms.	Almost entirely indigenous cover and infauna. Most areas have minimal human-mediated hydrological or geomorphological change apart from inshore sediment plumes. No obvious human structures. There is generally a low level of non-natural sounds, odours and light except from spillover noise from the airport and localised boat traffic. There are no special restrictions on fishing and some areas (boundaries unknown) are dredged or seined.	MN, MO	H	0.51
B9/01	Nguroa Bay	Hillslopes and some coastal faces with manuka-kanuka dominant shrubland and low forest. Gullies include mixed broadleaved species and cabbage trees. Some steeper areas around rock outcrops.	Indigenous vegetation with few pest plants. Part of the continuum of terrestrial and aquatic ecosystems. Minimal human mediated hydrological or landform change. Absence of obvious human structures. Low level of non-natural sounds, odours and light.	ER-s	H	0.52
B9/02	Nguroa Bay	Steep coastal cliffs and faces with native shrubland and grasses, areas of mixed native shrubs and introduced grasses, and bare rock and sand.	Indigenous vegetation with few pest plants. Part of the continuum of terrestrial and aquatic ecosystems. Minimal human mediated hydrological and landform change. Absence of obvious human structures. Low level of non-natural sounds, odours and light.	ER-o-s	H	0.56

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
B9/03	Nguroa Bay	Small dune lake in a shallow basin. Peat stained. Surrounded by riparian kanuka and mixed broadleaved shrubland; native shrubs with introduced grasses; and mixed native and introduced grasses, rushes and sedges.	Primarily indigenous vegetation with few pest plants. Includes a continuum of terrestrial and aquatic ecosystems. Riparian vegetation part of a buffer for an aquatic ecosystem (dune lake) of high natural character. Minimal human mediated hydrological and landform change. Absence of obvious human structures. Low level of non-natural sounds, odours and light.	LA; ER	H	0.51
B9/04	Nguroa Bay	Hill slopes with pasture and small patches shrubland and low forest		ER,DU	T	
B10/01	Wharariki	The steep and very exposed coastal cliffs of Cape Farewell. Vegetation is primarily low windswept native scrub. This includes: Manuka-kanuka dominant shrubland with flax and tauhinu and much exposed rock; Manuka-kanuka-taupata-pohuehue shrubland with New Zealand spinach in slots. The tops of the cliffs are largely in pasture and so are largely excluded from the unit.	Primarily indigenous vegetation with few pest plants. Relatively mature indigenous vegetation for site conditions and natural disturbance history. Minimal human mediated hydrological and landform change. Absence of obvious human structures. Low level of non-natural sounds, odours and light.	ER-o-s	H	0.62
B10/02	Wharariki	Freshwater wetland with tall native shrubs and low trees (especially manuka and Coprosma species), with some flax and native sedges in the lower reaches. Upstream lower stature native shrubs, flax and native sedges predominate. Upland catchment largely indigenous vegetation.	Primarily indigenous vegetation with few pest plants. Includes relatively mature indigenous vegetation for site conditions. Minimal human mediated hydrological and landform change within the wetland. Absence of obvious human structures. Generally low level of non-natural sounds, odours and light.	AL	H	0.59

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
B10/03	Wharariki	Freshwater wetland with tall native shrubs and low trees (especially manuka and Coprosma species), with some flax and native sedges in the lower reaches. Upstream lower stature native shrubs, flax and native sedges predominate. Catchment is largely indigenous vegetation	Primarily indigenous vegetation with few pest plants. Includes relatively mature indigenous vegetation for site conditions. Minimal human mediated hydrological and landform change within the wetland. Absence of obvious human structures. Generally low level of non-natural sounds, odours and light.	AL	H	0.63
B10/04	Wharariki	Wharariki Stream valley floor freshwater wetland and a small area of riparian vegetation. Wetland vegetation is primarily cabbage tree/flax-native shrubs (Coprosma species)-native sedges. Much of the wetland has a relatively low level of weed invasion.	Primarily indigenous vegetation with few pest plants. Wetland contains relatively mature indigenous vegetation for the site conditions. Minimal human mediated hydrological and landform change within the wetland. Absence of obvious human structures. Generally low level of non-natural sounds, odours and light, although there is some vehicle/camp area/ people noise and short term night light.	AL	H	0.55
B10/05	Wharariki	Freshwater wetland dominated by native species. In the lower reaches there are low trees and shrubs- primarily kaihikatea/ mixed broadleaved species-manuka-cabbage trees. In the middle reaches there is primarily manuka dominant shrubland with flax and native sedges. The upper reaches are primarily kaihikatea treeland with mixed native shrubs. There are low weed levels. Catchment largely indigenous vegetation.	Primarily indigenous vegetation with few pest plants. Relatively mature indigenous vegetation for site conditions. Part of a continuum of indigenous ecosystems from aquatic to terrestrial. Minimal human mediated hydrological and landform change. Absence of obvious human structures. Generally low level of non-natural sounds, odours and light.	AL	O	0.77

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
B10/06	Wharariki	Small freshwater wetland. Vegetation is a mosaic of manuka-Coprosma propinqua shrublands; flax dominant vegetation and raupo dominant vegetation. There are scattered cabbage trees within the wetland and kaihikatea on the inland margin. The wetland is not fenced. Sheep are grazed in the area.	Primarily indigenous vegetation with few pest plants. Moderately mature indigenous vegetation for site conditions. Absence of obvious human structures. Generally low level of non—natural sounds, odours and light.	AL	H	0.50
B10/07	Wharariki	This is a relatively large dune lake with a sandy bottom. There is no outlet. The lake is now fenced with a buffer of manuka and tall grasses. The lake margins include narrow bands of emergent raupo and rushes and some turfs. There are reasonable numbers of scaup. As swans are present it is likely that some macrophytes are present.	A dune lake with minimal human mediated hydrological and landform change. Lake vegetation likely to be dominated by indigenous species. Absence of obvious human structures. Generally low level of non-natural sounds, odours and light.	LA	H	0.43
B10/08	Wharariki	Two small freshwater valley floor wetlands. The vegetation is primarily flax and native sedges with patches of raupo and some native shrubs. The eastern is partly fenced, and the western one which has a small pond is fenced. There has been some native shrub planting on the margins of the western wetland.	Primarily indigenous vegetation with relatively few pest plants. Appears to be relatively free of hydrological & geomorphological change. Few obvious human structures apart from fencing from stock. Generally low level of non-natural sounds, odours and light.	AL	H	0.48
B10/09	Wharariki	Dune lake with raupo and flax emergent on the margins. Upland catchment and margins are native vegetation –primarily manuka-kanuka shrubland and low forest with nikau & some mixed broadleaved	A dune lake with minimal human mediated hydrological and landform change. Lake vegetation likely to be dominated by indigenous species. Lake buffered by riparian vegetation and	LA	H	0.61

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		species and kahikatea in valleys. Lower catchment in pasture although most of the riparian margins have kanuka-manuka shrubland.	upland catchment in indigenous vegetation. Absence of obvious human structures. Generally low level of non-natural sounds, odours and light.			
B10/10	Wharariki	Dunes with indigenous forest. Includes kanuka dominant forest with good regeneration of mixed broadleaved species and the understory and some kanuka dominant shrubland; and mixed broadleaved forest with kawakawa and nikau understorey. Canopy species for the latter include pigeonwood, mahoe, kaikamako and nikau. The forest is fenced.	Relatively mature indigenous vegetation for site conditions and disturbance history. Minimal human mediated hydrological and landform change. Though obvious human structures apart from fencing from stock. Generally low level of non-natural sounds odours and light.	DU	H	0.63
B10/11	Wharariki	Green Hills Stream estuary (4.4ha) and immediate riparian margins. The estuary consists of intertidal sand flats with fringing native rushes and limited subtidal channel. The terrestrial margins include flax with some raupo upstream. The lower margins include some fringing dunes with marram. There has been historic grazing of the margins as lupins, introduced grasses and clover are present. Estuary catchment is 89% native forest; pasture 10%	The estuary largely has an indigenous cover and indigenous infauna. The margins of the estuary are largely in woody vegetation. There has been minimal human mediated hydrological and geomorphological change. There are no obvious human structures. The area is largely free from non-natural sounds, odours and light.	MN, SW	O	0.65
B10/12	Wharariki	Alluvial flats and low hill slopes primarily used for pastoral farming. Includes some small areas of native shrubs and native rushes		AL	T	
B10/WK1	Wharariki	Rock headland with low coastal scrub (manuka-flax- mixed broadleaved scrub)	Relatively mature indigenous vegetation for site conditions and natural	ER-o-s	O	0.63

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		with taller scrub further inland & in gullies	disturbance history. Minimal human-mediated hydrological and landform change. No obvious human structures. Low level of non-natural sounds, odours and light.			
B10/WK2	Wharariki	Small sandstone rock outcrops on beach. Low coastal scrub & flax	Relatively mature indigenous vegetation for site conditions and natural disturbance history. Minimal human-mediated hydrological and landform change. No obvious human structures. Low level of non-natural sounds, odours and light.	ER-o-s	O	0.77
B10/WK3	Wharariki	Relict dunes with large expanses of bare sand with relict marram grass on steep remnant dunes	Primarily natural surface although there is some relict alien marram. Minimal human-mediated hydrological and landform change. Few obvious human structures. Low level of non-natural sounds, odours and light.	DU	H	0.59
B10/WK4	Wharariki	Back dune with grassland & shrubland. The vegetation is dominated by introduced grasses (including marram) with pohuehue, bracken, sedges, scattered native shrubs and flax		DU	T	0.32
B10/WK5	Wharariki	Manuka dominant shrubland on sandstone with patches native mixed broadleaved shrubland. There is a small area of marram on a steep foredune	Largely indigenous vegetation with few pest plants (except for a very small area of gorse & marram). Minimal human-mediated hydrological and landform change. No obvious human structures. Low level of non-natural sounds, odours and light.	DU	H	0.60

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
B10/WK7	Wharariki	This unit is based on a relatively mature mixed broadleaved forest with nikau. There is increasing manuka & kanuka towards the edges. Birdlife is good.. The unit also includes Nikau Lake and the adjoining wetland. This is a dune lake that is relatively heavily peat stained. There is a wetland sequence from the lake as follows: raupo; sedge-flax-raupo; introduced grasses -gorse & manuka scrub. It has been recently fenced with recent plantings on the margins.	Relatively mature indigenous vegetation for site conditions and natural disturbance history. Minimal human-mediated hydrological and landform change. No obvious human structures. Generally low level of non-natural sounds, odours and light.	DU	O	0.71
B10/WK9	Wharariki	Series of sandstone islets/ rock stacks & a peninsula with low mixed broadleaved shrubland and manuka shrubland with flax	Relatively mature indigenous vegetation for site conditions and natural disturbance history. Minimal human-mediated hydrological and landform change. No obvious human structures. Low level of non-natural sounds, odours and light.	ER-o-s	O	0.77
B10/WK10	Wharariki	Sandstone headland with extensive areas of bare rock and low wind-shorn prostrate native shrubland & flax. There is kanuka-manuka shrubland (taller on thicker soils) and taupata-pohuehue- other narrow leaved shrubs. Much of the area is steep	Contains large areas of bare rock and relatively mature indigenous vegetation for site conditions and disturbance history. There has been minimal human mediated hydrological and landform change. There are no obvious human structures. Generally there is a low level of non-natural sounds, odours and light	ER-o-s	O	0.67
B10/WK11	Wharariki	The unit is primarily a duneland mosaic of manuka shrubs, mixed broadleaved shrubs, introduced grasses, & bracken. There is a		DU	T	0.30

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		small area of marram grass & gorse on the front of foredune				
B10/WK14	Wharariki	Primarily intertidal sand flats on exposed coast with no vehicle access. The unit also includes Wharariki Estuary (2.8ha).	Primarily natural surface. Minimal human-mediated hydrological and landform change. No obvious human structures. Low level of non-natural sounds, odours and light.	DU	O	0.90
B11/01	Pillar Point	Relatively small gully exposed to the open coast. Vegetation is primarily kanuka dominant shrubland and low forest. This is fenced and adjoins pasture in places.	Primarily native vegetation with few pest plant species. Minimal human mediated hydrological and landform change. No obvious human structures apart from fencing. Generally an absence of non-natural sounds, odours and light.	ER-s	H	0.45
B11/02	Pillar Point	Relatively small gully exposed to the open coast. Vegetation is primarily Manuka kanuka dominant shrubland and low forest. There is a core area of rimu-kaihikatea-northern rata emergents over canopy of kanuka and mixed broadleaved species.	Primarily native vegetation with few pest plants. Includes relatively mature indigenous forest. Minimal human mediated hydrological and landform change. No obvious human structures. Generally an absence of nonnatural sounds, odours and light.	ER-s	H	0.47
B11/03	Pillar Point	Coastal cliffs associated with Cape farewell and Polar point. These are very steep Eroding largely rock cliffs with low mainly native shrubland on some of the upper outer faces. The shrub land is primarily manuka- kanuka dominant with tauhinu, narrow leaved Coprosmas, and flax. There are few small patches of gorse. The occasional face has more mature manuka kanuka shrubland and mixed broadleaved	The unit includes exposed rock and some areas of relatively mature indigenous vegetation for site conditions and natural disturbance history. There is minimal human mediated hydrological or landform change. There are no obvious human structures. There is generally an absence of non-natural sounds, odours and light.	ER-o-s	O	0.79

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		shrubland. There are caves and an arch.				
B11/04	Pillar Point	Hill slopes with pasture, the occasional small patch of pines, and small scattered patches of native shrubland		ER	T	
B11/05	Pillar Point	Coastal faces of low fertility hard sandstone and conglomerate. Vegetation is primarily low prostrate manuka and native rushes with mingimingi, gorse and the occasional hakea (approximately 90% native species).	The unit includes exposed rock and relatively mature indigenous vegetation the site conditions and natural disturbance history. There is minimal human mediated hydrological or landform change. There are no obvious human structures. There is generally an absence of non-natural sounds, odours and light.	ER-o-s	H	0.54
B11/06	Pillar Point	Steep and very exposed coastal faces. Vegetation is dominated by kanuka-manuka shrubland with gorse near the track, and mixed broadleaved shrubs in gullies.	Indigenous vegetation that is moderately mature for site conditions and natural disturbance history. There is minimal human mediated hydrological or landform change. There are no obvious human structures. There is generally absence of non-natural sounds, odours and light.	Er-o-s	H	0.50
B11/07	Wharariki Valley	Two alluvial freshwater wetlands. The vegetation is a mosaic dominated by either native rushes or native shrubs (especially manuka and Coprosma species). There are also low levels of flax. There appears to be a low level of weed invasion. The unit includes some manuka or kanuka dominant shrubland on the lower margins. The wetland is of relatively low fertility. The	Indigenous vegetation with few pest plants. The unit includes relatively mature indigenous vegetation for site conditions and natural disturbance history. There is minimal human mediated hydrological or landform change within the unit itself. There are no obvious human structures. There is generally low level of non-natural	AL	H	0.61

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		wetland to the south contains about 50% of native shrubs, while the northern wetland contains about 20% native shrubs.	sounds, odours and light.			
B11/08	Farewell Spit	Pasture on flats, pockets of unfenced manuka & some wet areas with rushes & sedges. On the coastal margin there is a mature pine plantation/shelterbelt		DU	T	
B11/09	Farewell Spit	Hill slopes and hill faces with manuka dominant shrubland; mixed broadleaved shrubland & low forest in gullies; and ridge top patches % of introduced grasses (10%).	Primarily indigenous vegetation, although there are still some patches of introduced grasses. There has been minimal human mediated landform or hydrological disturbance. There are a few obvious human structures. There is generally a low level of non-natural sounds, odours and light.	ER-o-	H	0.45
B11/FS14	Farewell Spit	This unit consists of manuka-kanuka shrubland on low hill slopes, and a pond with wetland rushes & sedges around the margins. This is an unfenced patch within a pasture matrix	Primarily indigenous vegetation although some non-native species are present. There are few obvious human structures. There is generally a low level of non-natural sounds, odours and light.	ER	H	0.44
B11/FS16	Puponga	Puponga Farm Park hill slopes dominated by pasture. There are pockets of manuka & gorse scrub, and mixed broadleaved shrubland (generally unfenced) as well as some limestone rock outcrops. There are patches sedges & non-native rushes in wet areas		ER	T	0.13
B11/FS18	Pillar Point	Steep limestone coastal faces with kanuka-manuka shrubland and low forest; and mixed broadleaved shrubland and low	Primarily indigenous vegetation with few pest plants. Some vegetation is moderately mature for site conditions	ER-o-s	H	0.50

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		forest in the gullies (mahoe dominant with nikau). There is a minor amount of gorse near the track.	and natural disturbance history. There is minimal human mediated hydrological or landform change. There are no obvious human structures. There is generally an absence of non-natural sounds, odours and light.			
B11/FS19	Puponga	Hillslopes with low fertility soils. Manuka dominant shrubland	Relatively mature indigenous vegetation for site conditions and natural disturbance history. Minimal human-mediated hydrological and landform change. No obvious human structures. There is generally a low level of non-natural sounds, odours and light.	ER	H	0.50
B11/FS20	Puponga	Low fertility sandstone slopes & ranges with dramatic rock outcrops. Infertile with low shrubland, tussocks & rushes & species normally found at higher altitudes (low manuka-gorse-veronica shrubland with patches of native rushes & some subalpine species)	Relatively mature indigenous vegetation for site conditions and natural disturbance history. Part of a larger area of indigenous vegetation. Minimal human-mediated hydrological and landform change. Few obvious human structures. Low level of non-natural sounds, odours and light.	ER-s	H	0.59
B11/FS30	Puponga	Freshwater wetland at head of Puponga Estuary. Manuka margins, sedges & flax wetland and stream	Relatively mature indigenous vegetation for site conditions and natural disturbance history. Minimal human-mediated hydrological and geomorphological change. Part of a continuum of indigenous ecosystems from marine to terrestrial. Few obvious human structures. Low level of non-natural sounds, odours and light.	AL	O	0.72

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
B11/FS31	Puponga	Pasture with small patches scrub, road, some tracking, and a few buildings on relict alluvial flats		AL	T	0.13
B11/FS32	Farewell Spit	Dune sequence- foredune, swale & immediate back dune. Marram grass & sand on low foredune; kanuka dominant shrubland; flax-rushland; mixed broadleaved shrubland ; and introduced grasses & bracken	Generally relatively mature indigenous vegetation for site conditions and natural disturbance history although there are some areas of younger mixed vegetation. Minimal human-mediated hydrological and landform change. Few obvious human structures. Low level of non-natural sounds, odours and light.	DU	H	0.44
B11/FS33	Puponga	Hillslopes with manuka & kanuka shrubland; and mixed broadleaved shrubland & forest	Largely indigenous vegetation. Minimal human-mediated hydrological and landform change. Few obvious human structures. Low level of non-natural sounds, odours and light.	ER	H	0.46
B11/FS36	Puponga	Fenced mixed broadleaved shrubland & forest with limestone rock outcrops on hill slopes	Includes relatively mature indigenous vegetation for site conditions and natural disturbance history. Minimal human-mediated hydrological and landform change. Few obvious human structures (apart from fencing to exclude stock). Generally there is a low level of non-natural sounds, odours and light.	ER	H	0.60
B11/PE1	Puponga Estuary	Main Puponga Estuary. In the upper tidal area the substrate includes river cobbles; while the lower area is tidal with a silty sand substrate. There is fringing saltmarsh at head of the estuary, and limited salt herbfield. There is a road causeway. No	Largely indigenous cover and infauna. Minimal human-mediated hydrological and geomorphological change. Part of a continuum of indigenous ecosystems from marine to terrestrial. Few obvious human structures apart from the road	SW	O	0.74

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		sea grass was observed. Catchment sandstone and mudstone with cover beings 88% native forest; 10% pasture. Inlet is 33ha	bridge and causeway associated with a natural constriction. There is generally a low level of non-natural sounds, odours and light except for vehicle traffic across the bridge & causeway.			
B12/01	Farewell Spit	Extensive open coast intertidal flats with indigenous infauna. Used by a variety of wading birds at low tide. Part of Department of Conservation nature reserve with prohibitions on removal of indigenous biota. Apart from a couple of daily return commercial tourism vehicles to and from the Spit there is little or no human visitation because of restrictions on access	Natural surface with indigenous infauna. Harvest/removal of any native biota is prohibited. Minimal human-mediated hydrological and geomorphological change. There are no obvious human structures. There is an absence of non-natural sounds, odours and light (except for the once-twice daily return tourism vehicle trips).	DU	O	0.81
B12/02	Farewell Spit	Mobile largely unvegetated dunes. The unit includes extensive dune flats, some remnant dunes with generally patchy marram grass (alien species); some small dune lakes and an area of inland migrating dunes. Access without a permit is not permitted in much of the area (Department of Conservation Nature Reserve)	Primarily natural surface (sand, some dune lakes). Minimal human-mediated hydrological and landform change in recent times although past grazing and burning are likely to have led to a higher level of mobile sands than might otherwise have been the case. Few obvious human structures. Generally an absence of non-natural sounds, odours and light	DU	H	0.60
B12/03	Farewell Spit	This unit encompasses the vegetated dune lands west of the open ocean breakthrough the dunes mid-way along the spit. The moister dune swales are a mosaic of deeper ponds with native flora – (e.g.	The unit is largely indigenous vegetation with relatively few pest plants (mainly gorse, marram and some other introduced grasses). There has been minimal human-mediated hydrological	DU	H	0.52

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		<p>Myriophyllum propinquum, charophytes, Ludwegia, Elatine & emergent Elaeocharis); shallow ponds, native rushland (oioi and knobby clubrush) with native sedges, patches of gorse with native shrubs; some mixed native shrubs with the occasional cabbage tree, and some residual pastoral grassland.</p> <p>The remainder of the vegetated dune lands are drier. Vegetation includes mixed broadleaved scrub & manuka scrub; introduced grasses, flax, native shrubs; and marram on the coastal margins. Access without a permit is not permitted in most of the area (Department of Conservation Nature Reserve).</p>	and landform change, except for historical changes resulting from past burning and grazing of the Spit. Generally there is an absence of non-natural sounds, odours and light			
B12/04	Farewell Spit	<p>Very extensive intertidal sand flats. Variable densities of sea grass, large cockles and variety other native infauna. Extremely important area for a large variety of wading birds, including seasonal migrants. There is a relatively high level of black swan (indigenous) grazing in places. There is localised eutrophication associated with swan browsing. There are some small patches saltmarsh being buried. In the east the unit includes some small vegetated sand islands (minor component of the unit as a whole). The unit is part of an extensive</p>	<p>Extensive areas of natural surface (intertidal sand flats). Indigenous cover and infauna Harvest/removal of any native biota is prohibited. Extremely important area for a large variety of wading birds. Minimal human-mediated hydrological and landform change. No obvious human structures. Absence of non-natural sounds, odours and light.</p>	SW	O	0.93

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		nature reserve administered by the Department of Conservation. In most of the area public access is prohibited without a permit.				
B12/FS2	Farewell Spit	Older dunes with mahoe dominant shrubland on sand with a thin band of the alien marram grass on the foredune	Largely indigenous vegetation with relatively few pest plants (except for limited marram & gorse). Minimal human-mediated hydrological and landform change. Few obvious human structures. Low level of non-natural sounds, odours and light.	DU	H	0.50
B12/FS3	Farewell Spit	Kanuka dominant forest and shrubland on old dunes	Indigenous vegetation, including relatively mature indigenous vegetation for site conditions and natural disturbance history. Minimal human-mediated hydrological and landform change. Few obvious human structures. Low level of non-natural sounds, odours and light.	DU	H	0.59
B12/FS4	Farewell Spit	Older dune mosaic with manuka & kanuka shrubland; mixed broadleaved shrubland with flax & gorse; clearings with introduced grasses, flax, knobbly clubbrush & native shrubs. To the east there is small area of dune swale on the margins of a large dune blow-out. This swale includes native rushes & sedges, and shrubs	Includes some relatively mature indigenous vegetation for site conditions and natural disturbance history. Minimal human-mediated hydrological and landform change. Few obvious human structures. Low level of non-natural sounds, odours and light.	DU	H	0.58
B12/FS13	Farewell Spit	Dune swale area with low stature swale vegetation especially native rushes. Some foredune with the alien marram & the	Much of the area contains relatively mature indigenous vegetation for site conditions and natural disturbance	DU	H	0.54

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		natural sand surface is included	history. There has been minimal human-mediated hydrological and landform change. Few obvious human structures. Low level of non-natural sounds, odours and light.			
B15/01	Farewell Spit	Extensive area of intertidal flats and supratidal sands on the exposed coast. Includes a spit breach mid-way along the Spit as well as the unvegetated tip of the Spit. Native infauna. Used by a variety of wading birds. . The unit is part of an extensive nature reserve administered by the Department of Conservation. In most of the area public access is prohibited without a permit.	Extensive areas of natural surface (intertidal sand flats and supratidal sands. Indigenous cover and infauna. Harvest/removal of any native biota is prohibited. Minimal human-mediated hydrological and landform change. No obvious human structures. Absence of non-natural sounds, odours and light.	DU	O	0.80
C8/01	Mount Lunar	There are several deeply incised gullies. Vegetation is primarily windshorn mixed broadleaved-kanuka shrubland and low forest with tree ferns and nikau. The vegetation is unfenced and adjoins pasture grazed by sheep.	Indigenous vegetation with few pest plants. Minimal human mediated hydrological or landform change. No obvious human structures. Generally low level of non-natural sounds, odours and light.	ER	H	0.47
C8/02	Mount Lunar	South-facing hill slopes with some areas of emergent limestone rock. The vegetation is a mosaic of manuka-kanuka wind shorn shrubland with <i>Metersideros perforata</i> and mixed broadleaved shrubland, kiekie and patches of introduced grasses. The area is unfenced and grazed by cattle and sheep.	Largely indigenous vegetation apart from the introduced grasses. Minimal human mediated hydrological or landform change. No obvious human structures. Generally low level of non-natural sounds, odours and light.	ER-s	H	0.43
C9/01	Mount Lunar	Alluvial flats with freshwater wetland. The wetland vegetation is primarily flax with	Largely indigenous vegetation with relatively few pest plants. No obvious	AL	H	0.47

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		fringing manuka shrubland (as an ecotone) and raupo on one margin. The wetland is in pasture matrix which is grazed by sheep.	human structures. The wetland itself has low levels of hydrological or landform change. There is generally a low level of non-natural sounds, odours and light.			
C9/03	Mount Lunar	Low fertility coastal faces and hill slopes between mean high water springs and Mount lunar. The upper faces have low manuka-kanuka shrubland with mingimingi and gorse. The lower faces contain mixed native shrubs, especially manuka and kanuka) flax and native rushes. This relatively large area is now in public ownership.	Largely indigenous vegetation with relatively few pest plants. Minimal human-mediated hydrological and geomorphological change. No obvious human structures. There is generally a low level of non-natural sounds, odours and light.	ER-o	H	0.48
C9/04	Mount Lunar	Primarily south-facing hill slopes with areas of emergent limestone rock. The vegetation is patches of native mixed shrublands and introduced grasses. Shrubland species include manuka, kanuka, <i>Metersideros perforata</i> , and mixed broadleaved species. Kiekie is also present. The area is unfenced and grazed by cattle and sheep.	Largely indigenous vegetation apart from the patches of introduced grasses. Minimal human mediated hydrological or landform change. No obvious human structures. Generally low level of non-natural sounds, odours and light.	ER	T	0.41
C9/05	Mount Lunar	Hill slopes primarily with pasture. There are limestone rock outcrops and small patches of grazed mixed native shrubs (kanuka, manuka <i>Metersideros perforata</i> , and mixed broadleaved species). The latter are too small to map.		ER	T	
C9/06	Pitch Point- Bar Point	Intertidal and shallow subtidal reef platforms with sandy beaches and/or rocky	The Intertidal and subtidal reefs are free from introduced species. The sandy	MN	O	0.74

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		cliffs inshore. The area has a low level of visitation and harvest as there is no public access from shore and it would be difficult to access the area from the sea most of the time. Some rocky cliff areas are steep and there is a limited area of native vegetation before pasture predominates. The narrow fringe of coastal cliffs includes prostrate mixed native shrubland, native rushes and salt herbfield and introduced grasses. This unit includes the small 1.5ha Nguroa Estuary	beaches are primarily Intertidal flats and supratidal sands with limited vegetation. There is been minimal human mediated hydrological or landform change. There are no obvious human structures. There is largely an absence of non-natural sounds, odours and light.			
C11/01	Puponga south	Coastal escarpment with kanuka-mixed broadleaved forest	Largely indigenous vegetation with relatively few pest plants. Minimal human-mediated hydrological and landform change apart from some local earthworks for a road. Few obvious human structures except for a road. Low level of non-natural odours and light. Seasonally variable low-moderate level of non-natural sounds with proximity of road	ER	H	0.44
C11/02	Puponga south	Hillslopes dominated by manuka and kanuka shrub land and low forest. Limited areas of mixed broadleaved low forest in valleys.	Largely indigenous vegetation with few pest plants. Minimal human mediated hydrological and landform change. Few obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	H	0.45
C11/03	Puponga south	Low Hill slopes behind Puponga township with young manuka and kanuka dominant		ER	T	

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		shrubland and scattered wilding pines. There is some tracking.				
C11/04	Puponga south	Coastal terrace and hill slopes with pasture, introduced trees including shelterbelts, and smaller patches of native shrubland.		ER	T	
C11/05	Puponga south	Freshwater wetland separated from the main Puponga wetland by the unsealed road to Whaariki Beach. It is primarily low fertility swamp with (cabbage tree)/ flax-native shrubs –sedges and manuka dominant shrubland on the margins	Largely indigenous vegetation with few pest plants. Part of a continuum of indigenous ecosystems from marine to terrestrial. There are few obvious human structures. There are low level of non-natural sounds, odours and light except for low levels of traffic.	AL	H	0.59
C11/06	Puponga south	Alluvial flats and hill slopes with low mixed broadleaved forest and low kanuka dominant forest. There are also patches of manuka and kanuka shrub land. The unit also includes a small section of road but most is excluded.	Largely indigenous vegetation with few pest plants. Minimal human mediated hydrological and landform change. Few obvious human structures. There is generally a low level of non-natural sounds, odours and light apart from some traffic noise.	AL	H	0.53
C11/07	Puponga south	Hillslopes dominated by Regenerating native forest. The vegetation is primarily kanuka dominant forest and shrubland; and mixed broadleaved forest and shrubland. The unit includes some more mature indigenous forest in inland areas. There are also patches of kanuka and manuka shrubland and mixed broadleaved shrubland on some of the unit margins. The unit extends onto the lowest foothills and plains in a couple of areas. The south part	Largely indigenous vegetation with few pest plants. Includes some moderately mature indigenous forest. There has been minimal human mediated hydrological and landform change. There are few obvious human structures. Low level of non-natural sounds odours and light.	ER	H	0.54

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		of the unit contains riparian forest adjoining Taupata Stream, including a relatively mature indigenous forest patch with native podocarp/ mixed broadleaved forest.				
C11/08	Puponga	Coastal margins with mixed broadleaved shrubland and kanuka-manuka shrubland	Largely indigenous vegetation with few pest plants. Minimal human-mediated hydrological and landform change. Few obvious human structures. Most of unit generally has a low level of non-natural sounds, odours and light (except when lot of people arriving or departing from adjoining uphill car park	ER	H	0.45
C11/FS34	Puponga south	Hill slopes primarily with young manuka & kanuka scrub (with wilding pines), mixed broadleaved shrubland, buildings & roads/tracks		ER	T	
C11/FS35	Puponga south	Alluvial flats and a limited area of lower slopes primarily with a pasture cover. There are smaller patches of younger native scrub, some introduced trees and shrubs, roads/tracks and buildings		AL	T	
C11/FS39	Puponga	Rock island connected to the mainland at low tide. Surrounded by sand flats. The cover is mainly manuka – kanuka dominant shrubland & low forest (with some wilding pines); some mixed broadleaved shrubland & low forest; and small patches of gorse scrub & introduced grasses	Largely indigenous vegetation with relatively few pest plants. Minimal human-mediated hydrological and landform change. Few obvious human structures. Generally low level of non-natural sounds, odours and light.	ER	H	0.43
C11/PE2	Puponga	Puponga Estuary below causeway. Cobbles	Largely indigenous cover and infauna.	SW	O	0.79

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		with patches of sand with dense sea grass. There is limited fringing saltmarsh	Includes dense sea grass. Minimal human-mediated hydrological and geomorphological change. Part of a continuum of indigenous ecosystems from marine to terrestrial. Few obvious human structures apart from the road bridge and causeway associated with a natural constriction. There is generally a low level of non-natural sounds, odours and light except for vehicle traffic across the bridge & causeway.			
C11/PE3	Puponga	Intertidal sand flats with some shingle & shell flats. Ebb tide delta for the Puponga Estuary Abundant sea grass & waders .Includes old wharf breakwater	Largely indigenous cover and infauna. Minimal human-mediated hydrological and geomorphological change. Few obvious human structures apart from remains of the old wharf breakwater. There is generally a low level of non-natural sounds, odours and light apart from some traffic	SW	O	0.85
C11/PE4	Puponga	Puponga Beach settlement. Low key houses & gardens, road, narrow strip of grass & marram grass on sand shore		AL	T	0.15
C11/PE5	Puponga	Small cutoff wetland by road causeway. Primarily saltmarsh surrounded by manuka & kanuka scrub. Small area of sand flats.	Relatively mature indigenous vegetation for site conditions and natural disturbance history. Few obvious human structures. Generally a low level of non-natural sounds, odours and light apart from some traffic noise and dust.	AL	H	0.55
C11/PE6	Puponga	Alluvial flats adjoining the Puponga settlement with manuka & kanuka	Largely indigenous vegetation with few pest plants. Minimal human-mediated	AL	H	0.45

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		shrubland & low forest	hydrological and landform change. Few obvious human structures although may be some recent structures. Generally low level of non-natural sounds, odours and light.			
C15/01	Farewell Spit	<p>This unit encompasses the vegetated dune lands east of the open ocean break-through the dunes mid-way along the spit. Compared to the vegetated dune west of the spit break this eastern section is more vegetated with less topography variation. Immediately to the east of the breach there are several smaller “breaches” or channels linking the open and sheltered coasts. In this area there are also several larger vegetated sand islands which are part of this unit.</p> <p>The vegetation includes mixed native shrubs; patches of gorse or introduced grasses with native shrubs & flax; native rushland (oioi and knobbly clubrush) with native sedges, and some marram with introduced grasses & native shrubs on some coastal margins. The more modified area around the lighthouse, buildings and air strip are excluded from the unit. The unit is part of a nature reserve (administered by the Department of Conservation) Access without a permit is</p>	Generally indigenous vegetation with relatively few pest plants. Minimal human-mediated hydrological and landform change although past burning and grazing may have affected dune stability. Few obvious human structures. Generally an absence of non-natural sounds, odours and light except for tourism vehicles visiting lighthouse area (lighthouse is not in unit)	DU	H	0.51

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		not permitted.				
D8/01	Kaihoka	South and east facing limestone bluffs with mixed native shrub land and low forest. The vegetation is primarily mixed broadleaved species (mahoe dominant) with nikau, treefern, manuka-kanaka and patches of kiekie and flax. There are introduced grasses on the lower slopes although most areas are excluded	Primarily indigenous vegetation with relatively few pest plants. There is been minimal human mediated hydrological or landform change. There are no obvious human structures. There is a low level of non-natural sounds, odours and light.	ER-s	H	0.46
D8/02	Kaihoka	This unit includes intertidal sand flats and channel for a small stream draining an alluvial freshwater wetland. It also includes dunes with extensive areas of bare sand. The vegetation on these dunes is primarily maram. There is a small patch of emergent nikau in a sandfield. This unit also includes a small patch of unfenced northern rata emergents over a kanuka- mixed broadleaved low forest on sand	The intertidal sand flats and channel primarily contain indigenous benthic cover and infauna. There are extensive areas of bare sand, however the main vegetation is non-native. The small area of native forest is relatively mature vegetation for site conditions and natural disturbance history. There has been minimal human mediated hydrological or landform change. There are few obvious human structures apart from some fencing. There is a low level of non-natural sounds, odours and light.	DU	H	0.59
D8/03	Kaihoka	Steep limestone bluffs with some conglomerate banding. The vegetation is mixed native (kanuka, mixed broadleaved including <i>Metersideros perforata</i> and mapou) shrub land with some flax and kiekie and the occasional nikau. The colluvium at the base of the cliffs has kanuka-mixed broadleaved (especially	There is largely indigenous vegetation with few pest plant species and bare rock. The unit includes vegetation that is moderately mature for site conditions. There is minimal human mediated hydrological or landform change. There are no obvious human structures. Low level of non-natural sounds, odours and	ER-s	H	0.51

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		mahoe) shrubland and low forest. The bluffs are unfenced with pasture and the base and the summit.	light.			
D8/04	Kaihoka	Steep Hill slopes with limestone outcrops. The vegetation is primarily mixed broadleaved (especially mahoe) shrubland and low forest with kanaka. There are pines on the southern margin. Elsewhere the unit adjoins pasture. There is no fencing.	The unit consist of indigenous vegetation with few pest plant species and some bare rock. There is minimal human mediated hydrological or landform change. There are no obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	H	0.46
D8/05	Kaihoka	Remnants of a mostly drained alluvial wetland. Is includes: a small area with flax and cabbage tree; an area of raupo reedland; and an area of shallow open water with some rushes, sedges, introduced grasses and floating algae. The unit boundaries have been drawn to exclude pampas on a levee and the southern drain with a buffer.	Mostly indigenous vegetation with relatively few pest plants. Few obvious human structures. There is a low level of non-natural sounds, odours and light.	AL	H	0.36
D8/WF1	Kaihoka Lakes	This is one of two moderately sized dune lakes. The water level is more stable than the western lake. Catchment is primarily forested with native species. The lake is peat stained. Much of the margin contains emergent species including Elaeocharis, flax, native sedges, and raupo. There is also a limited area of native turf species.	Freshwater lake with indigenous vegetation in no known alien plant species. Catchment is largely indigenous forest. Minimal human hydrological or geomorphological change. There is a low level of non-natural sounds, odours and light. There are few obvious human structures apart from a jetty.	LA	O	0.86
D8/WF2	Kaihoka Lakes	One of two moderately sized dune lakes. The catchment is largely in native forest except for an area of pasture at the	Freshwater lake with only indigenous vegetation and no alien pest plant species. Catchment largely indigenous	LA	O	0.77

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		western end. The lake is within a reserve although it seems sheep have access in the west. The lake vegetation appears to be all native species and includes: native turfs (<i>Glossostigma</i> & <i>Lilaeopsis</i>), charaphytes (e.g <i>Chara globularis</i>) and a limited area of <i>Potamogeton ochreatus</i> in the west. Native freshwater crayfish are present. Lake level fluctuates.	vegetation. There is a low level of non-natural sounds, odours and light.			
D8/WL47	Catchment of northern Westhaven inlet	Coastal headlands and faces on the northern side of Whanganui Inlet. The vegetation is mainly manuka dominant shrubland; and mixed broadleaved forest and shrubland	Largely indigenous vegetation with few pest plants. Minimal human-mediated hydrological and landform change. Few obvious human structures. Low level of non-natural sounds, odours and light.	ER	H	0.46
D8/WL48	Kaihoka Lakes catchment	This unit consists of the forested catchments surrounding the Kaihoka dune lakes. It encompasses a series of inland migrating dunes with ridges and swales. The eastern lake has more intact forest surrounding it and has probably been less affected by migrating dunes. The vegetation around the eastern lake includes remnant tall podocarp and rata emergents over nikau- mixed broadleaved forest. Podocarps include rimu, matai, kahikatea and miro. The catchments surrounding both the eastern and western lakes include large proportions of nikau emergents over mixed broadleaved forest and shrublands. There is abundant nikau	The unit contains relatively mature indigenous vegetation for site conditions and natural disturbance history. It includes mature indigenous forest. It is part of the continuum of terrestrial and aquatic ecosystems. Provides a buffer for an aquatic ecosystem of high or outstanding natural character. There has been minimal human mediated hydrological or landform change. There are few human structures apart from fencing and picnic facilities by the eastern lake. There is generally a low level of non-natural sounds, odours and light.	DU	O	0.64

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		regeneration, especially with the migrating dunes. There are patches of kiekie near the lake margins. The unit includes a small section of unsealed road, some introduced grasses and a small area with picnic facilities.				
D8/WL49	Catchment of northern Westhaven inlet	Coastal slopes with some remnant manuka dominant scrub, other cleared/sprayed areas & pasture		ER	T	
D8/WL50	Catchment of northern Westhaven inlet	The unit consists of hill slopes adjoining Westhaven inlet. The ridge and spur vegetation consists of kanuka-manuka shrubland and low forest with mixed broadleaved species in places. In the gullies the vegetation is primarily kanuka-rimu-mixed broadleaved forest.	Primarily indigenous vegetation with few pest plants. Minimal human-mediated hydrological and geomorphological change. No obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	H	0.47
D8/WL51	Catchment of northern Westhaven Inlet	This unit includes: a lower valley with a flax dominant -raupo-native shrub wetland; several upper valleys with rimu-mixed broadleaved –kanuka low forest; and hill slopes with manuka-kanaka low forest and shrubland. Areas of gorse scrub have been excluded.	The unit primarily contains indigenous vegetation with relatively few pest plants. Within the unit there has been a low level of human mediated hydrological or landform change. There are few obvious human structures. There is generally a low level of non-natural sounds, odours and light	ER & AL	H	0.44
D8/WL52	Catchment of northern Westhaven inlet	The unit includes steep hillsides with some limestone rock outcrops at the crest; hill slopes; and a narrow valley wetland. The vegetation on the steep hillsides with the rock outcrops is primarily mixed	The unit primarily contained indigenous vegetation with relatively few pest plants. There is a low level of human mediated hydrological or landform change apart from a few areas of	ER & AL	H	0.44

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		broadleaved-nikau-flax shrub land. The vegetation on the hill slopes (majority of the unit) is dominated by kanuka-manuka shrub land and low forest with some mixed broadleaved species. The vegetation in the valley wetland is primarily flax with mixed native shrubs. The unit includes a small section of unsealed road and parts of a couple of farm tracks.	Earthworks associated with roading. There are no obvious human structures. There is a low level of non-natural sounds, odours and light.			
D8/WL53	North of Westhaven inlet entrance	Sandy beach and dune blow-out into pasture	Primarily natural surface. Minimal human-mediated hydrological and landform change. Few obvious human structures. Low level of non-natural sounds, odours and light.	DU	H	0.60
D9/01	Catchment of northern Westhaven inlet	Unfenced valley floor wetland. Cover is primarily flax-raupo with native shrubs in places. The wetland is accessed by sheep and occasional cattle. It appears to have a relatively low level of weed species.		AL	T	0.41
D9/02	Catchment of northern Westhaven inlet	Coastal faces adjoining the Inlet. Vegetation is primarily kanaka forest with rimu, kamahi and tanekaha emergents. There are poisoned pine trees.	Largely indigenous vegetation with relatively few pest plants. There has been minimal human mediated hydrological or landform change. There are few if any human structures. There is a low level of non-natural sounds, odours and light.	ER	H	0.54
D9/03	Catchment of northern Westhaven inlet	Low hill slopes adjoining the Inlet. The area has roading as part of a subdivision for lifestyle blocks. The vegetation is largely manuka-kanaka shrub land and low forest		ER	T	

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		with some hakea and pines				
D9/04	Catchment to northern Westhaven inlet	This unit contains two patches of dense kaihikatea dominant forest with some northern rata and rimu. The understory is dominated by mixed broadleaved species. The two patches are separated by a farm road. The boundaries have been drawn to exclude the macrocarpas in the north and west, the pines and other introduced trees in the south; and willows and eucalypts in the east..	The unit has been drawn to include primarily indigenous vegetation and exclude non-native species. It contains mostly mature indigenous forest. There has been minimal human mediated hydrological and landform change within the unit. The unit contains few human structures apart from the fencing, although it is close to some buildings. There is generally a relatively low level of non-natural sounds, odours and light although the unit is close to a number of farm buildings.	ER	H	0.59
D9/05	Catchment of northern Westhaven inlet	Fenced tall native forests on old dune swale. Kaihikatea in northern rata are the predominant emergents. Other emergents include matai, rimu, tanekaha and New Zealand cedar (<i>Librocedrus bidwilli</i>). There is good regeneration of mixed broadleaved canopy species and understory since the removal of grazing. There is a small area of kanuka forest and mixed broadleaved forest with cabbage trees on western margins. The unit is now administered by the Department of Conservation.	Mature indigenous forest with good understory. There has been minimal human mediated hydrological and landform change. There are few human structures apart from fencing. There is generally a low level of non-natural sounds, odours and light.	DU	O	0.78
D9/06	Catchment of northern Westhaven inlet	Old dune with kanaka dominant forest with tanekaha and the occasional northern rata is canopy or emergent. There are patches of mixed broadleaved forest with nikau.	Indigenous vegetation with few pest plants. Includes relatively mature indigenous forest. There has been minimal human mediated hydrological	DU	H	0.58

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		There is also a flax-manuka freshwater wetland.	and landform change. There are few human structures. There is generally a low level of non-natural sounds, odours and light.			
D9/WL40	Catchment of northern Westhaven Inlet	Hill slopes with native podocarps (especially rimu) and northern rata emergents over a mixed broadleaved-beech forest canopy. Most of this unit is administered by the Department of Conservation.	Mature indigenous forest. Minimal or no human-mediated hydrological or landform change. Few if any human structures. Absence of non-natural sounds, lights and odours.	ER	O	0.77
D9/WL41	Catchment of northern Westhaven Inlet	Hill slopes primarily with kanaka-manuka dominant shrubland and low forest. There are some small areas of kanuka-mixed broadleaved shrubland and low forest associated with gullies which can include some rimu. There are scattered emergent wilding pines. Much of the area is administered by the Department of Conservation	Largely indigenous vegetation with relatively few pest plants. There has been minimal human mediated hydrological or landform change apart from earthworks associated with the road. There are few obvious human structures apart from those associated with the road. There is generally a low level of non-natural sounds, odours and lights (except the low level of traffic on the unsealed road)	ER	H	0.46
D9/WL42	Catchment of northern Westhaven inlet	Low slopes adjoining the Inlet. There are dense emergent pine trees over canopy of native shrubs.		ER	T	
D9/WL43	Catchment of northern Westhaven inlet	Hill slopes adjoining a cut-off arm of the Westhaven Inlet. The vegetation includes: emergent radiata pine over a kamahi-mixed broadleaved forest canopy; kanuka dominant shrubland on the inland margins;		ER	T	0.44

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		and mixed broadleaved shrubland near the water margins.				
D9/WL44	Catchment of northern Westhaven Inlet	Inlet riparian margins of rimu-tanekaha-kamahi dominant forest with mapou. Some kanuka dominant shrubland and low forest on the northern margins and several tall radiata pine trees on the water margin in the west.	Primarily indigenous vegetation with relatively few pest plants. The unit includes relatively mature indigenous forest. There has been minimal hydrological or geomorphological change. Few obvious human structures. Low level of non-natural sounds, odours and light	ER	H	0.57
D9/WL45	Catchment of northern Westhaven Inlet	Hillslopes with pasture and scattered smaller areas of native shrub land and pine plantations. Some unsealed roads and scattered buildings.		ER	T	
D9WL46	Catchment of northern Westhaven inlet	Hillslopes adjoining Westhaven Inlet. Vegetation includes: manuka-kanuka dominant shrubland and low forest; manuka-kanuka-mixed broadleaved shrubland & low forest and smaller areas of rimu-kamahi-tanekaha forest. There is an occasional pine on the water margin.	Primarily indigenous vegetation with relatively few pest plants. The unit includes some relatively mature indigenous forest. There has been minimal hydrological or landform change. There are a few obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	H	0.48
D9/WM13	Northern compartment of Whanganui Inlet	Northern main compartment of the Inlet. Wildlife Management Reserve. Extensive sand & silty sand flats with large areas of dense sea grass (compared to WM1). Also shell banks. Limited areas fringing saltmarsh & occasional informal ramp area. There is some increased sediment from the pasture catchments in the north	Largely indigenous cover without benthic pest species. Extensive areas of sea grass. Indigenous biota receives protection from the wildlife management reserve status. Minimal human mediated hydrological or geomorphological change. Few obvious human structures. Very low levels of	SW	O	0.75

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
			non-natural sounds, odours and light.			
D9/WM21	Cut-off arm of Westhaven inlet	Inlet embayment with the road causeway. The culvert is of reasonable size to allow flushing. There is primarily saltmarsh (<i>Juncus krausii</i>) with some raupo reedland and manuka-Coprosma shrubland. The Inlet is largely surrounded by indigenous shrub land.	Primarily indigenous cover including a sequence of ecosystems. While there has been hydrological change because of the causeway the culvert is of sufficient size to allow flushing. The embayment itself contains few obvious human structures. Generally there is a low level of non-natural sounds, odours and light (except when vehicles cross the unsealed road causeway which has a low level of usage)	SW	H	0.60
D9/WM22	Cut-off arm of Westhaven Inlet	This is a small Inlet embayment cut-off by the road causeway. There is saltmarsh in the lower reaches and a raupo dominant wetland upstream. There are pine trees and native shrubs on the true right margins. The unit adjoins pasture on the true left margins.	Largely indigenous cover with few pest species. There are a few obvious human structures as the road causeway is excluded. There is a low level of non-natural sounds, odours and light.	SW	H	0.56
D10/01	Te Rae	Alluvial plains with a mature remnant of mixed podocarp forest with mixed broadleaved species. The remnant appears to be relatively intact and appears to be at least partly fenced. There is a small area of kanuka dominant forest in the northwest	Mature indigenous forest patch in good condition on alluvial plains. There has been minimal human-mediated hydrological and landform change and there are no obvious human structures apart from fencing. There is a low level of non-natural sounds, odours and light.	AL	O	0.79
D10/02	Te Rae	Hill slopes with native podocarps-rata/mixed broadleaved- beech forest with younger forest on the eastern margin with farmland	Indigenous vegetation with much being relatively mature indigenous forest. Part of a larger area of indigenous vegetation. Minimal human-mediated	ER	O	0.65

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
			hydrological and landform change. No obvious human structures. Low level of non-natural sounds, odours and light.			
D10/03	Te Rae	Alluvial flats & lower slopes primarily in pasture. There are shelterbelts, small patches of woody vegetation, some roads and scattered buildings		AL	T	
D11/01	Te Rae	Part of a small patch of relatively mature indigenous forest with kahikatea within a pasture matrix.	Relatively mature indigenous forest. Minimal human-mediated hydrological and landform change. Few obvious human structures. Low level of non-natural sounds, odours and light.	AL	H	0.68
D17/01	Farewell Spit	Introduced grasses and conifers (including macrocarpas), lighthouse, buildings and air-strip.		DU	T	
E7/01	Whanganui Inlet entrance	Harbour entrance including the flood and ebb tide deltas. Immediate shore is sand and there is an extensive bar system. Adjoins a marine reserve and wildlife management reserve. Limited fishing activity because of the location.	Natural surface with indigenous cover (minimal) and infauna. Minimal human-mediated hydrological and landform change. No obvious human structures. Limited fishing activity because of the location. There is a very low level of non-natural sounds, odours and light.	MN	O	0.81
E7/02	Whanganui South Head Cone	Coastal faces & hill slopes with exposed rock (limestone). The vegetation is primarily mixed broadleaved shrubland and kanuka-manuka shrubland in a matrix of introduced grasses and introduced grasses with native shrubs	Unit includes natural surface (rock). Much of the unit is indigenous vegetation with few pest plants. Minimal human-mediated hydrological and landform change. Few obvious human structures. There is a low level of non-natural sounds, odours and light.	ER-o-s	H	0.46
E7/03	Whanganui	Steep coastal faces at South Head. The unit	Largely indigenous vegetation with	ER-o-s	H	0.51

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
	South Head Cone	includes areas of exposed rock (limestone) and some sand. The vegetation is primarily mixed broadleaved & manuka - kanuka shrubland with some smaller patches of introduced grasses. .	relatively few pest plants. The unit includes exposed rock. Minimal human-mediated hydrological and landform change. There are no obvious human structures. There is a very low level of non-natural sounds, odours and light.			
E7/WL58	Whanganui Inlet northern head	Blow-out transverse dune with limited areas of vegetation (probably introduced grasses including marram and some native shrubs)	Primarily natural surface. Minimal human-mediated hydrological and landform change. No obvious human structures. There is a very low level of non-natural sounds, odours and light.	DU	H	0.61
E7/WL59	Whanganui Inlet northern head	Supratidal sands and vegetated low dune area at the northern entrance to Whanganui Inlet. Vegetation includes grasses – some with native shrubs, and indigenous shrubland.	Includes natural surfaces (sand). The vegetation is relatively mature for site conditions and natural disturbance history, although non-native plants are present. There has been minimal human mediated hydrological or landform change. There is a very low level of non-natural sounds, odours and light.	DU	H	0.54
E8/01	Whanganui Inlet northern head	Rocky coastal faces, often steep, adjoining the blow-out dune. The vegetation is primarily mixed broadleaved shrubland and kanuka-manuka shrubland. There are also patches of introduced grasses, some with native shrubs	Natural surface and largely indigenous vegetation with few pest plants. There are some linking patches of introduced grasses. Minimal human-mediated hydrological and landform change. No obvious human structures. There is a very low level of non-natural sounds, odours and light.	ER-o-s	H	0.46
E8/03	Whanganui Inlet northern head	Rocky head lands and hillfaces with kanuka- manuka and mixed broadleaved shrubland and a small amount of low forest	Includes natural surface and areas dominated by indigenous vegetation. There has been minimal human	ER-o-s	H	0.46

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		in a couple of gullies.	mediated hydrological or landform change. There are no obvious human structures. There is a very low level of non-natural sounds, odours and light.			
E8/WL24	Catchment of Whanganui Inlet	Pine plantation with native shrubs		DU	T	0.21
E8/WL25	Catchment of Whanganui Inlet	Rough pasture with gorse patches. Some farm tracking, structures & buildings. Road		AL	T	0.15
E8/WL26	Catchment of Whanganui Inlet	Freshwater wetland grading to saline wetland at White Pine Creek. Low coastal dunes with manuka scrub & gorse on dunes	Primarily indigenous vegetation. Minimal human mediated hydrological or geomorphological modification. Few obvious human structures. Low level of non-natural sounds, odours and light.	AL	H	0.51
E8/WL54	Catchment of Whanganui Inlet	Steep rock headland north side Whanganui Harbour entrance with rock outcrops, kanuka & manuka & mixed broadleaved shrubland. Limited tracking		ER-o-s	T	
E8/WL57	Catchment of Whanganui Inlet	Hill slopes with mixed broadleaved shrubland and forest and limited areas of kanuka dominant forest and shrubland on spurs.	Largely indigenous vegetation with few pest plants. Includes some moderately mature indigenous forest. Minimal human-mediated hydrological and landform change. No obvious human structures. Low level of non-natural sounds, odours and light.	ER	H	0.54
E8/WM14	Catchment of Whanganui Inlet	Saltmarsh (oioi, <i>Juncus kraussii</i> , marsh ribbonwood) on both sides of White Pine Creek	Indigenous vegetation with few pest plants. Relatively mature indigenous vegetation for site conditions and natural disturbance history. Minimal	SW	O	0.67

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
			human-mediated hydrological and geomorphological change. Very low level of non-natural sounds, odours and light.			
E9/01	Catchment of Whanganui Inlet	Hill slopes with road, tracking/ driveway, buildings & young scrub		ER	T	
E9/02	Catchment of Whanganui Inlet	Hill slopes adjoining Whanganui Inlet. Vegetation includes regenerating mixed broadleaved forest with scattered podocarps. Small section of road.	Indigenous vegetation including relatively mature indigenous forest. Part of a buffer for an aquatic ecosystem of high or outstanding natural character. Minimal human-mediated hydrological and landform change. No obvious human structures. Low level of non-natural sounds, odours and light.	ER	H	0.53
E9/03	Catchment of Whanganui Inlet	Hill slopes with manuka-kanuka & mixed broadleaved forest and shrubland with some wilding pines	Largely indigenous vegetation with relatively few pest plants. Minimal human-mediated hydrological and landform change. No obvious human structures. Low level of non-natural sounds, odours and light.	ER	H	0.48
E9/04	Catchment of Whanganui Inlet	Hill slopes with road, drive, buildings and young mainly native scrub		ER	T	
E9/05	Catchment of Whanganui Inlet	Hill slopes with mixed broadleaved shrubland & young forest and kanuka-manuka shrubland & low forest. Unit includes a section of the road around the Inlet and some tracking	Predominantly indigenous vegetation with few pest plants. Minimal human mediated hydrological and landform change except for the road. Few obvious human structures. Low level of non-natural sounds, odours and light.	ER	H	0.44
E9/WL28	Catchment of	Young manuka dominant scrub on hill		ER	T	

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
	Whanganui Inlet	slopes; some sprayed				
E9/WL29	Catchment of Whanganui Inlet	Hill slopes with pine plantation		ER	T	
E9/WL30	Catchment of Whanganui Inlet	Young manuka dominant scrub with some emergent pines on hill slopes. Road & some tracking		ER	T	
E9/WL31	Catchment of Whanganui Inlet	Mostly logged (more than indicated on aerial) pine (and eucalypt) plantations with some patches mixed broadleaved forest and scrub on hill slopes. Tracking & skid sites		ER	T	
E9/WL33	Catchment of Whanganui Inlet	Pine plantation on hill slopes with some mixed broadleaved shrubland		ER	T	
E9/WL35	Catchment of Whanganui Inlet	Freshwater wetland:- flax- native shrub wetland and a small section of road	Largely indigenous vegetation with few pest plants. Part of a continuum of indigenous ecosystems from marine to terrestrial. Minimal human-mediated hydrological and landform change. Few obvious human structures. Low level of non-natural sounds, odours and light.	AL	H	0.61
E9/WL38	Catchment of Whanganui Inlet	Lower hill slopes with primarily manuka dominant shrubland, limited young mixed broadleaved shrubland. Road around estuary & tracking		ER	T	
E9/WM15	Whanganui Inlet cut-off arm	Large tidal inlet cut-off by road causeway. Upper intertidal flats. Sea grass not seen. Causeway. Wildlife management reserve	Indigenous vegetation without pest plants. Some protection from human harvest. Few obvious human structures	SW	H	0.53

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
			apart from the causeway and road. Low level of non-natural sounds, odours and light.			
E9/WM16	Whanganui Inlet cut-off arm	Upper tidal flats cut-off by road causeway. Good amounts of sea grass & amphibola. Native forest catchment	Indigenous vegetation without pest plants. Indigenous cover and infauna. The catchment is native forest. There are minimal human mediated hydrological and geomorphological changes apart from the effect of the causeway on sedimentation patterns. There are a few obvious human structures apart from the causeway and road. There is generally a low level of non-natural sounds, odours and light.	SW	H	0.60
E9/WM17	Whanganui Inlet cut-off arm	Upper tidal flats cut-off by road causeway. Good amounts of sea grass & amphibola. Native forest catchment	Indigenous vegetation without pest plants. Indigenous cover and infauna. The catchment is native forest. There are minimal human mediated hydrological and geomorphological changes apart from the effect of the causeway on sedimentation patterns. There are a few obvious human structures apart from the causeway and road. There is generally a low level of non-natural sounds, odours and light.	SW	H	0.62
E9/WM18	Whanganui Inlet cut-off arm	Small catchment cut-off by road causeway. Some sea grass. Fringing saltmarsh	Indigenous cover and infauna. There is a generally a low level of non-natural sounds, odours and light.	SW	H	0.49
E9/WM20	Whanganui Inlet cut-off	Upper tidal flats cut off by road causeway. Inlet follows road to eastern coast. Silty	Indigenous vegetation without pest plants. Indigenous cover and infauna.	SW	H	0.62

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
	arm	sand flats with fringing saltmarsh. Road causeway & culvert	There are minimal human mediated hydrological and geomorphological changes apart from the effect of the causeway on segmentation patterns. There are a few obvious human structures apart from the road and its causeway. There is generally a low level of non-natural sounds, odours and light.			
E10/01	North of Seaford	Coastal wetland that is primarily saltmarsh with some ecotonal manuka shrubland in the south and some fringing regenerating mixed broadleaved low forest. Located between the coast road and the sea. The area adjoining and to the south of a short beach access way is not included as there is a relatively high level of pest plants	The unit is largely indigenous vegetation with relatively few pest plants. Includes a sequence of ecosystems on a small scale. There are few obvious human structures. Relatively low level of non-natural odours and light and seasonally variable moderate-low levels of traffic noise.	AL	H	0.57
E10/02	Puponga - Pakawau	Extensive area of intertidal flats from Puponga to Pakawau. This is the southern continuation of unit B12/04 but without the protective nature reserve status and with a more impacted catchment.		MN	H	0.59
E10/03	Pakawau Estuary	Unit includes the entire estuary (65ha) which is primarily intertidal with limited subtidal channels. Geology of sandstones, mudstones and schists. The substrate consists of silty sands in the upper reaches with cobble flats in the lower reaches. The bridge across the entrance is relatively wide which limits the narrowing effect on tidal flows. This bridge links to a partial	Sea grass present. Indigenous cover and infauna. Modified margins reduce buffering potential from agricultural land uses. Generally minimal human-mediated hydrological and geomorphological change (excluding bridge & partial causeway). Few obvious human structures. Generally low level of non-natural sounds, odours and light	SW	H	0.58

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		causeway. The flood tide delta is limited in extent. Saltmarsh (primarily <i>Juncus kraussii</i> with some oioi) fringes much of the estuary, especially in the south and west. There are also areas of salt herbfield. Sea grass is present in the lower reaches of the estuary. Amphibola numbers are high in places. Most of the margins are in pasture. There are also patches of gorse with manuka and flax. Catchment is 79% native forest; 11% plantation forestry, 9% pasture.	(except for seasonally variable levels of traffic across the bridge in lower reaches and the road to west coast).			
E10/04	Pakawau catchment	Hill slopes primarily with young kanuka-manuka shrubland and some mixed broadleaved shrubland and possibly small amounts of low mixed broadleaved forest in some sections of gullies		ER	T	0.41
E10/05	Pakawau catchment	Hill slopes with mixed broadleaved –beech forest with patches kanuka forest on upper spurs and ridges	Relatively mature indigenous forest. Minimal human-mediated hydrological and landform change. Few obvious human structures. Low level of non-natural sounds, odours and light.	ER	H	0.61
E10/06	Pakawau catchment	Hill slopes primarily with young kanuka-manuka shrubland and limited areas of young mixed broadleaved shrubland in some sections of gullies		ER	T	0.42
E10/07	Pakawau Estuary Island	Small low island with introduced conifers and some mixed broadleaved shrubland and low forest		ER	T	0.31
E18/01	Farewell Spit	Shallow subtidal and intertidal sand flats	Extensive areas of natural surface	SW	O	0.90

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		within the Farewell Spit Nature Reserve and beyond the end of the sandspit position in December 2012. Native infauna Access without a permit is not permitted.	(shallow subtidal and intertidal sand flats). Indigenous cover and infauna. Harvest/removal of any native biota is prohibited. Minimal human-mediated hydrological and landform change. No obvious human structures. Absence of non-natural sounds, odours and light.			
F6/01	Te Hapu	This unit contains several patches of mixed broadleaved coastal forest on limestone bluffs. The northern patch is dominated by <i>Griselinia lucida</i> and ngaio. The second patch includes <i>Griselinia lucida</i> -nikau forest; and mapou - <i>Meterosideros perforata</i> shrub land	The unit is dominated by indigenous vegetation and there is some natural surface (rock). There has been minimal human mediated hydrological or landform change. There are a few obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	O	0.63
F6/02	Te Hapu	This unit contains intertidal and supratidal rock platforms and sands as well as the lower sections of coastal cliffs with rock outcrops. The vegetation on the lower sections of coastal cliffs is a mixture of native and introduced (mainly introduced grasses) plants. It includes salt herbfield, ferns and shrubs with small patches of mixed broadleaved shrubland (dominated by ngaio with nikau) and flax on some coastal cliffs.	Primarily indigenous vegetation including areas that are relatively mature for site conditions and natural disturbance regime. There has been minimal human mediated hydrological or landform change. There are no obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	O	0.71
F6/04	Te Hapu	This unit contains intertidal and supratidal sands south of Te Hapu. While the unit includes a small area of rocky head lands in the vicinity of Te Hapu, generally the	The unit is primarily natural surface (sand and rock). There has been minimal human mediated hydrological or geomorphological change. There are no	ER	O	0.68

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		dramatic cliffs that are present to the north are not present in this unit.	obvious human structures. There is a low level of non-natural sounds, odours and light.			
F6/05	Te Hapu	Terrace and rolling hill country with pasture, small outcrops of limestone rock, and small patches of native shrubland.		ER	T	
F6/06	Te Hapu	This unit consists of several patches of massive limestone rock outcrops and cliffs with flax, native shrub land & low forest as well as introduced grasses. The indigenous forest is primarily kaikomako with other mixed broadleaved species and nikau. The mixed native shrub land is dominated by kanaka, manuka and <i>Metersideros perforata</i> with mixed broadleaved species also present.	There are large areas of natural surface (rock). There are patches of native vegetation, some of which may be moderately mature for site conditions. There has been minimal human mediated hydrological or landform change. There are no obvious human structures. There is a low level of non-natural sounds, odours and light.	ER-s	H	0.47
F7/01	Te Hapu	Hillslopes between mean high water springs and the base of limestone bluffs. The cover is primarily pasture grass with patches of mixed native shrubland and low forest especially around boulders. Cattle and sheep are grazed.		ER	T	
F7/02	Te Hapu	Limestone bluffs with mixed native shrub land and some tongues of grass. At the top of the bluffs there is mixed native shrubland which is dominated by mixed broadleaved species and <i>Metersideros perforata</i> . Other species include kanuka-manuka, nikau, flax, kiekie and various <i>Coprosma</i> species.	Includes natural surface (rock) and indigenous vegetation. There has been minimal human mediated hydrological or landform change. There are no obvious human structures. There is a low level of non-natural sounds, odours and light.	ER-s	H	0.47

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
F7/03	Te Hapu	Intertidal rock platforms, intertidal and supratidal sands and adjoining rocky cliffs with native vegetation. This vegetation includes salt herbfields and low native shrubs (e.g. Veronica sp, prostrate ngaio) and ferns in cracks	Largely natural surface. Minimal human-mediated hydrological and landform change. No obvious human structures. Low level of non-natural sounds, odours and light.	MN	O	0.67
F7/04	Te Hapu	Steep coastal limestone bluffs and rock outcrops with several steep sided incised creeks. The vegetation is primarily mixed native shrubland (including Meterosideros perforata, Hymenantha, various Coprosma species, tauhinu, nikau, Olearia species) with flax patches. Gullies are primarily mixed broadleaved forest with emergent nikau. There are small patches of introduced grasses. There are large blocks of limestone along mean high water springs.	The unit includes natural surface and predominantly indigenous vegetation. Some of the latter is relatively mature for the site conditions. There has been minimal human mediated hydrological or landform change. There are no obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	H	0.54
F7/05	Te Hapu	Limestone bluffs primarily with low mixed broadleaved shrubland (as well as Collespermum, nikau, kanuka-manuka, mingimingi and Meterosideros perforata. There are patches of grass between the rock outcrops.	The unit includes natural surface and predominantly indigenous vegetation although some grass patches are present. There has been minimal human mediated hydrological or landform change. There are no obvious human structures. There is a low level of non-natural sounds, odours and light.	ER-s	H	0.44
F7/06	Whanganui Inlet catchment	Whanganui Inlet margins and hill slopes with manuka- kanuka shrubland & low forest; mixed broadleaved shrubland & forest with pockets rata & nikau.	Largely indigenous vegetation with relatively few pest plants. Part of a buffer for an aquatic ecosystem of high or outstanding natural character.	ER	H	0.47

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		Occasional small building & some tracking. Boundaries have been drawn to exclude planted pines as much as possible.	Minimal human-mediated hydrological and landform change except for earthworks associated with some tracking. There are few obvious human structures. There is a low level of non-natural sounds, odours and light.			
F7/07	Whanganui Inlet catchment	Upper hill slopes on western side of Whanganui Inlet. Vegetation includes manuka- kanuka shrubland & low forest; mixed broadleaved shrubland & forest. The latter includes pockets with scattered emergent rimu, rata & nikau. There is some tracking/ local roading	Largely indigenous vegetation with few pest plants. Part of a continuum of terrestrial ecosystems. There has been minimal human-mediated hydrological and landform change (except for some earthworks associated with the roading. Few obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	H	0.51
F7/08	Whanganui Inlet catchment	Lower hill slopes, valleys and harbour headlands on the south western section of Whanganui Inlet. Vegetation primarily includes valleys & lower slopes of mature podocarp/ mixed broadleaved- beech forest with northern rata; some patches of younger mixed broadleaved forest with scattered emergent podocarps ; and mixed broadleaved shrubland on water margin rocky headlands. Unit includes part of the narrow unsealed road on south side of Inlet	Mostly mature indigenous forest. Part of a continuum of terrestrial and marine ecosystems. Part of a buffer for an aquatic ecosystem of high or outstanding natural character. Minimal human-mediated hydrological and landform change. Few obvious human structures. There is a low level of non-natural sounds, odours and light except for occasional vehicle use	ER	O	0.65
F7/WL8	Whanganui Inlet	Small island with mixed broadleaved - manuka shrubland	Largely indigenous vegetation with few pest plants. Minimal human-mediated hydrological and landform change. Few	ER	H	0.50

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
			obvious human structures. There is a low level of non-natural sounds, odours and light.			
F7/WL9	Whanganui Inlet	Small island with mixed broadleaved - manuka shrubland	Largely indigenous vegetation with few pest plants. Minimal human-mediated hydrological and landform change. Few obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	H	0.50
F7/WL15	Whanganui Inlet	Small island with mixed broadleaved - manuka shrubland	Largely indigenous vegetation with few pest plants. Minimal human-mediated hydrological and landform change. Few obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	H	0.45
F7/WL16	Whanganui Inlet catchment	Peninsula opposite harbour entrance with mature podocarp- rata/ mixed broadleaved forest & rata-mixed broadleaved forest on hill slopes and valleys. Narrow water-margin fringe flaxes & rushes. Inland unsealed road with some large cuttings	Primarily mature indigenous forest in good condition. Part of a continuum of terrestrial ecosystems. Part of a buffer for an aquatic ecosystem of high or outstanding natural character. Minimal human-mediated hydrological and landform change (except for road earthworks). Few obvious human structures (except for road). There is a low level of non-natural sounds, odours and light except for localised effect of occasional traffic on the road	ER	O	0.82
F7/WM1	Whanganui Inlet	This is the main southern intertidal & subtidal section of Whanganui Inlet that has formed much of the Inlet's no-take	Largely indigenous cover and infauna. No human-harvest of fish stocks has been permitted since 1994. Minimal	SW	O	0.86

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		marine reserve since 1994. The Inlet is primarily intertidal flats with some sea grass and fringing saltmarsh with limited areas of channels. The peat stained waters from the Mangarakau Swamp have been artificially channelled into the SW corner of the Inlet. There are scattered moorings and buoy channel markers & some old wharf remains. Mangarakau Wharf area is a separate unit	human-mediated hydrological and geomorphological change except for the inlet of peat stained waters from the Mangarakau Swamp. There are few obvious human structures except for a few scattered moorings & channel markers & old wharf remains. There is a low level of non-natural sounds, odours and light.			
F8/01	Whanganui Inlet catchment	This is a large forest unit of podocarp/mixed broadleaved forest with beech on hill slopes. There are a few areas of younger native forest and shrubland although most such areas have been assigned to other units. The unit includes part of the unsealed road around the east of the Inlet where the unit extends to the Inlet margins.	Primarily mature indigenous forest. Part of a continuum of terrestrial ecosystems. Part of a buffer for an aquatic ecosystem of high or outstanding natural character. Minimal human-mediated hydrological and landform change. Few obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	O	0.73
F8/02	Whanganui Inlet catchment	Manuka dominant shrubland with a few patches of mixed broadleaved shrubland on hill slopes with some clearings. Some tracking & scattered buildings		ER	T	
F8/WL17	Whanganui Inlet catchment	Hill slopes with young manuka dominant shrubland and a small amount of mixed broadleaved dominant shrubland & forest		ER	T	
F8/WL18	Whanganui Inlet catchment	Hill slopes with manuka dominant shrubland & low forest; and areas of mixed broadleaved dominant low forest.	Largely indigenous vegetation with few pest plants. Part of a continuum of terrestrial ecosystems and part of a buffer for an aquatic ecosystem of high	ER	H	0.45

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
			or outstanding natural character. Minimal human-mediated hydrological and landform change. Few obvious human structures apart from a small section of Inlet margin road. Generally low level of non-natural sounds, odours and light except for some traffic.			
F8/WL19	Whanganui Inlet catchment	Hill slopes with manuka dominant scrub and mixed broadleaved dominant scrub & forest. Unit includes the road around the eastern side of the Inlet & some internal tracking	Largely indigenous vegetation with few pest plants. Part of a continuum of terrestrial ecosystems and part of a buffer for an aquatic ecosystem of high or outstanding natural character. Minimal human-mediated hydrological and landform change. Few obvious human structures. Generally low level of non-natural sounds, odours and light except for some traffic.	ER	H	0.45
F8/WL20	Whanganui Inlet catchment	Low dune with manuka dominant scrub & some emergent pines		DU	T	
F8/WL21	Whanganui Inlet catchment	Hill slopes primarily with manuka-kanuka dominant shrubland with small amounts of mixed broadleaved shrubland. Small section of road		ER	T	
F8/WL22	Whanganui Inlet catchment	Hill slopes with manuka dominant shrubland and mixed broadleaved dominant shrubland & young forest with some native conifers. Tracking & several buildings		ER	T	
F8/WM8	Whanganui Inlet	This area of intertidal flats with sea grass has been cut-off from the main harbour by	Largely indigenous cover and infauna. Catchment largely indigenous	SW	O	0.63

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		a road causeway. These upper intertidal flats are mainly sand with more muddy areas near margins with saltmarsh fringe. Banjo Creek. The area has been part of a marine reserve since 1994	vegetation. Few obvious human structures except for the causeway. Low level of non-natural sounds, odours and light with a small impact from intermittent traffic by the road causeway. There has been no human harvest of marine biota since 1994.			
F8/WM9	Whanganui Inlet	This is an elevated brackish area with saltmarsh (oioi, <i>Juncus kraussii</i>). It was formed by causeway constructed for old road (not now used) with the outlet cut through rock.	Largely indigenous cover and infauna. Catchment largely indigenous vegetation. Few obvious human structures except for the low causeway associated with the old road. Low level of non-natural sounds, odours and light	SW	H	0.57
F8/WM10	Whanganui Inlet	This small area of intertidal flats with sea grass has been cut-off from the main harbour by a road causeway. The area has been part of a marine reserve since 1994	Largely indigenous cover and infauna. Catchment largely indigenous vegetation. Few obvious human structures except for the causeway. Low level of non-natural sounds, odours and light with a small impact from intermittent traffic by the road causeway. There has been no human harvest of marine biota since 1994.	SW	H	0.43
F8/WM11	Whanganui Inlet	This area of intertidal flats with sea grass has been cut-off from the main harbour by a road causeway. The small catchment contains excellent forest. Scenic Reserve, The area has been part of a marine reserve since 1994	Largely indigenous cover and infauna. Catchment largely indigenous vegetation. Few obvious human structures except for the causeway. Low level of non-natural sounds, odours and light with a small impact from intermittent traffic by the road causeway. There has been no human	SW	H	0.57

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
			harvest of marine biota since 1994			
F8/WM12	Whanganui Inlet	This unit contains the lower reaches of the Wairoa River. It has been partly cut-off from the main harbour by a road causeway and bridge. The main habitat is upper intertidal flats. The Wairoa River brings in relatively large amounts of freshwater and so sea grass is absent from the intertidal flats. The area has been part of a marine reserve since 1994	Largely indigenous cover and infauna. There is a large catchment with indigenous vegetation, mostly indigenous forest. There are few obvious human structures except for the causeway. There is a low level of non-natural sounds, odours and light with a small localised impact from intermittent traffic by the road causeway. There has been no human harvest of marine biota since 1994	SW	O	0.76
F9/WL27	Whanganui Inlet catchment	Young manuka & gorse scrub on hill slopes; some sprayed		ER	T	
F9/WL37	Whanganui Inlet catchment	Hillslopes with grass, tracking & some young scrub		ER	T	
F10/01	Pakawau	Alluvial flats with pasture, shelterbelts, roads, small settlement and scattered buildings		AL & ER	T	
F10/02	Pakawau	Hill slopes primarily with mixed broadleaved forest and some shrubland. Some kanuka and beech	Indigenous vegetation with some moderately mature indigenous forest. Minimal human-mediated hydrological and landform change. No obvious human structures. Low level of non-natural sounds, odours and light.	ER	H	0.54
F10/03	Pakawau	Hill slopes with young kanuka-manuka shrubland. There are a few small areas of kanuka dominant low forest and mixed broadleaved forest & shrubland in gullies		ER	T	0.41
G5/01	North of	Hill slopes and valley floor with mixed	Largely indigenous vegetation. There has	ER	H	0.45

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
	Paturau River	broadleaved shrubland & forest	been minimal human-mediated hydrological and landform change. There are few obvious human structures. Low level of non-natural sounds, odours and light.			
G6/01	North of Paturau River	Steep hill slopes with steep sided valleys and some limestone rock outcrops. Cover is primarily mixed broadleaved forest with varying levels of emergent podocarps; mixed broadleaved forest & shrubland and limited areas of kanuka dominant forest & shrubland.	The unit contains indigenous vegetation including some relatively mature indigenous forest. There has been minimal human-mediated hydrological and landform change. There are no obvious human structures. There is a very low level of non-natural sounds, odours and light.	ER	H	0.58
G6/02	North of Paturau River	Steep hill slopes with steep sided valleys. There limestone rock outcrops in the vicinity. The cover is primarily mixed broadleaved forest and shrubland. Some of this forest contains some emergent podocarps and there are limited areas of kanuka dominant forest & shrubland.	The unit contains indigenous vegetation including some relatively mature indigenous forest. There has been minimal human-mediated hydrological and landform change. There are no obvious human structures. There is a very low level of non-natural sounds, odours and light.	ER	H	0.53
G6/03	North of Paturau River	Hill slopes and valley floor with mixed broadleaved shrubland & low forest and lesser amounts of kanuka shrubland & low forest	Largely indigenous vegetation with few pest plants. There has been minimal human-mediated hydrological and landform change. There are few obvious human structures. Low level of non-natural sounds, odours and light.	ER	H	0.45
G7/01	Whanganui Inlet catchment	Inlet peninsula and margins with kanuka-manuka dominant shrubland & low forest. There are some areas of mixed	The unit contains largely indigenous vegetation with few pest plants. It is part of a buffer for an aquatic ecosystem of	ER	H	0.44

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		broadleaved shrubland & low forest (mainly along the Inlet's southern margin). There is the occasional emergent tanekaha	high or outstanding natural character. There has been minimal human-mediated hydrological and landform change except for the cut channel draining part of the Mangarakau Valley into Whanganui Inlet. There are few obvious human structures. There is a low level of non-natural sounds, odours and light except for some traffic.			
G7/02	Whanganui Inlet catchment	Inlet margins, hill slopes and valleys with indigenous vegetation. The dominant vegetation is kanuka-manuka shrubland & low forest. Other vegetation includes relatively mature podocarp/mixed broadleaved – beech forest ; mixed broadleaved shrubland and forest some with scattered podocarps and beech trees; and mixed broadleaved- beech shrubland & low forest with emergent podocarps	Largely indigenous vegetation with few pest plants. It includes some relatively mature and moderately mature indigenous forest. There has been minimal human-mediated hydrological and landform change and few obvious human structures apart from unsealed road around some of the Inlet margins within the unit. There is generally a low level of non-natural sounds, odours and light except for some traffic along the road	ER	H	0.46
G7/03	Whanganui Inlet catchment	Part of the southern margins of the Inlet. Indigenous vegetation including mixed broadleaved-beech shrubland & forest; manuka dominant shrubland; Mixed broadleaved-beech forest with podocarps	Indigenous vegetation including some relatively mature indigenous forest. Minimal human-mediated hydrological and landform change. Few obvious human structures. Low level of non-natural sounds, odours and light.	ER	H	0.50
G7/WL5	Whanganui Inlet catchment	Manuka dominant scrub with some emergent pines on hillslopes. Road		ER	T	0.34
G7/WL13	Whanganui	Old wharf area with reclamation, sheds,		ER	T	

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
	Inlet catchment	caravans, pine and parking area				
G7/WM2	Whanganui Inlet catchment	This area of intertidal flats has been cut-off from the main harbour by a road causeway and bridge. Mangarakau Stream tidal reaches with sea grass and minimal fringing saltmarsh. The area has been part of a marine reserve since 1994.	Largely indigenous cover and infauna. Catchment largely indigenous vegetation. Few obvious human structures except for the causeway. Low level of non-natural sounds, odours and light with a small impact from intermittent traffic by the road causeway. There has been no human harvest of marine biota since 1994	SW	O	0.66
G7/WM3	Whanganui Inlet catchment	This area of intertidal flats has been cut-off from the main harbour by a road causeway. The flats contain sea grass. There are good numbers of Amphibola and limited fringing saltmarsh. The unit includes the road causeway. The area has been part of a marine reserve since 1994	Largely indigenous cover and infauna. Catchment largely indigenous vegetation. Few obvious human structures except for the causeway. Low level of non-natural sounds, odours and light with a small impact from intermittent traffic by the road causeway. There has been no human harvest of marine biota since 1994	SW	H	0.57
G7/WM4	Whanganui Inlet catchment	This area of intertidal flats in the lower reaches of Muller Creek has been cut-off from the main harbour by a road causeway. There are good numbers of Amphibola and limited fringing saltmarsh. No sea grass was observed. The unit includes the road causeway & bridge. The area has been part of a marine reserve since 1994.	Largely indigenous cover and infauna. Catchment largely indigenous vegetation. Few obvious human structures except for the causeway. Low level of non-natural sounds, odours and light with a small impact from intermittent traffic by the road causeway. There has been no human harvest of marine biota since 1994	SW	H	0.56
G7/WM5	Whanganui Inlet catchment	This area of intertidal flats in the lower reaches of Island Creek has been cut-off	Largely indigenous cover and infauna. Catchment largely indigenous	SW	O	0.66

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		from the main harbour by a road causeway & bridge. There is some fringing saltmarsh (oioi). The unit includes the road causeway. The area has been part of a marine reserve since 1994.	vegetation. Few obvious human structures except for the causeway. Low level of non-natural sounds, odours and light with a small impact from intermittent traffic by the road causeway. There has been no human harvest of marine biota since 1994			
G7/WM6	Whanganui Inlet catchment	This area of intertidal flats has been cut-off from the main harbour by a road causeway. The unit includes the road causeway. The area has been part of a marine reserve since 1994	Largely indigenous cover and infauna. Catchment largely indigenous vegetation. Few obvious human structures except for the causeway. Low level of non-natural sounds, odours and light with a small impact from intermittent traffic by the road causeway. There has been no human harvest of marine biota since 1994	SW	H	0.51
G7/WM7	Whanganui Inlet catchment	This area of intertidal flats has been cut-off from the main harbour by a road causeway. The unit includes the road causeway. The area has been part of a marine reserve since 1994	Largely indigenous cover and infauna. Catchment largely indigenous vegetation. Few obvious human structures except for the causeway. Low level of non-natural sounds, odours and light with a small impact from intermittent traffic by the road causeway. There has been no human harvest of marine biota since 1994	SW	H	0.51
G7/WM22	Whanganui Inlet catchment	This is the marine area around old Mangarakau Wharf & boat launching area that is excluded from the Westhaven (Te Tai Tapu) Marine Reserve. The unit excludes the wharf & launching ramp (in	Largely indigenous cover and infauna. Catchment largely indigenous vegetation. Few obvious human structures within unit but land unit adjoining includes ramp and old wharf.	SW	H	0.63

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		unit WL13)	Generally low level of non-natural sounds, odours and light with a small impact from intermittent traffic and boat ramp activities			
G9/RU27	Mount Burnett	Pine plantation on hill slopes		ER	T	
G10/RU1	Ruataniwha Inlet	North Ruataniwha outer tidal flats. This is an extensive area of low tide flats protected by an offshore sand barrier. There is an area of relict saltmarsh. The predominant habitat is sand & shell flats with some detrital basins & sea grass beds	Largely indigenous cover and infauna. Minimal human-mediated hydrological and geomorphological change. Few obvious human structures. Low level of non-natural sounds, odours and light.	MN	O	0.70
G10/RU5	Ruataniwha Inlet	Primarily saltmarsh (<i>Juncus kraussii</i> , <i>oioi</i>) with lesser amounts of salt herbfield and intertidal flats, and a small area of gorse scrub margins.	Largely indigenous cover and infauna. Minimal human-mediated hydrological and geomorphological change. Few obvious human structures. Low level of non-natural sounds, odours and light.	SW	H	0.60
G10/RU6	Ruataniwha Inlet	North compartment Ruataniwha: extensive sand flats, very little low tide freshwater drainage. Mid tide sand flats with diatoms. Some fringing saltmarsh. Sea grass previously found in this area was not sighted in this assessment (probably buried)	Largely indigenous cover and infauna. Minimal human-mediated hydrological and geomorphological change. Few obvious human structures. Low level of non-natural sounds, odours and light except for traffic noise by the road.	SW	O	0.70
G10/RU7	Ruataniwha catchment	Pasture & shelterbelts on alluvial flats. Narrow fringe gorse, wider in some areas with mixed broadleaved scrub. Areas rock rip-rap. Several buildings, unsealed roads		AL	T	0.13
G10/RU8	Ruataniwha catchment	Planted pines & some grass. Gorse dominant scrub, manuka-mixed broadleaved scrub, small pond area		DU	T	0.25

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
G10/RU9a	Ruataniwha	Waikato Inlet south arm. It includes saltmarsh & patches salt meadow. Margins are pasture and dune with a=gorse dominant scrub. Some islands of gorse & introduced iceplant	The unit includes largely indigenous cover and infauna although some pest plants are present on the islands. Minimal human-mediated hydrological and landform change. Few obvious human structures. Low level of non-natural sounds, odours and light.	SW	H	0.54
G10/RU9b	Ruataniwha catchment	Dune spit with gorse dominant scrub, introduced grasses, some native scrub; buildings		DU	T	0.26
G10/RU10	Ruataniwha	Waikato Inlet north arm. This is a small inlet between the main road and the settlement on the dune spit. There are sand flats in the lower reaches while the upper flats have more silt with saltmarsh & a diverse native salt herbfield. There is a northern stop bank dominated by pines & gorse. There are areas sand accretion & saltmarsh dieback. There are noise effects from the road traffic and the settlement and some retaining walls on the margins.	Much of the unit includes largely indigenous cover and infauna. The northern stopbank has some alien plants. There has been minimal human-mediated hydrological and landform change except for the northern stopbank and some retaining walls in the east and some increase in nutrients from the catchment. Few obvious human structures. There is generally a low level of non-natural sounds, odours and light except for traffic noise from the state highway and the adjoining settlement on the sand spit.	SW	H	0.62
G10/RU11	Ruataniwha catchment	Sand spit with totara forest/ treeland, centre road & houses/baches among the trees. Seawall on outer and much of inner coast		DU	T	0.31
G10/RU12	Ruataniwha catchment	Escarpment & slopes with emergent wattles, mixed broadleaved forest and		ER	T	0.31

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		scrub, kanuka & manuka scrub. Grass areas with introduced trees. Road				
G10/RU13	Ruataniwha catchment	Podocarp/ mixed broadleaved forest remnant on alluvial flats on the western side of Waikato Inlet. Unfenced	Mature indigenous forest although the patch is unfenced. Minimal human-mediated hydrological and landform change. Few obvious human structures. Low level of non-natural sounds, odours and light.	AL	O	0.70
G10/RU14	Ruataniwha Inlet	Series low islands in Ruataniwha Inlet dominated by manuka shrubland with varying levels of emergent (planted) pines	The unit includes areas that are largely indigenous vegetation with relatively few pest plants. However several areas dominated by emergent pines are also included. Minimal human-mediated hydrological and landform change. Few obvious human structures. There is generally a low level of non-natural sounds, odours and light.	DU	H	0.47
G10/RU15	Ruataniwha Inlet	Upper tidal flats in northern compartment with saltmarsh & limited areas of open sand flats	Largely indigenous cover and infauna. Minimal human-mediated hydrological and geomorphological change. Few obvious human structures. Low level of non-natural sounds, odours and light.	SW	O	0.64
G10/RU16	Ruataniwha Inlet	Upper estuary tidal flats with saltmarsh cut off by road causeway	Largely indigenous cover and infauna. Few obvious human structures except for a road causeway.	SW	H	0.47
G10/RU17	Ruataniwha catchment	Hillslopes with mosaic of houses, tracking, native & introduced scrub, road		ER	T	0.28
G10/RU18	Ruataniwha catchment	Hillslopes in pasture with native scrub & low forest in upper gullies & slopes. Some trackings & buildings		ER	T	0.20

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
G10/RU19	Ruataniwha catchment	Scrub regeneration on hillslopes. Pasture & cleared scrub		ER	T	0.26
G10/RU20	Ruataniwha catchment	Pasture on easy hill country. Farm tracks & roads & some buildings		ER	T	0.12
G10/RU21	Ruataniwha catchment	Escarpment & riparian margins with native forest and scrub & scattered emergent introduced trees. Road, tracks & scattered buildings		ER	T	0.36
G10/RU22	Ruataniwha catchment	Active quarry zone with roads, several buildings, open pits. An area of recent mining now in pasture (Google Earth August 2011 imagery not on aerials), few areas remnant scrub		ER	T	0.02
G10/RU23	Ruataniwha catchment	Pasture & shrubland & small areas scrub in previously disturbed hill country. Limited tracking		ER	T	0.16
G10/RU28	Ruataniwha catchment	Hill slopes with mature podocarp-rata/mixed broadleaved forest. Tree fern-mixed broadleaved forest and kanuka dominant taller shrubland & forest occur on lower slopes. This is a large block of indigenous forest with varying disturbance histories extending well beyond the coastal environment.	This unit is dominated by mature indigenous forest and is part of a larger area of indigenous vegetation. There has been minimal human mediated hydrological or landform changes. No obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	O	0.64
H5/01	Paturau Estuary	14ha estuary. In the lower reaches of the estuary there is a sand and cobble substrate (reflecting the high energy open coast). In the middle reaches there is some marginal saltmarsh and minor amounts of native salt herffield. The riparian	The unit is dominated by natural surface and there is largely indigenous cover and infauna. There has generally been minimal human mediated hydrological or landform change. There is generally a low level of non-natural sounds, odours	SW	H	0.58

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		vegetation is primarily introduced grasses with maram and knobby clubbrush nearer the open coast. The estuary is crossed by a bridge. While the catchment is largely in native vegetation the adjoining lower floodplain is grazed pasture.	and light except for occasional traffic.			
H5/02	Paturau	Steep limestone bluffs with mixed native shrubland and low forest. This cover includes kanuka-manuka, mapou, puka, karaka, nikau, ngaio, mahoe & the occasional flax. The lower slopes dominated by introduced grasses are excluded.	The unit includes natural surface and relatively mature indigenous vegetation for site conditions and disturbance history. There has been minimal hydrological and landform change. There are no obvious human structures. There is generally a low level of non-natural sounds, odours and light.	ER-s	H	0.52
H5/03	Paturau	This unit consists of a narrow band of limestone bluffs with low native mixed broadleaved shrubland. This includes mahoe, nikau & mapou.	This unit includes natural surface and relatively mature indigenous vegetation for site conditions and disturbance history. There has been minimal hydrological and landform change. There are no obvious human structures. There is generally a low level of non-natural sounds, odours and light.	ER-s	H	0.48
H5/04	Paturau south	The unit includes limestone bluffs with mixed broadleaved shrubland, kanuka-manuka shrubland and introduced grasses; as well as gullies dominated by mixed broadleaved shrubland.	The unit includes natural surface and some moderately mature indigenous vegetation for the site conditions. There has been minimal hydrological and landform change. There are no obvious human structures. Low level of non-natural sounds, odours and light.	ER-s	H	0.45
H5/05	Paturau	Upper valleys and hill slopes with mixed	The unit is dominated by indigenous	ER	H	0.48

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		broadleaved shrubland & forest as well as limited areas of kanuka-manuka shrubland.	vegetation. There has been minimal human-mediated hydrological and landform change. There are no obvious human structures. Low level of non-natural sounds, odours and light.			
H5/06	Paturau	Steep hill slopes with mixed broadleaved and kanuka-manuka shrubland and low forest.	The unit is dominated by indigenous vegetation. There has been minimal human-mediated hydrological and landform change. There are no obvious human structures. Low level of non-natural sounds, odours and light.	ER	H	0.00
H5/07	Paturau	Largely alluvial flats and coastal terraces but with some lower hill slopes. Land cover is dominated by introduced grasses (pastoral farming) with some areas of younger scrub.		AL & ER	T	0.00
H5/08	Patarau south	Coastal cliffs with bare rock, mixed native shrubland including mixed broadleaved species, kanuka-manuka, <i>Metrosideros perforata</i> , and native & introduced grasses	Natural surface, indigenous vegetation. Minimal human-mediated hydrological and landform change. No obvious human structures. Low level of non-natural sounds, odours and light.	ER-s-o	H	0.48
H9/01		Alluvial plain forest remnant adjoining an old channel meander loop. Primarily mature podocarp/mixed broadleaved forest.	Mature indigenous forest. Few obvious human structures. Moderate – low level of non-natural sounds, odours and light (some noise from traffic on adjoining road).	AL	H	0.62
H9/RU24	Ruataniwha catchment	Pasture on dissected terrace land. Escarpment by the road with native mixed broadleaved scrub, gullies with riparian manuka dominant scrub		ER	T	0.16

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
H9/RU25	Ruataniwha catchment	Pine plantation on hillslopes		ER	T	0.18
H9/RU26	Ruataniwha catchment	Pasture on hillslopes with rough gorse & rush shrubland near road. Road		ER	T	0.13
H9/RU31	Ruataniwha catchment	Estuarine channel with saltmarsh, intertidal flats and channel. There is a narrow strip of riparian mixed broadleaved & totara on the true right bank and on a couple of levees.	Largely indigenous cover and infauna for the estuarine channel. There is a small area of moderately mature indigenous terrestrial vegetation. Few obvious human structures. Moderate-low level of non-natural sounds, odours and light (there is some traffic noise).	SW	H	0.57
H9/RU32	Ruataniwha catchment	Pasture flats with cattle & sheep. Shelterbelts, some buildings, paved areas & tracks		AL	T	0.05
H10/RU2	Ruataniwha catchment	South end of northern spit. Pine plantations & gorse dominant scrub		DU	T	0.27
H10/RU3	Ruataniwha Inlet	Saltmarsh (<i>Juncus kraussii</i> , oioi), salt herbfield mosaic. Sand blown into lower section. Top section removed by one-way flapgate		SW	H	0.58
H10/RU4	Ruataniwha Inlet	Low section of dune with marram -gorse scrub- introduced ice plant		DU	T	0.21
H10/RU30	Ruataniwha Inlet	Southern delta compartment of Ruataniwha Inlet (Aorere River). Extensive intertidal flats dissected with numerous stream & river drainage channels (cf RU6)		SW	H	0.56
Unique ID	Locality	Summary description	Factors contributing to ranking	Env type	Ranking	NCI
I4/01	Sandhills Creek	This unit includes the mouth of the creek and it's estuary (3.3ha) plus a small area of dunes on the true right. This is a soft	The unit consist primarily of natural surface. There has been a low level of human mediated hydrological change	SW	H	0.51

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		bottom stream that is naturally heavily peat stained. 85% of the estuary catchment is native forest	resulting from increased nutrients from catchment. There are no obvious human structures. There is a low level of non-natural sounds, odours and light.			
14/02	Sandhills Creek	This unit consists of a native forest and shrubland patch on the true left faces adjoining sandhills Creek. It includes mixed broadleaved forest (including karaka, kaikomako, nikau & tree ferns); and mixed broadleaved shrubland and low forest with kanuka-manuka and nikau.	The unit contains indigenous vegetation, including indigenous forest. There has been minimal human mediated hydrological or landform change. There are no obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	H	0.48
14/03	Sandhills Creek north	Open coastal cliffs with mixed native shrubland, rock, rushes and introduced grasses	There has been minimal human mediated hydrological or landform change. There are no obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	H	0.43
14/04	Hansen Creek dunes	Coastal faces with windblown sand in places. Vegetation includes patches of low native shrub land (kanuka-manuka, pohuehue & <i>Meterosideros perforata</i>), introduced grasses including maram, with native shrubs, rushes and flax		ER	T	0.38
14/05	North of Anatori	An extensive area of hill slopes covered with largely native forest. The main vegetation is rata-rimu/mixed broadleaved (kamahi, mahoe) forest. Other vegetation types include kanuka-manuka-mixed broadleaved shrubland and low forest with kiekie and nikau emergents; low mixed broadleaved forest; and a small area of	Largely mature indigenous forest, although there is younger regeneration on the margins. Part of a larger area of indigenous vegetation. There has been minimal human mediated hydrological or landform change. There are no obvious human structures apart from a section of unsealed road. There is a very	ER	O	0.65

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		floodplain kaihikatea regeneration.	low level of non-natural sounds, odours and light.			
14/06	Sandhills Creek	Steep limestone bluffs with mixed native shrub land, nikau and patches of introduced grasses. The native shrub land is primarily mixed broadleaved shrubland with <i>Metersideros perforata</i> -kanuka-manuka on the steepest areas with kiekie.	Largely indigenous vegetation with some being moderately mature for the site conditions. There has been minimal human mediated hydrological or landform change. There are no obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	H	0.47
14/07	Sandhills Creek	Small pond with rushes and grasses on the surrounding flats which appear to have been drained	There are no obvious human structures. There is a low level of non-natural sounds, odours and light.	LA	T	
14/08	Sandhills Creek	Limestone bluffs with mixed native shrub land and some introduced grasses.	Largely indigenous vegetation. There has been minimal human mediated hydrological or landform change. There are no obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	H	0.47
14/09	Sandhills Creek	Small dune lake with raupo and flax margins. The riparian margins include native shrubland and introduced grasses.	Includes indigenous vegetation. The catchment is small and so there has been minimal human mediated hydrological or landform change. There are no obvious human structures. There is a low level of non-natural sounds, odours and light apart from some traffic noise.	LA	H	0.44
19/01	Ruataniwha catchment	Alluvial plain kaihikatea/mixed broadleaved forest remnant. It seems to be fenced and has a relatively diverse understory.	The unit is dominated by relatively mature indigenous forest. There are few human structures (excluding fencing). There is a relatively low level of non-	AL	O	0.65

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
			natural sounds, odours and light.			
I9/02	Ruataniwha catchment	Alluvial plain kaihikatea pole stand. The stand is relatively mature and includes some mixed broadleaved species. It appears to be at least partly fenced.	The unit is dominated by relatively mature indigenous forest. There are few human structures (excluding fencing). There is a relatively low level of non-natural sounds, odours and light.	AL	O	0.69
I9/03	Ruataniwha catchment	Alluvial floodplains with pasture and some shelter belts & trees (eucalypt, pines & macrocarpas). Small unfenced secondary kahikatea pole stands, riparian scrub/plantings		AL	T	
I9/04	Ruataniwha catchment	This unit includes the existing and recent river channels for the Aorere River. It includes woody vegetation on the margins of the current channel and woody and wetland vegetation in the old oxbow channel.	The unit is the river and its relatively natural margins. There are few human structures apart from some bridging. There is a relatively low level of non-natural sounds, odours and light (although this is greater near roads and bridges).	AL	H	0.50
I9/05	Ruataniwha catchment	Alluvial flats with pasture and limited shelterbelts		AL	T	
I10/01	Ruataniwha catchment	Upper terrace dominated by low manuka shrubland		ER	T	
I10/C4	Ruataniwha catchment	Collingwood residential area - roads, paving, buildings, gardens & lawns		ER	T	
I10/C5	Ruataniwha catchment	Vegetated escarpment with houses on top		ER	T	
I10/C6	Ruataniwha catchment	Residential area of Collingwood on hill slopes. Mixed native & introduced matrix.		ER	T	
I10/C7	Ruataniwha catchment	Commercial & built part of Collingwood on the flat. Includes motor camp, boat		ER	T	

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		launching area, retaining walls, car park				
I10/C8	Ruataniwha catchment	Older sand accretion. Marram grass & other introduced grasses. Car park areas & tracks		DU	T	
I10/C8B	Ruataniwha catchment	Recent accretion of sand with patchy vegetation cover. by the mouth of the Aorere River mouth	Much of the unit is natural surface and it includes native sand-binders. There has been minimal human-mediated hydrological and landform change. There are few obvious human structures. There are moderately low levels of non-natural sounds, odours and light	DU	H	0.52
I10/C9	Ruataniwha catchment	Residential settlement along the base of the escarpment. Road, coastal rip-rap		ER	T	
I10/C10	Ruataniwha catchment	Escarpment with mixed broadleaved forest and scrub with some introduced species (e.g. pines). There is the occasional house & paved/tracking although most have been excluded	Largely indigenous vegetation with few pest plants. There has been minimal human-mediated hydrological and landform change. There is a generally a low level of non-natural sounds, odours and light.	ER	H	0.44
I10/PN4	Between Collingwood & Parapara	Low & narrow coastal foredune with eucalypt forest & treeland with mixed broadleaved species. The foredune vegetation is marram & other introduced grasses		DU	T	
I10/PN10	Between Collingwood & Parapara	Rough pasture with gorse, introduced trees. Some farm tracking, scattered buildings.		DU	T	0.16
I10/PN11	Between Collingwood &	Manuka dominant and mixed broadleaved shrubland & forest on hill slopes. Small	Largely indigenous vegetation with few pest plants. There has been minimal	ER	H	0.44

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
	Parapara	amount of tracking	human-mediated hydrological and landform change. There are few obvious human structures. There is a low level of non-natural sounds, odours and light.			
I10/PN12	Between Collingwood & Parapara	Hillslopes with a mosaic of manuka & kanuka scrub, mixed broadleaved scrub, planted pines & eucalypts, access roads & several buildings		ER	T	0.29
I10/RU33	Ruataniwha catchment	Small remnant totara dominant remnant on alluvial plains. Largely intact understory with some weeds on margins	Mature indigenous forest remnant. Minimal human-mediated hydrological and landform change. There are few obvious human structures. There is a relatively low level of non-natural sounds, odours and light (although there is some traffic noise)	AL	H	0.63
I10/RU34	Ruataniwha catchment	Pasture on alluvial flats with remnant podocarp trees (kahikatea, totara), Aorere riparian		AL	T	0.07
I10/RU36	Ruataniwha catchment	Cut-off arm of current Aorere delta. Surrounded by drains. Mosaic saltmarsh & channel (lower ground); freshwater rush-flax-toetoe wetland; flax-native scrub with emergent native trees (higher ground). Road	Indigenous vegetation largely without pest species. Includes relatively mature indigenous vegetation for site conditions. Few obvious human structures. Generally a low level of non-natural sounds, odours and light, although there is some traffic noise.	SW	H	0.52
I10/RU37	Ruataniwha catchment	Aorere river mouth, its present delta, its oxbow to causeway & bridge. Saltmarsh & associated scrub, salt herbfield & intertidal flats. Includes wharf, seawall, rock rip-rap, small derelict training wall. Very small	Largely indigenous cover and infauna and natural surface. Few obvious human structures except for some on the southern margins.	SW	H	0.53

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		island with pines				
I10/RU38A	Ruataniwha catchment	Aorere river mouth delta levees with mixed native & introduced shrubs & trees		AL	T	0.38
110/RU38 B	Ruataniwha catchment	Aorere river mouth delta levees with mixed native & introduced shrubs & trees		AL	T	0.38
110/RU39	Ruataniwha catchment	Low ground between saltmarsh (RU36) and low escarpment. Recycling depot & industrial site. Road		AL	T	0.10
I10/RU40	Ruataniwha catchment	Low escarpment with manuka dominant scrub, mixed broadleaved scrub & pines & other introduced trees		ER	T	0.28
J3/01	Anatori south	The unit is primarily mudstone cliffs and the adjoining a sandy beach. The cliffs are steep. The vegetation along the rest of the cliffs consists largely of mixed native shrubland with flax, native sedges and some rushes. There are also areas of native shrubs, rushes & introduced grasses.	Largely indigenous vegetation. There has been minimal human-mediated hydrological and landform change. There are few obvious human structures. There is a very low level of non-natural sounds, odours and light.	ER	H	0.44
J3/02	Anatori south	Relatively steep faces with mixed broadleaved and kanuka-manuka shrubland & low forest	Largely indigenous vegetation. There has been minimal human-mediated hydrological and landform change. There are no obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	H	0.45
J4/01	Anatori north	Coastal mudstone cliffs and supratidal sands. The vegetation consists primarily of low wind-shorn mixed native shrubland (variety of Coprosma species, Meterosideros perforata, with some mixed broadleaved species with some nikau	Primarily indigenous vegetation. There has been minimal human mediated hydrological or landform change apart from a few earthworks associated with the road. There are a few obvious human structures. There is a low level of	ER-o	H	0.47

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		where more sheltered) and flax. The unit includes the gravel road.	non-natural sounds, odours and light except for occasional traffic.			
J4/02	Anatori south	The unit is primarily mudstone cliffs and the adjoining a sandy beach. The cliffs are steep and without vegetation at the Anatori River mouth. The vegetation along the rest of the cliffs consists largely of mixed native shrub land with flax, native sedges and some rushes. There are a few areas of introduced grasses.	Primarily indigenous vegetation. There has been minimal human mediated hydrological or landform change. There are a few obvious human structures. There is a low level of non-natural sounds, odours and light.	ER-o-s	H	0.49
J4/03	Anatori	This unit consists of the Anatori River estuary and the active braided river channels upstream to the coastal environment boundary. It excludes the vegetated flats.	Largely natural surface. The main river and estuary is relatively free from human modifications to the hydrology and geomorphology although there has been some dredging around the area of the road crossing. There are few obvious human structures. There is generally a low level of non-natural sounds, odours and light.	AL	H	0.57
J4/04	Anatori	Steep faces along the true left bank of the Anatori River. The vegetation is primarily rata-rimu/mixed broadleaved forest; mixed broadleaved forest with tree ferns and nikau.	The unit primarily consists of mature indigenous forest. There has been minimal human mediated hydrological or landform change. There are few obvious human structures. There is generally a low level of non-natural sounds, odours and light.	ER-s	O	0.75
J4/05	Anatori	The lower reaches of a coastal valley and parts of the riverine faces on the true left of the Anatori near the river mouth. Vegetation is primarily low mixed	Primarily indigenous forest. There has been minimal human mediated hydrological or landform change. There are a few obvious human structures.	ER	H	0.43

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		broadleaved forest and shrublands (mahoe, tree ferns).	There is generally a low level of non-natural sounds, odours and light except for some traffic noise.			
J4/06	Antori	This unit consists of the modified Anatori River flats. It includes areas of weeds (especially Gorse), willow planting, shingle extraction, grazing and gravel roads.		AL	T	
J4/07		Low hill slopes with introduced grasses (pastoral farming), scattered tracks and buildings		ER	T	
J10/01	Parapara catchment & south	Hill slopes and coastal terraces in a variety of rural land uses; mixed native & alien shrubland & forest; and native shrubland too young and/or too small to map as separate units		ER	T	0.10
J10/PN1	Milnthorpe	Milnthorpe settlement. Houses with mixed native & non-native margin		ER	O	0.68
J10/PN2	Milnthorpe	Brackish wetland grading to freshwater upstream. The vegetation is primarily manuka dominant shrubland & rushes .The unit includes a small lake with fringing flax & manuka & an outlet stream	Relatively mature indigenous vegetation for site conditions. Part of a continuum of indigenous ecosystems from marine to terrestrial. There are few obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	O	0.77
J10/PN3	Milnthorpe	Freshwater wetland with manuka dominant shrubland; oioi rushland; flax-sedges-scattered shrubs	Relatively mature indigenous vegetation for site conditions. Part of a continuum of indigenous ecosystems from marine to terrestrial. There are few obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	H	0.51
J10/PN5	Milnthorpe	Manuka dominant shrubland on poor soils	Largely indigenous vegetation. Part of a	AL	T	

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
			continuum of indigenous ecosystems from marine to terrestrial. There are few obvious human structures. There is a low level of non-natural sounds, odours and light.			
J10/PN6	Milnthorpe	Mosaic of planted & wilding introduced trees (especially pines, eucalypts) & natives		ER	T	0.37
J10/PN7	Milnthorpe	Mosaic manuka & kanuka shrubland, mixed broadleaved forest and scrub with some wilding conifers, tracks	Largely indigenous vegetation with relatively few pest plants. Part of a continuum of indigenous ecosystems from marine to terrestrial. There are few obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	H	0.55
J10/PN8	Milnthorpe	Upper estuary intertidal flats with saltmarsh with wooded margins	Largely indigenous cover and infauna. Few obvious human structures (apart from a walking track on part of the margins)	SW	O	0.68
J10/PN9	Milnthorpe	Manuka dominant shrubland on poor soils	Moderately mature indigenous vegetation for site conditions and natural disturbance regime/history. Minimal human-mediated hydrological or landform change. Few obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	H	0.55
J10/PP1	Parapara	Sandspit tip & outer dune vegetation. Area TDC restoration with native sand binders (pingao, spinifex, <i>Carex pumila</i> , shore convolvulus). Also marram grass. Narrow inland band gorse & mixed broadleaved	Relatively mature indigenous vegetation for site conditions and natural disturbance history. Minimal human-mediated hydrological and landform change. Few obvious human structures.	DU	H	0.56

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		scrub	There is generally a low level of non-natural sounds, odours and light.			
J10/PP2	Parapara	Recurved tips of sandspit. Gorse & mixed broadleaved scrub. Some emergent pines & macrocarpa		DU	T	0.34
J10/PP3	Parapara	Large grazed sandflat with small areas gorse-mixed broadleaved shrubland & some tall planted macrocarpa		DU	T	0.16
J10/PP4	Parapara Estuary	Small inlet nearly enclosed by sandspit. Saltmarsh	Largely indigenous cover and infauna. Minimal human-mediated hydrological and geomorphological change. Few obvious human structures. Low level of non-natural sounds, odours and light.	SW	H	0.60
J10/PP8	Parapara Estuary	Outer estuary between sandspits and the ebb-tide delta. Strong currents. "Gorge" area is heavily armoured with cobbles. Includes an old wooden wharf. Limited fringing saltmarsh true left margin through the "gorge".	Largely indigenous cover and infauna. Minimal human-mediated hydrological and geomorphological change. Few obvious human structures apart from the old wharf. Low level of non-natural sounds, odours and light (except for occasional motorised boat at high tide)	SW	O	0.68
J10/PP9	Parapara Estuary	Small enclosed inlet with a cobble base and fringing saltmarsh. Foot causeway & 2 culverts.	Largely indigenous cover and infauna. Part of a continuum of indigenous ecosystems from marine to terrestrial. Low level of non-natural sounds, odours and light	SW	H	0.62
K3/01	Turimawiwi River north	This is a large area of mobile dunes with small patches of pingao and probably some spinifex. The stable marram dunes are mostly excluded along with the grazing, tracks and tyres in the South.	Primarily natural surface. There has been a low level of human mediated hydrological or landform change. There are few obvious human structures. There is a low level of non-natural	DU	H	0.60

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
			sounds, odours and light.			
K3/02	Turimawiwi River south	This is a large area of mobile dunes with the dunes are migrating to the North East over previously farmed areas. Pingao and spinifex are present. Most of the areas with dense marram grass are excluded.	Primarily natural surface with some native sand binders. There has been minimal human mediated hydrological or landform change. There are few obvious human structures. There is a low level of non-natural sounds, odours and light.	DU	H	0.56
K3/03	North of Turimawiwi River	This is part of a large forest unit of podocarp/ mixed broadleaved forest with beech on hill slopes. There are a few areas of younger native forest and shrubland	Primarily mature indigenous forest. Part of a continuum of terrestrial ecosystems. Minimal human-mediated hydrological and landform change. Few obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	O	0.62
K10/01	Parapara catchment	Coastal faces and headland with mixed broadleaved shrubland and forest that includes both native and introduced species. The unit excludes the large eucalyptus trees near the head land.		ER	T	0.34
K10/02	Parapara catchment	Hillslopes and riparian margins with mixed broadleaved and kanaka-manuka shrub land and low forest. Adjoins an estuary too small to map separately	Largely indigenous vegetation with relatively few pest plants. There has been minimal human mediated hydrological or landform change. There are a few obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	H	0.43
K10/03	Parapara catchment	Basin with kanaka dominated shrub land and low forest on the hill slopes. There is a small pond with a limited area of rushes	Largely indigenous vegetation. Few obvious human structures remaining from the former mining. There is a	ER	H	0.46

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		(including <i>Eleocharis sphacelata</i>) on the margins. The unit also includes exposed rock and old mining tracks. There is intensive local pest control.	relatively low level of non-natural sounds, odours and light.			
K10/04	Parapara catchment	Hill slopes with mature northern rata/black beech-mixed broadleaved forest on the true left of the Parapara stream. There is intensive local pest control.	The unit is dominated by mature indigenous forest. There has been minimal human mediated hydrological or landform change. There are a few human structures. There is a low level of non-natural sounds, odours and light.	ER	O	0.81
K10/05	Parapara catchment	Hill slopes on the northern side of the Parapara Estuary. The vegetation includes: mixed broadleaved shrubland and low forest with kanaka and tree ferns; and northern rata-mixed broadleaved forest with the occasional kaihikatea in the gullies. The unit has been drawn to exclude eucalypts and pines.	Largely indigenous vegetation, including mature indigenous forest. There has been minimal human mediated hydrological or landform change. There are no obvious human structures. There is generally a low level of non-natural sounds, odours and light (except for those areas near the road)	ER	H	0.46
K10/06	Parapara catchment	Parapara Lagoon margins. The vegetation is primarily saltmarsh bounded by a limited amount of flax in places and kanaka-mixed broadleaved-tree fern shrub land and low forest forming an ecotone from brackish conditions to land.	Largely indigenous vegetation, including some that is moderately mature for the site conditions. There are few obvious human structures. There is moderately low level of non-natural sounds, odours and light (with the main disturbance being road traffic noise).	SW	H	0.44
K10/07	Parapara catchment	Parapara settlement and areas of vegetation that are dominated by, or contain relatively high levels of. alien species		ER	T	
K10/PP5	Parapara	Outer inlet on silty sand. Saltmarsh (<i>Juncus</i>	Relatively mature indigenous vegetation	SW	H	0.61

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
	Estuary	<i>krausii</i> & <i>oioi</i>) & limited salt herbfield. Narrow fringing manuka dominant shrubland inland	for site conditions and natural disturbance history. Minimal human-mediated hydrological and geomorphological change. Few obvious human structures. Low level of non-natural sounds, odours and light.			
K10/PP6	Parapara Estuary	Main intertidal flats area with channels. Fringing saltmarsh near freshwater seeps. Pacific oyster found in low densities in the south-west. Gracilera & filamentous green algae were found by the culvert in south. Good saltmarsh throughout & around the river delta. Estuary catchment is 96% native forest and shrubland although some has historic disturbance. Catchment geology is mudstone and siltstones	Largely indigenous cover and infauna (excluding the low levels of Pacific oyster). There are few obvious human structures. There is a generally a low level of non-natural sounds, odours and light, except for traffic noise from the road.	SW	O	0.69
K10/PP7	Parapara Estuary	Estuary arm (22ha) separated from the main inlet by the road causeway. The water in this arm is largely retained at low tide (so little intertidal flats) because of the small undersized culvert with the invert level set too high. Restricted flushing and additional sedimentation from the causeway construction. There is fringing saltmarsh. The catchment is largely in woody vegetation (primarily native).	Largely indigenous cover and infauna. There are few obvious human structures within the unit as the road causeway is excluded. There is generally a low level of non-natural sounds, odours and light although the unit is affected by traffic noise.	SW	T	0.33
K11/01	Little Kaituna Estuary	Little Kaituna Estuary (6ha), primarily with saltmarsh (<i>Juncus krausii</i> & <i>oioi</i>) with abundant marsh ribbonwood dominant shrubland. Wooded margins with a mixture	Relatively mature indigenous vegetation for the site conditions and in good condition. Low level of human-mediated hydrological and geomorphological	SW	H	0.56

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		of native and alien species. A small amount of the unit includes the lower stream, intertidal flats and cobbles. The upper part is freshwater wetland – primarily a flax swamp with sedges and occasional cabbage trees. The weedy section by the main road is excluded from the unit. Catchment 40% native vegetation and 50% pasture. Part has a QEII covenant.	change apart from some water table lowering. Few obvious human structures. Low level of non-natural sounds, odours and light.			
L2/01	Anaweka River north	Exposed coastal dunes. The unit includes supratidal sands. The dominant vegetation is maram grass with patches of native pingao.	The unit includes a large area of natural surface. There has been minimal human mediated hydrological or landform change. There are no obvious human structures. There is a very low level of non-natural sounds, odours and light.	DU	H	0.52
L2/02	Anaweka River catchment	Limestone faces in the lower reaches on the true right bank of the Anaweka River. The vegetation is low wind- shorn native shrubland (kanuka-manuka, mingimingi, mixed broadleaved species and <i>Meterosideros perforata</i>) with flax.	The unit consists of moderately mature indigenous vegetation the site conditions and some natural surface. There has been minimal human mediated hydrological or landform change. There are no obvious human structures. There is a very low level of non-natural sounds, odours and light.	ER	H	0.52
L2/03	Anaweka River	This is a sandy estuary with some low limestone reefs and low sand dunes. There is an extensive area of intertidal flats extending well up the river. There are also areas of salt marsh. The sands are naturally highly mobile. In the lower reaches the cattle have access to the estuarine sands.	There is a large area of natural surface. The cover is primarily indigenous as are the infauna. There has been minimal human mediated hydrological or landform change. There are no obvious human structures. There is a very low level of non-natural sounds, odours and	SW	O	0.67

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
			light.			
L2/04	Anaweka River catchment	This unit includes indigenous shrubland (kanuka-manuka, minimingi, mixed broadleaved species) on riparian faces on the true right bank of the Anaweka River. It also includes more mature forest (beech-mixed broadleaved forest with some northern rata) on slopes and faces that extend inland beyond the unit boundary.	Largely indigenous vegetation, including some relatively mature indigenous forest. There has been minimal human mediated hydrological or landform change. There are no obvious human structures. There is a very low level of non-natural sounds, odours and light.	ER	H	0.56
L2/05	Anaweka & Raukawa River catchments	This unit includes native forest and mature shrub land on the hill slopes and hill on the margins of the lower reaches of the Anaweka and Raukawa Rivers. The vegetation is primarily mixed broadleaved species (especially kamahi) and beech, and there are patches of kanaka-manuka shrubland with other species.	Largely indigenous vegetation including some moderately mature indigenous forest. There has been minimal human mediated hydrological or landform change. There are no obvious human structures. There is a very low level of non-natural sounds, odours and light.	ER	H	0.53
L2/06	Raukawa River catchment	Limestone faces with some caves on the true right bank of the Raukawa River there is wind shorn mixed native shrub land (kanuka, manuka, narrow-leaved Coprosma species & mixed broadleaved species) with nikau and kiekie and the occasional patch of grass.	Natural surface and largely indigenous vegetation. There is a very low level of human mediated hydrological or landform change. There are no obvious human structures. There is a very low level of non-natural sounds, odours and light.	ER	H	0.45
L2/07	Raukawa River	This unit includes the estuary and lower tidal reaches of the Raukawa River. It has a sandy estuary where the river mouth closes around high tide. Most of the catchment is in indigenous forest and the water is peat stained. The margins in the	The unit includes natural surface and the cover is indigenous. There has been minimal human mediated hydrological or landform change. There are no obvious human structures. There is a very low level of non-natural sounds,	SW	O	0.64

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		lower reaches are fenced (at least in part). There is saltmarsh upstream and patches of kaihikatea pole stands	odours and light.			
L2/08	South of Raukawa River	Steep coastal dunes with mobile sands. The vegetation is dominated by maram grass, although there are some rushes and sedges. Inland there is grazed pasture that is unfenced. There are some patches of sand sedge and shore convolvulus.	Largely natural surface. There has been minimal human mediated hydrological or landform change. There are no obvious human structures. There is a low level of non-natural sounds, odours and light.	DU	H	0.61
L2/09	South of Raukawa River	Low hill slopes dominated by pasture grasses and grazed with pockets of native shrubland too small and/or too young to map		ER	T	
L2/10	South of Raukawa River	Riparian faces and hill slopes with mixed native shrubland and forest (mixed broadleaved species, kanuka-manuka and beech)	Indigenous vegetation. Minimal human-mediated hydrological and landform change. No obvious human structures. Low level of non-natural sounds, odours and light.	ER	H	0.45
L11/01	North of Patons Rock	Coastal faces and a gully with mixed broadleaved- tree fern shrubland and low forest. Mahoe is dominant.	Indigenous vegetation. Minimal human mediated hydrological and landform change. Few obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	H	0.44
L11/02	North of Patons Rock	Adjoining coastal faces and gully with mixed broadleaved – tree fern forest and shrubland. The vegetation is more diverse than for L11/01 and includes mahoe, five finger, akeake, & mapou.	Indigenous vegetation. Minimal human-mediated hydrological or landform change. Few obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	H	0.47
L11/03	Onekaka Estuary	Small (23ha) shallow well-flushed estuary. The unit is dominated by an ebb tide delta	Largely indigenous cover and infauna. There are few obvious human structures	SW	H	0.49

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		and a flood tide delta (intertidal flats). The entrance is armoured with cobbles. There are minor subtidal channels. There is fringing saltmarsh and salt herbfield, mainly in the upper arms of the estuary. This includes marsh ribbonwood-manuka- <i>Coprosma propinqua</i> shrubland. There is a small arm of the estuary that is separated by a causeway. This arm is still tidal with fringing saltmarsh and salt herbfield. The catchment contains regenerating indigenous vegetation (64%) and pasture (32%). The geology is mudstones and siltstones. There is some nutrient enrichment	(apart from some fences and a causeway affecting the relatively small northern arm. There is generally a low level of non-natural sounds, odours and light.			
L11/04	North of Patons Rock	Coastal terrace and hill slopes with pasture, introduced trees, mixed native and alien shrubs and alien scrub, scattered buildings and roads		ER	T	
M1/01	Kahurangi	Sand shore adjoining low hill slopes. The vegetation primarily includes kanuka-manuka shrubland and mixed broadleaved shrubland. There are also some patches of introduced grasses and some groups of macrocarpa trees near the shore and hut. There is an area affected by inland migrating dune sands	Primarily natural surface & indigenous vegetation. Part of a larger area of indigenous vegetation. Minimal human-mediated hydrological and landform change. Few obvious human structures (excluding several buildings & lighthouse). Very low level of non-natural sounds, odours and light.	ER & DU	H	0.45
M2/01	Kahurangi	Hill slopes and valleys largely with beech – mixed broadleaved forest with scattered rata and rimu and a small amount of	Indigenous vegetation, with much being relatively mature indigenous forest. Part of a larger area of indigenous	ER	O	0.65

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		kanuka-manuka and mixed broadleaved shrubland & low forest.	vegetation and part of a continuum of indigenous ecosystems from marine to terrestrial. Minimal human-mediated hydrological and landform change. No obvious human structures. Absence of non-natural sounds, odours and light			
M2/02	Big River	Estuary and tidal reaches of river to the coastal environment boundary. Relatively deep with humic stained water. Bed varies from soft muddy sands to granite gravels. Catchment is largely in indigenous forest with a small area of pasture by the coast.	Natural surface & native cover & infauna. Part of a continuum of indigenous ecosystems from marine to terrestrial. Minimal human-mediated hydrological and landform change. No obvious human structures. Very low level of non-natural sounds, odours and light.	SW	O	0.72
M11/01	North of Patons Rock	Freshwater wetland currently being restored with planting and predator control. In parts there is kahikatea, cabbage trees, mixed native shrubs & flax. As yet the restoration is not sufficiently far advanced for the area to rank as HNC		DU	T	
M11/02	North of Patons Rock	Coastal faces/escarpment extending inland in the vicinity of the Pariwhakaoho Stream. The vegetation is primarily mixed broadleaved shrubland & low forest with some some kanuka-manuka shrubland & low forest inland. There are also some alien species. The boundaries have been drawn to exclude areas of younger shrubland and areas with more alien species.	Largely indigenous vegetation with relatively few pest plants. Minimal human-mediated hydrological and landform change. Few obvious human structures. Low level of non-natural sounds, odours and light.	ER	H	0.43

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
M11/03	North of Patons Rock	Coastal hill slopes, primarily with native forest. It includes mixed broadleaved forest, kanuka forest & kahikatea-black beech-mixed broadleaved (including kamahi) forest.	Indigenous vegetation including some moderately mature indigenous forest. Minimal human-mediated hydrological and landform change. Few obvious human structures. Low level of non-natural sounds, odours and light.	ER	H	0.54
M12/01	South of Patons Rock	Coastal escarpment and stream valley primarily with mixed broadleaved forest (mahoe & kamahi dominant). There is also kanuka forest and a small patch of black beech forest on the true left slopes. The creek tidal reaches include marginal saltmarsh & salt herbfield	Indigenous vegetation including some moderately mature indigenous forest. There has been minimal human-mediated hydrological and landform change and few obvious human structures within the unit. There is a low level of non-natural sounds, odours and light.	ER	H	0.54
M12/02	Patons Rock	Coastal and alluvial flats used for pastoral purposes and coastal settlements. The unit includes some areas of younger and/or fragmented native shrubland		AL	T	
M16/01	Wharewharangi Bay	Beach/ dunes with tall macrocarpa trees and gorse shrubs on the backdune. The fore dune includes marram, gorse & some ngaio. The unit also includes the lower reaches of two small alluvial valleys which include some introduced grasses, the hut and younger shrubland		DU & AL	T	
M16/02	Separation Point	In 1980 this area was closed to all forms of power fishing so as to protect bryozoan beds and associated juvenile fish. Prior to closure there had been limited seabed disturbance with limited pair trawling	Largely indigenous cover and infauna. Minimal human-mediated hydrological or geomorphological change. Vulnerable bryozoans and the habitat they provide for juvenile fish are	MN	O	0.77

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		between 1972-1980- with the gear apparently held above the seabed. Studies in the late 2000s found significant differences between the seabed inside and outside the closure area demonstrating the much higher natural state of the seabed within the closure area.	protected from damaging activities. No obvious human structures. There is a low level of non-natural sounds, odours and light			
N12/01	Onahau River Estuary	Tidal lagoon (32ha) that is shallow and well flushed. This unit includes the relatively extensive (for estuary size) flood and ebb tide deltas; other intertidal flats (including those with saltmarsh), an unvegetated migrating residual sand spit; and a limited area of channels. The south-east lobe of the estuary is primarily saltmarsh (dominated by <i>Juncus kraussii</i> with some oioi) and shrubland (dominated by marsh ribbonwood & manuka) on the margins. In the upper reaches of this unit there is some freshwater wetland. This is a flax dominant swamp with cabbage trees and native sedges and patches of manuka shrubland. There is intensive pastoral use over 33% of the catchment. Increased nutrients from the pastoral land uses in the catchment	Largely indigenous cover and infauna. Minimal human-mediated hydrological and geomorphological change apart from increased nutrients (& sediment) from the catchment. Few obvious human structures. Low level of non-natural sounds, odours and light.	SW	H	0.52
N12/02	Rangihaeata Head	Head land with steep cliffs and some exposed rock. The vegetation is primarily mixed broadleaved and kanuka shrub land. The pines are excluded from the unit.	Largely indigenous vegetation. There has been minimal human mediated hydrological or landform change. There are a few obvious human structures.	ER	H	0.48

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
			There is a low level of non-natural sounds, odours and light.			
N12/03	Takaka River (Waitapu) Estuary	Extensive outer delta area and offshore bar system for the Takaka and Motupipi Rivers. Around the Takaka outer delta the substrate consists of cobbles and sand. Further east the substrate is sand and mud. This unit is important for godwits & oystercatchers and for Caspian tern breeding and is used by banded dotterels.	Largely natural surface with native infauna. There is a low level of human-mediated hydrological and geomorphological change. There are few obvious human structures. There is generally a low level of non-natural sounds, odours and light	SW	H	0.58
N12/04	Takaka River (Waitapu) Estuary	Inner delta area. This is largely intertidal flats with saltmarsh (<i>Juncus kraussii</i> , oioi and three- square sedge). There are lesser amounts of marsh ribbonwood – manuka shrubland and intertidal flats without obvious emergent vegetation. The unit includes sections of some channels	Primarily indigenous cover and infauna with saltmarsh in good condition. There are few obvious human structures in the unit. There is a low level of non-natural sounds, odours and light.	SW	H	0.59
N12/05	Takaka River Estuary catchment	Coastal faces adjoining the Takaka inner delta. The vegetation is mixed native forest with kaihikatea, totara, black beech, mixed broadleaved species, kanaka and the occasional tree fern. There is an occasional wilding pine and a small patch of eucalypts	Largely indigenous vegetation with few pest plants. The unit includes some moderately mature indigenous forest trees. There has been minimal human-mediated hydrological and landform change. There are few obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	H	0.51
N12/06	East of Rangihaeata	Hill slopes with a mosaic of native and alien vegetation and settlement		ER	T	
N15/01	Abel Tasman Point	Headland and coastal faces primarily with indigenous forest & shrubland. The unit also includes the road (with some cuttings)	Largely indigenous vegetation with few pest plants. There has been minimal human-mediated hydrological and	ER	H	0.45

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		from Tata Bay to Wainui Estuary and several houses. The headland is largely mixed native shrubland. The hill slopes adjoining the Wainui Inlet and near shore intertidal flats tend to be dominated by mixed broadleaved forest with some kanuka shrubland & forest. In this location the more modified areas, including the road, are excluded	landform change except for the earthworks associated with the road. There are few obvious human structures except for a couple of houses. There is generally a low level of non-natural sounds, odours and light except for some traffic noise.			
N15/02	Wainui catchment	Lower slopes with the road, pasture, alien trees and young native shrubland		ER	T	
N15/03	Tarakohe-Tata	Hill slopes primarily in pine plantations. The unit also includes hill slopes with young native shrubland, alien and native shrubs, roads & tracking		ER	T	
N15/04	Tata Beach	Settlement and low coastal margins with scattered buildings, roads & tracking, introduced grasses and mixed native & alien shrubs		ER & DU	T	
N15/05	Tata Estuary	This is a small 17ha well flushed estuary bounded by the road on its southern side. There is fringing saltmarsh (primarily <i>Juncus kraussii</i> with some three-square sedge, and limited oioi and marsh ribbonwood. The streams to the inner estuary delivered large amounts of coarse granite sediments from the catchment during the December 2011 storms (490mm in 24 hours). The streams have been bulldozed to remove sediment and much	Largely indigenous cover and infauna. The unit has few obvious human structures. There is relatively low level of non-natural sounds, odours and light except for some traffic noise and some seasonal noise from the nearby settlement.	SW	H	0.53

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		of this is in stockpiles. The outer harbour to the west of the sand spit consists of fine sand flats with sea grass. This spit is excluded from the unit (weed species, rock armouring, several buildings & planted macrocarpa). Also excluded is a small area of pile moorings by the headland. Catchment includes pasture and plantation forestry. Estuary is 35% soft mud resulting from erosion in plantation forestry areas (Robertson & Stevens).				
N15/06	Tata Islands	Small steep rocky limestone islands with mixed broadleaved shrubland and low forest. There is some flax near the shore line and some patches of prostrate mixed broadleaved shrubland.	Relatively mature indigenous vegetation for site conditions and disturbance history. There has been minimal human mediated hydrological or landform modification. There are few obvious human structures. There is a low level of non-natural sounds, odours and light.	ER-o-s	O	0.62
N15/07	Able Tasman Point and other localities	Mussel farms		MN	T	
N15/08	Ligar Bay headland	Steep coastal faces with rocky shore. The vegetation is primarily mixed broadleaved shrubland with some kanuka. There are small amounts of gorse & Cotoneaster by the water	Largely indigenous vegetation with few pest plants and natural rock surface. There has been minimal human-mediated hydrological and landform change. There are few obvious human structures within the unit. There is a generally a low level of non-natural sounds, odours and light apart from seasonal visitor noise.	ER-o-s	H	0.45

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
N16/01	Wainui sand spit	The unit includes the vegetated part of the sandspit. The vegetation is dominated by gorse with some mixed broadleaved and kanuka native shrubs; and introduced grasses including maram (approximately 10% native). On the inside of the spit there are patches of alien iceplant.		DU	T	0.36
N16/02	Wainui catchment	<p>Hill slopes and coastal head lands on the eastern side of Wainui Estuary and north of the track to Wharewharangi Beach. The vegetation includes kanuka dominant shrubland and low forest; and extensive areas of mixed broadleaved shrubland and forest dominated by mahoe. There are some small patches of moderately mature indigenous forest (mahoe-karaka forest). There are some large slips in the north-east (probably from the December 2011 storm)</p> <p>On the open coastal headlands there are some rocky bluffs and the vegetation is largely mixed broadleaved shrubland with flax in places. There are also a few patches of gorse nearer the water. At Separation Point the headland is dominated by flax. Gorse, introduced grasses, native rushes, native tussocks and shrubs are also present. This area has a low lighthouse and a seal breeding colony.</p>	Indigenous vegetation with few pest plants. There has been minimal human mediated hydrological and landform change. There are a few obvious structures within the unit. There is generally a low level of non-natural sounds, odours and light.	ER	H	0.47
N16/03	Wainui	Area of hill slopes on each side of the track		ER	T	0.39

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
	catchment	to Wharewharangi. The track is prominent. The vegetation is mixed broadleaved shrubland with gorse; and kanaka and manuka dominant shrubland.				
N16/04	Gibbs Hill	The unit is dominated by valley systems primarily with rimu- northern rata- beech (black and hard beech) forest. The spurs primarily contain kanaka - beech -rimu shrubland and low forest.	Indigenous vegetation, where most is mature indigenous forest. Minimal human-mediated hydrological and landform change. Few obvious human structures. Low level of non-natural sounds, odours and light.	ER	O	0.62
N16/05	Wainui catchment	Hill slopes with kanuka dominant shrubland & forest; and mixed broadleaved shrubland & forest with tree ferns. Introduced trees blocks are excluded.	Largely indigenous vegetation with few pest plants. Minimal human-mediated hydrological and landform change. Few obvious human structures. There is generally a low level of non-natural sounds, odours and light	ER	H	0.43
N16/06	Wainui catchment	Flats & lower hill slopes with pasture, introduced trees, mixed plantings & scrub, buildings, road & tracking		ER	T	
N16/07	Wainui Inlet	In the lower reaches there are extensive sand intertidal flats (with some sandy mud).and a limited amount of channels. In the mid reaches there are some relatively large areas of salt herbfield. This herbfield grades into saltmarsh (primarily <i>Juncus kraussii</i> with some oioi). There is a limited amount of the salt shrubland ecotone dominated by marsh ribbonwood. The catchment is largely wooded but there is some farming on the alluvial flats and	Largely indigenous cover and infauna. There generally has been minimal human-mediated hydrological and geomorphological change apart from small increases in sediment & nutrients). There are few obvious human structures (apart from walking markers). There is generally a low level of non-natural sounds, odours and light (apart from some traffic noise)	SW	H	0.56

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		lower slopes in the east. There is a road generally around much of the margins and there is road armouring in places. The supratidal sands in the north east by the spit often have a gorse, native shrubs & introduced grasses cover. There has been considerable loss of saltmarsh, including through reclamations and sea walls. Highly erodible granite catchment. There are some localised areas of macroalgae and/or mud.				
N16/08	Wainui catchment	Extensive area of sandy intertidal flats on the open coast adjoining the Wainui Inlet sand spit. It includes the Inlet's ebb tide delta. Most of the area is administered by the Department of Conservation	Indigenous cover and infauna. Human harvest is restricted by reserve status over much of area. Minimal human-mediated hydrological and geomorphological change. No obvious human structures. There is generally a low level of non-natural sounds, odours and light.	MN	O	0.67
N17/01	Totaranui	Abel Tasman National Park hill slopes and gullies with a predominantly native forest cover; and coastal headlands and coastal margins with a predominantly native shrubland & low forest cover. The hill slope and gully forest includes: emergent northern rata over a mixed broadleaved (especially mature pukatea) forest canopy; black (and some hard) beech on ridges with emergent northern rata; mixed broadleaved forest in gullies dominated by	Indigenous vegetation, with most being mature indigenous forest. Part of a larger area of indigenous vegetation. Minimal human-mediated hydrological and landform change. There are few obvious human structures. There is a low level of non-natural sounds, odours and light except for seasonal boat traffic	ER-o	O	0.62

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		mahoe. Headland vegetation includes kanuka dominant forest & shrubland				
N17/02	Anapai Bay	Abel Tasman National Park headlands, coastal hill slopes and gullies north of Anapai Bay. The vegetation is primarily kanuka dominant forest with some tree ferns and mixed broadleaved species. In the gullies there is primarily mixed broadleaved forest dominated by mahoe.	Indigenous vegetation, with some being moderately mature indigenous forest. The area is part of a larger area of indigenous vegetation. There are few obvious human structures. There is a low level of non-natural sounds, odours and light except for some seasonal boat traffic	ER-o	H	0.47
N17/03	Totaranui	Hill slopes with kanuka dominant forest & shrubland with mixed broadleaved species, tree ferns and some beech	Indigenous vegetation, with some being moderately mature indigenous forest. The area is part of a larger area of indigenous vegetation. There are few obvious human structures. There is generally a low level of non-natural sounds, odours and light except for some seasonal boat traffic and campground use	ER	H	0.48
N17/04	Totaranui	Freshwater wetland with track and boardwalk. It is less disturbed where it adjoins forest. Here the vegetation consists of native sedges, scattered raupo, & mixed native shrubs. Where it adjoins the vehicle track raupo is dominant, with flax, introduced grasses, native shrubs & gorse. The weeds by the vehicle track (e.g. Japanese honeysuckle) are largely excluded.	Indigenous vegetation. Part of a continuum of indigenous ecosystems from marine to terrestrial. Apart from the boardwalk there are few obvious human structures. There is generally a low level of non-natural sounds, odours and light except for seasonal heavy track & campground use	AL	H	0.49
N17/05	Totaranui	Sandy intertidal flats and limited channel	Largely indigenous cover and infauna.	SW	O	0.66

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
	Estuary	area. The upper reaches and margins have saltmarsh dominated by <i>Juncus kraussii</i> with some three square sedge. There are also patches of salt herbfield. The catchment is primarily woody native vegetation and there is an upstream freshwater wetland	There has been minimal human-mediated hydrological and geomorphological change. There are few obvious human structures in the unit (excluding a boat ramp). There is generally a low level of non-natural sounds, odours and light except for some seasonal boat traffic and campground use			
N17/06	Totaranui	Flats and low slopes in introduced grasses		AL	T	
N17/07	Totaranui	Hill slopes with mixed broadleaved forest with beech and kanuka	Moderately mature indigenous forest. There has been minimal human-mediated hydrological and landform change. There are few obvious human structures. There is generally a low level of non-natural sounds, odours and light.	ER	H	0.51
O12/01	Takaka River catchment	An area of hill slopes. The vegetation is kamahi-kanuka-manuka low forest & shrubland on the ridges and spurs with beech, kahikatea & mixed broadleaved species in the gullies. The unit excludes pasture, young scrub with gorse & buildings	Largely indigenous vegetation with few pest plants. There has been minimal human-mediated hydrological and landform change. There are few obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	H	0.46
O12/02	Takaka River	Lower reaches from the road bridge to the outer delta. The river is confined by stop-banks in places. It is largely tidal. There are increased nutrients from the catchment		AL	T	
O12/03	Takaka River catchment	Alluvial flats on the true left bank of the Takaka River. Primarily in pastoral land		AL	T	

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		uses.				
O12/04	Takaka River	Takaka River from the road bridge to the coastal environment boundary. This part of the river includes exposed cobble beds during average flows. There is gravel extraction, town sewage discharge and increased nutrients from pastoral farming		AL	T	
O13/01	Takaka River Estuary	This unit primarily consists of kaihikatea and totara forest on alluvium. It also includes a small area of manuka and low totara. There is some invasion by poplars.	The unit primarily consists of relatively mature indigenous forest although there is some popular invasion. There are few obvious human structures. There is a low level of non-natural sounds, odours and light.	AL	H	0.55
O13/02	Waitapu Inlet	This area used to be part of the Takaka catchment but is now separated from the main river. The unit includes extensive intertidal flats with sand, cobbles and mud. The unit includes some channels although the extent of these is not great. There are small patches of salt herbfield. On the inland margins there is saltmarsh (<i>Juncus kraussii</i> and oioi) with some marsh ribbonwood and manuka shrubs. The stopbanks and causeway are excluded from the unit. There are increased nutrients from the largely pastoral catchment resulting in excessive macroalgae growth in places	There is largely indigenous cover and infauna. There are a few obvious human structures within the unit itself. There is a low level of non-natural sounds, odours and light except for the area around the causeway/old wharf at times.	SW	H	0.51
O13/03	Takaka-Motupipi	Alluvial flats on the true right bank of Takaka River and around the Motupipi		AL	T	

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
	catchments	Estuary. Primarily in pastoral land uses				
O13/04	Motupipi catchment	This unit includes the main Motupipi River channel but not the large estuarine arm extending to the east. The dominant habitat is intertidal flats with saltmarsh in those upper margins that have not been drained. The amount of area occupied by channels is small. The river exit area has sand & cobbles with salt herbfield. The saltmarsh in the upper reaches is relatively extensive (<i>Juncus kraussii</i> dominant) with some marsh ribbonwood on the upper margins. There is also extensive salt herbfield (dominated by <i>Sarcocornia</i>). There are a few small levees largely with introduced grasses & mixed native & introduced shrubs. Most of the margins are developed. The upper section is poorly flushed with increased nutrients and algal blooms.	Largely indigenous cover and infauna except for levee areas (small extent). There are few obvious human structures. There is generally a low level of non-natural sounds, odours and light.	SW	H	0.47
O13/05	Motupipi catchment	Hill slopes and some alluvial flats adjoining the east lobe of the Motupipi Estuary. Land cover includes pasture, planted pines, and kanuka & mixed broadleaved shrubland. There is relatively large amount of tracking.		ER	T	
O14/01	Motupipi Estuary	Large eastern arm of the estuary. This is dominated by extensive intertidal flats with saltmarsh in the upper reaches and fringing the much of the low topography shoreline. The upper-mid reach fringing saltmarsh	Largely indigenous cover and infauna. There are few obvious human structures. There is generally a low level of non-natural sounds, odours and light.	SW	H	0.53

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		<i>(Juncus kraussii</i> dominant) generally appears to be in good condition. The extensive areas of saltmarsh in the upper reaches are dominated by oioi with <i>Juncus kraussii</i> and three-square sedge. The terrestrial margins include native and alien woody vegetation & introduced grasses. The upper section is poorly flushed with increased nutrients and algal blooms.				
O14/02	Tarakohe	The unit is predominantly native forest on a plateau, with some rock bluffs and colluvium. The plateau contains emergent northern rata over a mixed broadleaved forest canopy (including titoki) and nikau. There is mixed broadleaved shrubland and forest on the colluvium from the bluffs. Rengarenga are found on the bluffs. The lower slopes by the road contain some Cotoneaster.	Primarily indigenous vegetation and natural surface. Mature indigenous forest predominates. There has been minimal human mediated hydrological or landform change. There are few obvious human structures. There is a low-moderate level of non-natural sounds, odours and light (traffic noise).	ER	O	0.64
O14/03	Tarakohe	The unit is predominantly native forest on a plateau, with some rock bluffs and colluvium. The plateau contains emergent northern rata over a mixed broadleaved forest canopy. There is mixed broadleaved shrubland and forest on the colluvium from the bluffs. The lower section contains some Cotoneaster.	Primarily indigenous vegetation and natural surface. Mature indigenous forest predominates. There has been minimal human mediated hydrological or landform change. There are few obvious human structures. There is a low to moderate level of non-natural sounds, odours and light (traffic noise).	ER	O	0.63
O14/04	Tarakohe	Hill slopes and coastal bluffs above the road contain emergent northern rata over a mixed broadleaved canopy. There is	Primarily indigenous vegetation and natural surface. Mature indigenous forest predominates. There has been	ER	H	0.60

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		some kaihikatea inland. There are some weeds by the road margin (primarily Cotoneaster). There are non-natural sounds associated with the road & the nearby quarry.	minimal human mediated hydrological or landform change within the unit except for a quarry access road. There are few obvious human structures..			
O14/05	Motupipi catchment-Pohara	Alluvial flats and low sand spit. Primarily used for pastoral activities and settlement		AL	T	
O15/01	Wainui catchment	Hill faces with a mosaic of vegetation types including: mature emergent rimu and rata over a beech forest canopy; beech forest; and kanaka and tree-fern forests; and kanuka shrubland and forest.	Indigenous vegetation, with much being either mature indigenous forest or moderately mature indigenous forest. There has been minimal human-mediated hydrological and landform change. There are few obvious human structures. There is a relatively low level of non-natural sounds, odours and light.	ER	H	0.62
O15/02	Wainui catchment	Alluvial flats with three patches of largely fenced remnant indigenous forest. The vegetation is emergent kahikatea and northern rata over a mixed broadleaved forest canopy. The unit excludes alien species such as macrocarpa on or near the boundary of the indigenous forest	Mature indigenous forest although the patches are small. There are few obvious human structures except for fencing within the unit boundaries. There is generally a low level of non-natural sounds, odours and light although there is some noise associated with traffic and farm management	AL	O	0.65
O15/04	Tata –Ligar Bay catchment	Exposed rocky head land. The vegetation includes emergent northern rata with totara and matai over a mixed broadleaved forest canopy (including titoki) on the outer head land. There is some low prostrate mixed broadleaved shrubland	Largely indigenous vegetation with few pest plants. The unit includes mature indigenous forest. There has been minimal human-mediated hydrological and landform change. There are few obvious human structures.	ER	H	0.59

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		along the rocky shoreline, while on the roadside there is mixed broadleaved forest & shrubland with some kanuka and a few weed species.				
O15/05	Tarakohe	Marine environment occupied by the Tarakohe wharf, boat launching and marina facilities		MN	T	
O15/06	Wainui catchment	Hill slopes with mixed broadleaved forest & shrubland and kanuka forest & shrubland	Largely indigenous vegetation with few pest plants. Minimal human-mediated hydrological and landform change. Few obvious human structures. Generally a low level of non-natural sounds, odours and light.	ER	H	0.43
O16/01	Wainui catchment	Alluvial flats & lower slopes in pasture, introduced trees, scattered buildings, roads and some younger native shrubland.		AL	T	
O16/02	Wainui catchment	Hill slopes with kanuka dominant forest & shrubland; mixed broadleaved forest & shrubland; kanuka-mixed broadleaved – tree fern forest; and rimu-northern rata-hard beech. The unit includes a vehicle track up a spur	Largely indigenous vegetation with few pest plants. Part of a larger area of indigenous vegetation. There has been minimal human-mediated hydrological and landform change. There are few obvious human structures. There is generally a low level of non-natural sounds, odours and light (except for some traffic noise by the road)	ER	H	0.45
O16/03	Wainui catchment	Hill slopes with mixed broadleaved shrubland & forest; and kanuka dominant forest & shrubland	Largely indigenous vegetation with few pest plants. Part of a larger area of indigenous vegetation. There has been minimal human-mediated hydrological and landform change. There are few	ER	H	0.43

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
			obvious human structures. There is generally a low level of non-natural sounds, odours and light (except for some traffic and farm management noise)			
O17/01	Goat Bay	Hill slopes and gullies with rimu-beech-mixed broadleaved forest	Largely mature indigenous forest. Minimal human-mediated hydrological and landform change. There are no obvious human structures apart from those associated with the track. There is a low level of non-natural sounds, odours and light.	ER	O	0.66
O17/02	Totaranui	Hill slopes and gullies south of the Totaranui campground. Kanuka dominant forest and shrubland are dominant on the hill slopes. Mixed broadleaved forest & shrubland are dominant in the gullie. There are some patches of beech forest	Indigenous vegetation including moderately mature indigenous forest. There has been minimal human-mediated hydrological and landform change. There are no obvious human structures apart from those associated with the track. There is a low level of non-natural sounds, odours and light.	ER	H	0.47
O17/03	Totaranui	Totaranui campground, grass flats		AL	T	
O17/04	Totaranui	Hill slopes with kanuka-mixed broadleaved shrubland & forest and some bracken patches with mixed broadleaved shrubs. There are also some small patches of beech trees	Largely indigenous vegetation with few pest plants. There has been minimal human-mediated hydrological and landform change. There are no obvious human structures. There is generally a low level of non-natural sounds, odours and light.	ER	T	0.42
P13/01	Motupipi Estuary	This is a section of the estuary that is upstream from the road bridge. There is a	Largely indigenous vegetation with few pest plants. There are few structures	SW	H	0.47

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		causeway with a good sized culvert. The vegetation is primarily saltmarsh (in good condition) dominated by <i>Juncus kraussii</i> and with increasing oioi in the upper reaches. There is a small amount of each of marsh ribbonwood shrubland and salt herbfield. The adjoining land use and the one that dominates the catchment is pasture. Filamentous green algae were present in December 2012. There is a small island dominated by mapou (with a small amount of gorse)	within the unit. There is generally a low level of non-natural sounds, odours and light.			
P14/01	Motupipi	Small alluvial forest remnant. It contains kaihikatea mixed broadleaved mature forest that is in good condition and fenced.	Mature indigenous forest. There are few human structures except for fencing. There is generally a low level of non-natural sounds, odours and light.	AL	O	0.68
P14/02	The Grove	The limestone bluffs and plateau are dominated by emergent northern rata trees over a mixed broadleaved and nikau forest canopy. This canopy includes the occasional pukatea. On the "seaward" faces there is younger mixed broadleaved forest and a few weed species. The occasional kaihikatea and totara are present on the flats along with mixed broadleaved species. There are some alien trees on the margins which are generally excluded from the unit.	The unit is dominated by mature indigenous forest. There has been minimal human mediated hydrological or landform change. There are a few obvious human structures apart from some facilities associated with a walking track. There is generally a low level of non-natural sounds, odours and light.	ER	O	0.68
P14/03	The Grove	This is largely a weathered limestone unit with a native forest cover. The more	The unit includes mature indigenous forest. There has been minimal human	ER	H	0.50

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		mature vegetation consists of tall emergent northern rata over a mixed broadleaved canopy (which includes pukatea and mahoe as well as tree ferns and nikau). The younger forest includes kanuka and mixed broadleaved species.	mediated hydrological or landform change. There are a few obvious human structures. There is generally a low level of non-natural sounds, odours and light.			
P14/04	Clifton	Limestone bluffs and plateau predominate in this unit. The core of the unit is emergent northern rata over a mixed broadleaved forest canopy. On the margins there is kanuka- mixed broadleaved forest. Much of the mixed native and alien broadleaved shrubland on the north-western faces is excluded from the unit	The unit primarily includes mature indigenous forest. There has been minimal human-mediated hydrological and landform change. There are few obvious human structures. There is generally a low level of non-natural sounds, odours and light.	ER	O	0.64
P14/05	Clifton	Several patches of indigenous forest on hill slopes and in valleys associated with rural residential settlement. Part of the forest contains emergent northern rata over a mixed broadleaved forest canopy. The rest is younger predominantly mixed broadleaved forest. Houses, drives and gardens are generally excluded.	The unit includes mature indigenous forest and moderately mature indigenous forest. There has been minimal human-mediated hydrological and landform change. There are few obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	H	0.53
P16/01	Awaroa catchment	Alluvial flats & low slopes with introduced grasses, young manuka shrubland, roadway, causeway, drives & tracks, some buildings		AL & ER	T	0.00
P16/04	Awaroa catchment	Alluvial flats with mid-age kahikatea forest and partly surrounded by manuka shrubland	Largely indigenous vegetation with few pest plants. Few obvious human structures. Low level of non-natural	AL	H	0.48

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
			sounds, odours and light.			
P16/05	Awaroa catchment	Hill slopes with kanuka dominant forest & shrubland and some gullies with mixed broadleaved & beech shrubland & forest	Largely indigenous vegetation with few pest plants. Part of a larger area of indigenous vegetation. Minimal human-mediated hydrological and landform change. There are few obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	H	0.44
P16/06	Awaroa catchment	Hill slopes at the head of the Awaroa Inlet. The vegetation is primarily kanuka-manuka shrubland & forest. Other vegetation cover includes beech forest; and rimu and northern rata emergent over a beech canopy	Largely indigenous vegetation with few pest plants including some moderately mature indigenous forest. Part of a larger area of indigenous vegetation. Minimal human-mediated hydrological and landform change. There are few obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	H	0.48
P17/01	Awaroa catchment	The tip of the Awaroa sandspit. This includes a narrow band of marram grass with gorse (about 10% native). The vast majority of the unit is largely bare sand. This unit does not include the kanuka-manuka shrubland and gorse to the east.	Largely natural surface. There has been minimal human-mediated hydrological and landform change. There are few obvious human structures. There is a low level of non-natural sounds, odours and light.	DU	O	0.67
P17/02	Awaroa catchment	Eastern lobe of the Awaroa Estuary. It includes extensive intertidal sand flats and limited channels. There are patches of salt herbfield near the margins and saltmarsh (with a small amount of manuka-marsh ribbonwood ecotone) in the south-east arm. There are vehicle tracks. Houses	Largely natural surface. There has been minimal human-mediated hydrological and geomorphological change apart from some increased nutrients from catchment/ adjoining settlement and some vehicle compaction. There are few obvious human structures within the	SW	H	0.57

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		adjoin the southern margin of the unit. Sea lettuce and <i>Gracilera</i> (indicative of higher nutrient levels) are present.	unit. There is generally a low level of non-natural sounds, odours and light apart from some seasonal noise from the settlement.			
P17/03	Awaroa catchment	Young shrubland, airstrip, lodge and other buildings		ER	T	
P17/04	Awaroa catchment	Awaroa settlement, campsite, hut area and young shrubland		ER	T	
P17/05	Awaroa Estuary	This is the main (outer) Awaroa Estuary. It contains extensive intertidal sand flats, limited channels, a limited amount of salt herbfield and fringing saltmarsh. This unit includes the flood - tide and ebb- tide deltas.	Largely indigenous cover and infauna. Relatively mature indigenous vegetation for site conditions and natural disturbance history. There has been minimal human-mediated hydrological and geomorphological change. There are few obvious human structures. There is generally a low level of non-natural sounds, odours and light apart from seasonal visitors (particularly to buildings in adjoining units) and boat traffic at high tide	SW	O	0.72
P17/06	Awaroa catchment	Hill slopes and coastal margins adjoining the northern side of Awaroa Estuary. The vegetation is primarily: beech forest; and emergent rimu with some kahikatea over a beech canopy	Mature and relatively mature indigenous forest. Part of a large area of indigenous vegetation. There has been minimal human mediated hydrological or landform change. There are a few obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	O	0.65
P17/07	Awaroa catchment	This is the north-west lobe of the Awaroa Estuary. There are sand flats in the lower	Largely natural surface and indigenous vegetation. Part of a continuum of	SW	H	0.49

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		reaches and then extensive salt herbfield. In the upper sections there is extensive saltmarsh dominated by <i>Juncus kraussii</i> and oioi. On the slightly higher ridges of sand vegetation are often dominated by introduced grasses. A lot of sediment has entered this arm of the estuary from the part of the catchment being retained for pastoral agriculture. This arm of the estuary contains large amounts of mobile unconsolidated granite sands.	ecosystems from terrestrial to marine. There are no obvious human structures. There is a low level of non-natural sounds, odours and light.			
P17/08	Awaroa catchment	Hill slopes and coastal margins with mature indigenous forest. The hill slope vegetation is primarily emergent rimu and some northern rata over a beech (hard & black) forest canopy. On the lowest slopes and valleys there is emergent kaihikatea over a beech forest canopy.	Mature indigenous forest. Part of a much larger area of indigenous vegetation. There has been minimal human mediated hydrological or landform change. There are no obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	O	0.67
P17/09	Awaroa catchment	This unit includes the open coast, a low peninsular within Awaroa Estuary and some inland slopes on the northern side of Awaroa Estuary. The vegetation is primarily kanaka and beech forest with a small amount of low beech forest.	Moderately mature indigenous forest. Part of a larger area of indigenous vegetation. There has been minimal human mediated hydrological or landform change. There are no obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	H	0.47
P17/10	Awaroa catchment	This unit includes a peninsula and hill slopes on the northern side of Awaroa Estuary. The vegetation is primarily kanuka forest with patches of beech forest (hard and black). It also includes a Department of	Moderately mature indigenous forest. There has been minimal human mediated hydrological or landform change. Part of a larger area of indigenous vegetation. There are few	ER	H	0.44

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		Conservation carpark with introduced grasses and a small building	obvious human structures. There is a low level of non-natural sounds, odours and light except for some occasional vehicle noise.			
P17/11	Awaroa catchment	This is an alluvial flat with mature kaihikatea forest.	Mature indigenous forest. There has been a low level of human mediated hydrological or landform change. There are no obvious human structures. There is a low level of non-natural sounds, odours and light.	AL	O	0.68
P17/12	Awaroa catchment	This contains alluvial flats with a young kaihikatea pole stand and a mixed native shrub, flax and willow wetland. There is also a small area of manuka shrubland and raupo. The road causeway (not in unit) leads to increased sedimentation upstream.	Largely indigenous vegetation. There are few obvious human structures. There is a low level of non-natural sounds, odours and light (except for seasonal boat traffic).	AL	H	0.51
P18/01	Awaroa Head	Rocky coastal margins and lower slopes with kanuka dominant low forest and shrubland and mixed broadleaved shrubland. There are some groups of wilding pines.	Includes natural surface & largely indigenous vegetation with relatively few pest plants. There has been minimal human-mediated hydrological and landform change. There are few obvious human structures. There is a low level of non-natural sounds, odours and light.	ER-o-s	H	0.47
P18/02	Awaroa Head	Low fertility upper coastal hill slopes from Awaroa Head to the Tonga Roadstead. The vegetation is primarily kanuka-manuka shrubland & low forest with some mixed broadleaved shrubland & forest in gullies. There are some wilding pines. There are	Largely indigenous vegetation with relatively few pest plants. Part of a larger area of indigenous vegetation. There has been minimal human-mediated hydrological and landform change. There are no obvious human	ER-s	H	0.43

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		skeletal soils over much of the unit.	structures. There is a low level of non-natural sounds, odours and light.			
Q16/01	Awaroa catchment	Upper slope beech (hard and black) dominant forest with emergent rimu	Mature indigenous forest. Part of a larger area of indigenous vegetation. Minimal human-mediated hydrological and landform change. Few obvious human structures. Low level of non-natural sounds, odours and light.	ER	O	0.68
Q16/02	Awaroa catchment	Lower slopes with indigenous vegetation. This vegetation is a mosaic kanuka-manuka shrubland & forest; and mixed broadleaved shrubland & low forest. There are some patches of introduced grasses on the flats along the river and a few wilding pines on the lower slopes.	Largely indigenous vegetation with few pest plants. Part of a larger area of indigenous vegetation. There has been minimal human-mediated hydrological and landform change. There are few obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	H	0.45
Q17/01	Awaroa catchment	This is the south western section of the Awaroa Estuary. It contains a large expanse of intertidal sand flats with few channels. The upper reaches have fringing saltmarsh. There are also extensive areas of salt herbfield. In the upper true right arm, the saltmarsh is dominated by <i>Juncus kraussii</i> with oioi. This saltmarsh grades into a manuka dominant shrubland ecotone with marsh ribbonwood. This is a low fertility estuary because of the granite rock in the catchment. This low fertility means that there is a lower density than would otherwise be expected for crabs and mud	Largely indigenous cover and infauna. Part of a continuum of indigenous ecosystems from marine to terrestrial. There has been minimal human-mediated hydrological and landform change. There are few obvious human structures. There is a low level of non-natural sounds, odours and light.	SW	O	0.72

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		snails. The catchment is largely indigenous vegetation.				
Q17/02	Awaroa catchment	Upper hill slopes primarily with emergent rimu above a beech canopy. Some spurs contain kanuka with (and sometimes without) beech	Largely mature indigenous forest. Part of a larger area of indigenous vegetation. There has been minimal human-mediated hydrological and landform change. There are few obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	H	0.61
Q17/03	Awaroa catchment	Hill slopes and valleys on the south side of Awaroa Estuary. The vegetation is primarily kanuka dominant forest and mixed broadleaved forest with some beech. There are also areas of kanuka-manuka shrubland inland and a few places by the lower reaches of the estuary	Largely indigenous vegetation with few pest plants, including some moderately mature indigenous forest. There has been minimal human-mediated hydrological and landform change. There are few obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	H	0.45
Q18/01	Tonga Roadstead	Freshwater wetland associated with Richardson Stream. The vegetation includes mixed native shrubs, sedges, rushes & flax	Indigenous vegetation. Part of a continuum of indigenous ecosystems from marine to terrestrial. There has been minimal human-mediated hydrological and landform change. There are no obvious human structures. There is a low level of non-natural sounds, odours and light.	AL	H	0.51
Q18/02	Shag Harbour	Highly enclosed small meandering river estuary in a steep sided valley. Native forest margins. Clean granite sands. Seasonal seal crèche	Indigenous cover and infauna. Minimal human-mediated hydrological or geomorphological change. No obvious human structures. There is generally a	SW	O	0.81

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
			low level of non-natural sounds, odours and light except for seasonal high tide boat use			
Q18/03	Tonga Island	Low fertility granite and sandstone island. The vegetation is primarily mixed broadleaved shrubland & forest with some kanuka & flax. There is some northern rata on the upper slopes. The taller forest is on the sheltered western side. There are few weeds. The island is a seal haulout	Natural surface (rock) & indigenous vegetation, including some relatively mature indigenous vegetation for site conditions and natural disturbance history. Minimal human-mediated hydrological and landform change. No obvious human structures. There is a low level of non-natural sounds, odours and light.	ER-o	O	0.64
Q18/04	Tonga Roadstead	Coastal margins and hill slopes and valleys extending inland to the coastal environment boundary. The vegetation around the coastal margins is primarily kanuka dominant forest & shrubland with beech forest and mixed broadleaved forest & shrubland. Inland ridges are dominated by kanuka-manuka shrubland & some low forest. The valleys and lower slopes include mixed broadleaved forest with and without beech. There are low levels of scattered wilding pines on the hill slopes and some gorse on the coastal margins. The shore is mainly rocky although there are some sandy beaches.	Indigenous vegetation including some moderately mature indigenous forest. Part of a larger area of indigenous vegetation. There has been minimal human-mediated hydrological and landform change. There are no obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	H	0.45
Q18/05	Tonga Roadstead	The largely vegetated sand spit and wetland behind Onetahuti Beach. The spit vegetation is primarily kanuka-manuka	Largely indigenous vegetation with few pest plants. Part of a continuum of indigenous ecosystems from marine to	SW & DU	H	0.62

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		dominant shrubland. The wetland includes sand intertidal flats and saltmarsh grading into a freshwater wetland	terrestrial. There has been minimal human-mediated hydrological and landform change. There is generally a low level of non-natural sounds, odours and light although there can be seasonal visitor and boat noise.			
Q18/06	Tonga Island Marine Reserve	The no-take marine reserve was established in 1993. It covers 1835ha. It is a typical section of partly sheltered low fertility granite coastline. The marine reserve contains a growing seal colony	Indigenous cover and infauna. There has been no legal harvest since 1993. Minimal human-mediated hydrological or geomorphological change. Protection from human harvest. No obvious human structures apart from marine reserve signs. There is generally a low level of non-natural sounds, odours and light although there is seasonal visitor and power boat noise n	MN	O	0.85
R17/01	Bark-Sandfly Bays	Coastal rocky margins and hill slopes and gullies extending inland to the coastal environment boundary. The ridges are primarily kanuka dominant forest & shrubland. Gullies mainly include mixed broadleaved forest with beech in places. Scattered wilding pines.	Largely indigenous vegetation with few pest plants. Part of a larger area of indigenous vegetation. Minimal human-mediated hydrological and landform change. Low level of non-natural sounds, odours and light.	ER	H	0.45
R18/01	Bark Bay	The unit includes hill slopes and gullies adjoining the upper sections of the Bark Bay Estuary and extending inland to the coastal environment boundary. The unit cover is primarily rimu-beech-mixed broadleaved forest with a small amount of kanuka dominant and mixed broadleaved	Largely mature indigenous forest. Part of a larger area of indigenous vegetation. There has been minimal human-mediated hydrological and landform change. There are no obvious human structures (except for those associated with the track). There is	ER	O	0.66

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		forest	generally a low level of non-natural sounds, odours and light.			
R18/02	Bark Bay	Hut, ranger's accommodation & associated facilities, campground & pines		ER	T	
R18/03	Bark Bay Estuary	Small estuary of the relatively extensive area of intertidal sand flats. The catchment is entirely in indigenous vegetation. The estuary adjoins a marine reserve and is within a scenic reserve. There are limited areas of saltmarsh in the upper arms and some salt herbfield. The unit includes the non-vegetated part of the mobile sand bar at the entrance	The estuary contains indigenous cover and indigenous infauna. It is in a highly natural state and is generally surrounded by mature indigenous vegetation. There has been minimal human mediated hydrological or geomorphological change. There are no obvious human structures. There is generally a low level of non-natural sounds, odours and light.	SW	O	0.72
R18/04	Bark Bay	Vegetated part of sandspit at the entrance to Bark Bay Estuary. The vegetation is largely kanaka-manuka tall shrub land.	Largely indigenous vegetation. There has been minimal human-mediated hydrological and landform change. The unit has few obvious human structures (except seasonal visiting kayaks). There is a low level of non-natural sounds, odours and light except for some seasonal visitation and boat traffic	DU	H	0.55
R18/05	Mosquito Bay	Small rocky island at entrance to the bay. The vegetation is largely kanuka-mixed broadleaved forest	Indigenous vegetation and natural surface. There has been minimal human-mediated hydrological and landform change. There are no obvious human structures. There is low level of non-natural sounds, odours and light except for seasonal boat traffic	ER-o	H	0.61
S18/01	Sandfly-Torrent	Coastal margins between the Sandfly Bay	Largely indigenous vegetation with few	ER	H	0.48

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		and the northern end of the Torrent Estuary sand spit and slopes and valleys inland to the coastal environment boundary. The ridges are primarily kanuka dominant forest & shrubland although some willow-leaved hakea & scattered wilding pines are present. Gullies mainly include mixed broadleaved forest with beech in places. Some of the coastal headlands include lower native shrubland & some patches of gorse. The unit includes the vegetated part of the Sandfly Bay Sandspit	pest plants. Part of a larger area of indigenous vegetation. There has been minimal human-mediated hydrological and landform change. There are no obvious human structures apart from track facilities. There is a low level of non-natural sounds, odours and light except for seasonal boat traffic (affecting coastal margins)			
S18/02	Sandfly Bay	Valley at the head of Sandfly Bay Estuary. The unit cover is primarily rimu-beech-mixed broadleaved forest with a small amount of kanuka dominant and mixed broadleaved forest	Mature indigenous forest. Part of a larger area of indigenous vegetation. There has been minimal human-mediated hydrological and landform change. There are no obvious human structures apart from track facilities. There is a low level of non-natural sounds, odours and light	ER	O	0.64
S18/03	Sandfly Bay	Sandfly Bay Estuary. Predominantly channel & intertidal sand flats. The unit includes the non-vegetated parts of the sand spit and sand bar at the entrance to the Estuary	Largely indigenous cover and infauna. There has been minimal human-mediated hydrological and geomorphological change. There are few obvious human structures. There is a low level of non-natural sounds, odours and light except for some seasonal visitation	SW	O	0.68
S18/04	Boundary Bay	Shrubland with houses		ER	T	

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
S18/05	Fisherman's Bay	Small estuary with intertidal sand flats & channels	Largely indigenous cover and infauna. There has been minimal human-mediated hydrological and geomorphological change. There are few obvious human structures. There is a low level of non-natural sounds, odours and light except for some seasonal visitation	SW	O	0.68
S18/06	Sandfly-Boundary Bays	Small rocky islets including surrounding intertidal rock. There is a small amount of native shrubland	Natural surface & indigenous vegetation, including relatively mature indigenous vegetation for site conditions and natural disturbance history. There has been minimal human-mediated hydrological and landform change. There are few obvious human structures. There is generally a low level of non-natural sounds, odours and light except for seasonal boat traffic	ER-o-s	H	0.62
T17/01	Torrent Bay	Ridges, valleys & hill slopes inland from Torrent Bay to the coastal environment boundary. The vegetation is primarily kanuka dominant shrubland and forest; mixed broadleaved shrubland and forest; and patches of beech forest. Some wilding pines are scattered throughout at low densities.	Primarily indigenous vegetation, with a relatively low level of pest plants. There has been minimal hydrological and geomorphological change. There are few obvious human structures. There is a low level of non-natural sounds, odours and light.	ER	H	0.44
T17/02	Torrent Bay	Gullies and lower slopes with relatively mature indigenous forest. There is beech forest, and mixed broadleaved forest with some native conifers (primarily rimu).	The unit is dominated by mature indigenous forest. There has been minimal human mediated hydrological or landform change. There are a few	ER-o-s	O	0.63

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
			obvious human structures. There is a low level of non-natural sounds, odours and light.			
T18/01	Pitt Head	This unit consists of steep rocky headlands and coastline from the Anchorage to Anchor Bay. The vegetation is primarily kanuka dominant shrubland and low forest with patches of mixed broadleaved shrubland and low forest with kanaka in gullies. There are few small gorse patches near the water. There are some wilding pines. The unit includes a small lighthouse.	The unit is primarily indigenous vegetation with relatively few pest plants. There has been minimal human mediated hydrological or landform change. There are few obvious human structures (excluding lighthouse). There is generally a moderate to low level of non-natural sounds, odours and light (except for boat traffic and heavy seasonal visitor use).	ER-o-s	H	0.47
T18/02	Anchorage	Camp ground, Department of Conservation and private huts and other facilities		AL	T	
T18/03	Anchorage	Very low fertility granite soils with low native shrub land and some weed species including willow leaf hakea. The pines in the east have been poisoned	Largely indigenous vegetation although some pest plants are present. The highly infertile soils mean that the indigenous vegetation is moderately mature for site conditions. There has been minimal human mediated hydrological or landform change. There are few human structures. There is a relatively low level of non-natural sounds, odours and light, except for seasonal visitor use.	ER-s	H	0.44
T18/04	Anchorage	Torrent Headland. This rocky head land primarily has a kanuka dominant shrubland and forest cover with small patches of mixed broadleaved shrubland and low forest. There are some small patches of	Largely indigenous vegetation, including some that is moderately mature for the site conditions. There has been minimal human-mediated hydrological and landform change. There are few obvious	ER-s	H	0.49

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		beech forest (hard and black) in the east, although on the Estuary site it is mainly low black beech forest.	human structures.			
T18/05	Torrent Bay Estuary	Extensive intertidal flats & some channels. The unit excludes a small area in the north where there is a wharf, wooden retaining wall & some pilings.	Natural surface, indigenous cover and infauna. There has been minimal human-mediated hydrological and geomorphological change. There are few obvious human structures within the unit except for track markers	SW	O	0.68
T18/06	Torrent Bay	Torrent Bay sand spit. It primarily includes bare sand; spinifex & pingao with knobbly clubrush (planted sand binders) & introduced grasses (80% native); and a small area with sprayed gorse and native shrubs (kanuka, Veronica & akeake).	Largely natural surface & relatively mature indigenous vegetation for site conditions and natural disturbance history. There has been minimal human-mediated hydrological and landform change. There are few obvious human structures.	DU	H	0.57
T18/07	Watering Cove	Fringing rocky coastal faces with occasional small sandy beaches. There are also forested valleys extending inland. The vegetation is mainly beech (mainly black) - mixed broadleaved forest (mainly gullies); beech-kanuka forest on open faces. There are lesser amounts of kanuka dominant shrubland & forest; and mixed broadleaved shrubland & forest.	Indigenous vegetation including moderately mature indigenous forest. Minimal human-mediated hydrological and landform change. There are few obvious human structures (except for 1 building). There is generally a low level of non-natural sounds, odours and light except for seasonal boat traffic	ER-o	H	0.54
T18/08	Anchorage	This unit includes the wetlands and a pond in Anchorage Bay. To the west there is a pond and its outlet and a small native rush & shrub dominated wetland. In the east there is a rush-native shrub wetland inland	The unit includes indigenous vegetation and a pond. There appears to have been minimal human mediated hydrological or geomorphological change. There are a few obvious human structures. There	AL	H	0.54

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		of the campground. This wetland drains via a small stream to the eastern end of the beach	is generally a low level of non-natural sounds, odours and light, except for some seasonal visitor use.			
T18/09	Anchorage	The Anchorage Bay includes some permanent moorings and permanently moored vessels. It is the main anchorage in the Park and so can be extremely busy at certain times of the year. It is also a major drop-off/pick-up point for walkers and kayakers.		MN	T	
T18/10	Torrent Bay	Torrent Bay settlement		ER	T	
U17/01	Sandy Bay	Coastal faces and inland slopes. The predominant inland vegetation is generally kanuka-manuka shrubland, with patches of bracken and some gorse. There are also patches of mixed broadleaved shrubland and low forest in gullies. Along the coastline there are some pockets of mixed broadleaved shrubland and low forest (especially akeake) and small pockets of beech.		ER	T	0.41
U17/02	Sandy Bay	Marehau settlement, pasture and introduced trees, roads and tracking.		AL	T	
U17/03	Astrolabe Roadstead	Coastal faces adjoining rocky shore and some small sandy beaches. The unit also includes some small inland extending valleys. The vegetation is primarily beech forest (black and hard, although Black is predominant). There is also kanaka and/or mixed broadleaved forest and shrubland.	Indigenous vegetation, including some moderately mature indigenous forest. There has been minimal human mediated hydrological or landform change. There are few obvious human structures within the unit (excluding those associated with the track). There	ER-o	H	0.55

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		There are some poisoned pines.	is generally a low level of non-natural sounds, odours and light except for seasonal boat traffic and visitor use.			
U17/04	Apple Tree Bay	Small sand spit with pines, marram & gorse		DU	T	
U17/05	Tinline-Coquille Bays	Several valley systems extending inland to the coastal environment boundary. The cover includes kanuka dominant forest and shrubland, mixed broadleaved forest and shrubland and a small area of beech.	Indigenous vegetation, including some moderately mature indigenous forest. There had been minimal human mediated hydrological or landform changes. There are a few obvious human structures within the unit. There is a low level of non-natural sounds, odours and light.	ER	H	0.48
U17/06	Apple Tree Bay	Very small estuary with intertidal sand flats and saltmarsh.	Largely indigenous cover and infauna. There has been minimal human mediated hydrological or landform change. There are few obvious human structures. There is generally a low level of non-natural sounds odours and light, except for seasonal boat traffic and visitor use	SW	H	0.55
U17/07	Apple Tree Bay	Small group of houses along a sandy beach		DU	T	
U18/01	Adele Island	Rocky island free of animal pest species. The vegetation is a primarily a mosaic of mixed broadleaved and/or kanuka shrubland & forest. There are several patches with northern rata emergent over mixed broadleaved forest (dominated by mahoe). There are also several small patches of beech forest. In the north there are steep areas dominated by mixed	Largely indigenous vegetation, including some relatively mature indigenous forest. There has been minimal human mediated hydrological or landform change. The island is free of animal pest species. There are no obvious human structures. There is generally a low level of non-natural sounds, odours and light, except for seasonal boat traffic.	ER-o-s	H	0.58

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		broadleaved shrubland with some kanuka, flax, and gorse by the water. On the centre crest of the island there are some patches of willow-leaf hakea.				
U18/02	Fisherman's Island	Small rocky island primarily with mixed broadleaved (mahoe, akeake, ngaio) low forest, patches of low kanaka forest, patches of beech (black) forest, and some prostrate mixed broadleaved shrubland. Rengarenga are common on the eastern shore. There is generally a low level of weed species although there are a few patches of introduced grasses and a small amount of gorse on the north-western corner.	Largely indigenous vegetation, including some moderately mature indigenous forest. There has been minimal human mediated hydrological or landform change. There are no obvious human structures. There is generally a low level of non-natural sounds, odours and light except for seasonal boat traffic.	ER-o-s	O	0.63
V16/01	Otuwhero	Lower end of a spur with black beech forest; and kanuka-mixed broadleaved – totara forest. Further up the spur (outside of the unit but still within the coastal environment is kanuka-mixed broadleaved shrubland & low forest with wilding pines throughout	Indigenous vegetation, including some relatively mature indigenous forest. There has been minimal human mediated hydrological or landform change. There are no obvious human structures. There is generally a low level of non-natural sounds, odours and light, except for tourist buses and seasonal traffic.	ER	H	0.52
V16/02	Otuwhero	Alluvial flats with pasture. Some lower hill slopes with younger native shrubland with wilding pines.		AL & ER	T	
V17/01	Marehau	Intertidal flats and outer sand banks from Marehau to Otuwhero Estuaries. It includes the ebb-tide deltas for both of	Largely indigenous cover and infauna and natural surface. There has been minimal human mediated hydrological	SW	H	0.61

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		these estuaries. Extensive area of bird feeding. It is likely that human harvest levels are low given the extensive and mobile nature of the sands.	or geomorphological change. There are few obvious human structures. There is a low to moderate level of non-natural sounds, odours and light, excluding sounds from tourist vehicles/ vessels and seasonal boat traffic.			
V17/02	Marehau	Aquatic and terrestrial habitats associated with a section of the margins of the Marehau Estuary. Included are: a section of the Marehau River, a series of ponds, freshwater wetland (dominated by raupo), mixed native shrubs (e.g. akeake, ngaio, kanuka) - cabbage trees –flax shrubland. Planting to establish the wetland & riparian vegetation began in 1996.	Largely indigenous vegetation with relatively few pest plants. There is an active restoration programme. There are few obvious human structures within the unit. There is generally a moderate-low level of non-natural sounds, odours and light, except for the sounds from seasonal tourist traffic & visits	AL	H	0.45
V17/03	Marehau	Primarily pasture/ Introduced grasses, with some introduced & native trees, buildings, roads and low scrub		AL	T	
V17/04	Marehau	Hill slopes above Marehau. Primarily mixed broadleaved forest with black beech groups & trees and the occasional native conifer. The unit excludes the pines on the upper ridges but does include scattered wilding pines.	Largely indigenous vegetation with relatively few pest plants. Includes a small area of moderately mature indigenous forest. There has been minimal human-mediated hydrological and landform change. There is generally a low level of non-natural sounds, odours and light, except for tourist traffic	ER	H	0.48
V17/05	North of Kaiteriteri	Rocky coastal faces below a very low density residential settlement. The unit vegetation includes primarily kanuka	Largely indigenous vegetation with relatively few pest plants. There has been minimal human mediated	ER-o-s	H	0.43

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		dominant shrubland and low forest with lesser amounts of mixed broadleaved shrubland and low forest. The southern section of the unit contains some more mature vegetation including some beech in valleys and bays.	hydrological or landform change within the unit. There are few obvious human structures. There is generally a low-moderate level of non-natural sounds and light except for seasonal boat traffic and visitor use.			
V17/06	Marehau Estuary	This unit includes the estuary's intertidal sand flats, channels, salt herbfield and saltmarsh. Saltmarsh includes <i>Juncus krausii</i> , oioi & marsh ribbonwood. Salt meadow primarily includes <i>Sarcocornia</i> & <i>Samolus</i> . There is some gorse & weeds on upper margins although this is largely excluded from the unit. The ebb-tide delta & sand bars are in a larger intertidal flats unit extending to and including the Otuwhero ebb-tide delta	Largely indigenous cover and infauna. There are few obvious human structures apart from board-walks. There is generally a low level of non-natural sounds, odours and light, although there increased noise associated with seasonal visitor use	SW	H	0.49
V17/OW1	Otuwhero	Sandspit enclosing Otuwhero Estuary. Heavily modified by roadend carpark, vehicle tracking, rock riprap, weed invasions and plantings		DU	T	0.33
V17/OW2	Otuwhero	Lower intertidal flats, good invertebrate populations within un-vegetated sands, some eutrophic algae. Several moored boats and mooring blocks. It has a highly erodible catchment and land disturbance in the catchment has led to increases in sediment in the estuary as a whole	Indigenous cover and infauna. There are few obvious human structures apart from boat moorings. There is generally a low level of non-natural sounds, odours and light, although there increased noise associated with vehicle use on the adjoining road – especially that associated with seasonal visitor use of the National Park	SW	H	0.55

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
V17/OW3	Otuwhero	Upper intertidal flats with saltmarsh and salt herbfield. Saltmarsh includes <i>Juncus kraussii</i> with marsh ribbonwood on the margins along with some introduced grasses. The Salt herbfield includes <i>Sarcocornia</i> & <i>Samolus</i>	Largely indigenous cover and infauna. There are few obvious human structures within the unit. There is generally a low level of non-natural sounds, odours and light, although there increased noise associated with vehicle use on the adjoining road – especially that associated with seasonal visitor use of the National Park	SW	H	0.54
V17/OW4	Otuwhero	Upper intertidal flats with saltmarsh separated from the main estuary by a road causeway & bridge. The road bridge across stream leaves flows relatively intact. The saltmarsh includes <i>Juncus kraussii</i> and, oioi while the salt shrubland includes marsh ribbonwood and manuka. There appears to be some drain construction in the upper reaches	Largely indigenous cover and infauna. There are few obvious human structures within the unit. There is generally a low level of non-natural sounds, odours and light, although there increased noise associated with vehicle use on the adjoining road– especially that associated with seasonal visitor use of the National Park	SW	H	0.52
W17/01	Kaka Is	Small rocky island at the north west entrance to Kaiteriteri. The vegetation is primarily kanuka dominant shrubland with some mixed broadleaved species (akeake with mapou & mahoe) near the summit with a small amount of gorse and the very occasional wilding pine. There is a moderate level of boating traffic noise and a large number of visitors to the area during summer.	Largely indigenous vegetation and natural surface. There has been minimal human mediated hydrological or landform change. There are a few obvious human structures.	ER-o-s	H	0.48
W17/02	Kaiteriteri	Head land on the southern shores of the entrance to Kaiteriteri Estuary. The	Moderately mature indigenous forest. There has been minimal human	ER	H	0.55

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		vegetation is largely black beech-kanuka forest. There is a moderate level of boating traffic noise and a large number of visitors to the area during summer. Department of Conservation reserve.	mediated hydrological or landform change. There are few obvious human structures.			
W17/03	Kaiteriteri	Hill slopes behind the Kaiteriteri motor camp and the northern shore of the Kaiteriteri Estuary. Much of the area is a Department of Conservation reserve. The vegetation includes black beech-kanuka forest on the west facing slopes. The eastern ridges contain low kanuka-manuka shrubland with bracken while the gullies contain mixed broadleaved forest dominated by mahoe. Wilding pines are present.	Indigenous vegetation with relatively few pest plants. The unit includes moderately mature indigenous forest. There has been minimal human mediated hydrological or landform change. There are few obvious human structures. There is generally a low to moderate level of non-natural sounds, odours and light, except for seasonal visitor influences	ER	H	0.48
W17/04	Ngaio Is	This is a small rocky island. The vegetation is primarily mixed broadleaved shrubland (mahoe, mapou) and low forest with the occasional kanaka. Department of Conservation reserve.	Indigenous vegetation with few pest plants. There has been minimal human mediated hydrological or landform change. There are few obvious human structures.	ER-s	H	0.51
W17/05	Kaiteriteri	Several small rocky islands off the southern end of Little Kaiteriteri beach. The vegetation is primarily kanuka dominant shrubland and low forest on the crests; with gorse on the lower slopes of the larger island, and prostrate mixed broadleaved shrubland on the small island.	Largely indigenous vegetation and natural surface. Some of the vegetation is moderately mature for the site conditions. There has been minimal human mediated hydrological or landform change. There are a few obvious human structures.	ER-s	H	0.58
W17/06	Kaiteriteri	The main coastal settlement areas for Kaiteriteri and surrounds. Includes some		ER	T	

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		hills in introduced grasses cover and /or young shrubland				
W17/07	Kaiteriteri	Largely alluvial flats with campground , pasture & some residential and other development		AL	T	
W17/08	Kaiteriteri Estuary	<p>Small shallow well flushed tidal lagoon estuary with a small freshwater inflow. The tidal prism of Kaiteriteri Estuary has been reduced in size with the draining of the saltmarsh in the upper reaches of the estuary. That part of the estuary still remaining is primarily intertidal sands and some supratidal sands. There are areas of soft mud. There is also saltmarsh dominated by <i>Juncus kraussii</i> (upstream) and some salt herbfield (downstream). There is increased sediment resulting from catchment activities. The saltmarsh has been reduced by drainage, sea walls & causeways.</p> <p>There is a small low sand island. In the SW there scattered kanuka/ flax-mixed broadleaved shrubs –introduced grasses and native rushes. In the NE there is flax-scattered gorse, introduced grasses & introduced iceplant. There is rock armouring along much of the road margin joining the estuary. That part of the estuary (saltmarsh) to the south of the main road has been excluded from the unit because</p>	Largely natural surface with a largely an indigenous cover and infauna, although the small island primarily consists of introduced grasses.	SW	H	0.44

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		of the drainage, floodgates and filamentous green algae (reflecting increased nutrients from catchment).				
W17/09	Kaiteriteri	Valley wetland largely with native rush, sedge and shrub cover. Largely surrounded by a pine plantation	Largely indigenous vegetation with relatively few pest plants. There appears to have been minimal human-mediated hydrological and geomorphological change. There are few obvious human structures.	AL	H	0.51
X16/01	Kaiteriteri	Hill slopes with pine plantations, younger native shrubland, tracking and roads, and some buildings		ER	T	
X16/02	Riwaka-Motueka River	Alluvial flats in agricultural use, some rural settlements		AL	T	
X17/01	Riwaka River Estuary	15ha tidal lagoon. Current mouth of the Riwaka River and the lower flap-gated Atuia Stream. The unit includes intertidal flats & channels, saltmarsh & salt herbfield. There is stranded <i>Enteromorpha</i> (indicative of higher nutrient levels). The Riwaka River has been extensively channelized	The unit largely contains indigenous cover and infauna. There are few human structures within the unit. There is generally a low level of non-natural sounds, odours and light.	SW	H	0.44
X17/02	Tapu Bay	Steep rocky head land primarily with black beech, kamahi and other mixed broadleaved species; and a small area of low kanaka dominated forest. There is some gorse near the water margin in places. There is tagasaste on the south side of the headland.	Largely indigenous vegetation with relatively few pest plants. There has been minimal human mediated hydrological or landform change. There are a few obvious human structures within the unit itself. There is a relatively low level of non-natural sounds, odours and light.	ER-s	H	0.49
X17/03	Kaiteriteri	Headland & coastal faces with mixed	Largely indigenous vegetation with	ER-o-s	H	0.50

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		broadleaved low forest, kanuka dominant shrubland & low forest, and some emergent beech. Gorse on uphill margins is largely excluded and the pines at the northern end have been poisoned.	relatively few pest plants. There has been minimal human-mediated hydrological and landform change. There are few obvious human structures. There is a relatively low level of non-natural sounds, odours and light.			
X17/04	Kaiteriteri	Hill slopes and valleys largely within a Department of Conservation reserve. The cover includes beech forest with areas of kanuka forest & shrubland; & mixed broadleaved forest & shrubland. There is some tracking. Areas of pine plantation are excluded but there are some wilding pines.	Largely indigenous vegetation with relatively few pest plants. There has been minimal human-mediated hydrological and landform change. There are few obvious human structures within the unit. There is generally a relatively low level of non-natural sounds, odours and light.	ER	H	0.45
X17/05	Tapu Bay	The northern part of the Motueka Delta. There is an extensive area of intertidal fine sands protected from the sea by a low rock reef and shell bar. There are very healthy intertidal beds of sea grass. There are some scattered moorings. Inshore there is some sea lettuce and <i>Gracilaria</i> . There is some shellfish harvest.	Indigenous cover (including healthy sea grass) and infauna. There are a few obvious human structures within the unit apart from some moorings. There is generally a relatively low level of non-natural sounds, odours and light.	SW	H	0.57
Y17/01	Motueka	This is the inner Motueka River Delta. It is a relatively extensive area of saltmarsh (dominated by <i>Juncus kraussii</i> and oioi) and salt-herbfield with fringing patchy salt shrubland (dominated by marsh ribbonwood). The unit excludes introduced grasses, pines, willows and other introduced species on the margins. It does	Largely indigenous cover and infauna. There are few obvious human structures apart from the stop-banks (outside the unit). There is generally a relatively low level of non-natural sounds, odours and light.	SW	H	0.45

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		however include several small "islands" of higher ground with introduced grasses and/or gorse (too difficult to exclude). The estuary margins are stopbanked.				
Y17/02	Motueka	This unit includes several channels that were probably old channels from the Riwaka River. The NW arm/channel is more intact (the unit excludes modifications by the houses on the true right bank e.g. reclamation with a jetty and a small building). The intertidal flats are muddy but the saltmarsh and salt herbfield are intact. The unit associated with the smaller southern arm (Ferner Creek) has been drawn to exclude the rock armouring, boat pilings and jetties on the true left bank by the mouth.	Largely indigenous cover and infauna . Human structures are generally excluded from the unit.	SW	H	0.44
Y17/03	Motueka	Low sand island dominated by a pine plantation, with other areas of introduced vegetation.		DU	T	
Y17/04	Motueka	Outer delta of the Motueka River. This is an extensive area of intertidal flats and channels. There are fine sands and plenty of mud snails. There is some sea grass close to shore. The catchment is largely developed and stranded <i>Enteromorpha</i> was observed.	Largely indigenous cover and infauna. There are few obvious human structures. There is generally a low level of non-natural sounds, odours and light.	SW	H	0.45
Y17/05	Motueka	Island with introduced grasses & willows		DU	T	
Y17/06	Motueka	Motueka River from the main road bridge to the coastal environment boundary		AL	T	0.36

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
Y17/07	Motueka	Motueka Relict Estuary (Kumeras). The unit contains intertidal flats (sand and some cobbles) with some salt herbfield, and channels. In the upper reaches there is relatively extensive saltmarsh (dominated by <i>Juncus kraussii</i>). There are a few low islands largely with introduced grasses and other alien species. The area immediately downstream of the causeway culverts is excluded as it contains algae representative of high nutrient levels. Since the river diversion there has been an increase in sedimentation resulting from the removal of flood flushing flows. There is restoration activity (planting of native species) on parts of the riparian margins within the Raumanuka Scenic Reserve.	The intertidal flats, saltmarsh & salt herbfield contain largely indigenous cover and infauna. There are few obvious human structures. There is generally a low level of non-natural sounds, odours and light.	SW	H	0.43
Y17/MK2	Motueka	Low sand spit with supratidal sands and vegetated areas (most of unit) dominated by alien species. There is an occasional emergent pine over a tagasaste –gorse cover with introduced grasses including marram. In the north lupins replace tagasaste and gorse is dominant.		DU	T	
Y17/MK3	Motueka	An old river mouth into the Motueka Relict Estuary (Kumeras) which was subsequently separated from the river channel of the northern delta. Comprises river channel & upper tidal flats, bisected by causeways/floodgates and drains.		SW	T	

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
Z16/01	Motueka	Low lying alluvial flats used for agricultural purposes		AL	T	
Z17/01	Motueka	Alluvial flats used for agricultural purposes, & settlement of Motueka		AL	T	
Z17/MT20	Motueka	Outer Moutere Lagoon, bounded by the Motueka sandspit, township and Jackett Island. The unit includes the outer Moutere river channel and intertidal sandflats. The intertidal flats area mainly sand with some cobbles in west. Modifications include a wharf and a small reclamation for a saltwater swimming pool	Largely indigenous cover and infauna. There are few obvious human structures within the unit. There is generally a low level of non-natural sounds, odours and light.	SW	H	0.54
Z17/MT21	Motueka	Motueka Sandspit Scenic Reserve, comprising supratidal sands, dune islands with intertidal flats on the distal end and floodtide delta. Up to 10,000 waders roost on the sandspit and many breed. The proportion of the spit that is vegetated is very small (& is mainly introduced grasses with some lupin). The unit primarily consists of mobile unvegetated supratidal sands. The unit's position changes. The area is a reserve and no dogs are allowed	Almost entirely natural surface that is close to present-potential for site conditions and natural disturbance history. There are few obvious human structures. There is generally a low level of non-natural sounds, odours and light.	DU	O	0.67
AA17/MT16	Moutere Inlet	NW arm of Moutere Inlet, west of the river channels but not cut off by a causeway (which is excluded from this unit). There are some extensive patches of saltmarsh. The salt herbfield has a smaller extent and many are smothered by accumulations of silty sand. The unit is affected by traffic and	Largely indigenous cover and infauna. There are few obvious human structures within the unit.	SW	H	0.46

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		port noise				
AA17/MT1 7	Moutere Inlet	NW section of the Moutere Inlet, cut off by the Wharf Rd causeway and tidegates (included). The floodtide delta is armoured by cobbles. The saltmarsh is limited in extent but is primarily in the west. Salt meadow is predominant in the east. There are some restoration plantings on the margins. A small low sand island in this inlet has some introduced trees surrounded by native mixed broadleaved shrubland (akeake, ngaio). This island is largely fringed by saltmarsh and salt herbfield	Largely indigenous cover and infauna. There are few obvious human structures within the unit except for the causeway. The unit generally has a low-moderate level of non-natural sounds, odours and light.	SW	H	0.46
AA17/MT1 8	Moutere Inlet	Motueka wharf, marinas, dredged channels, boats, training walls. Adjoins Talley's fish factory. Pacific oyster are present		SW	T	0.13
AA17/MT1 9	Moutere Inlet	Narrow embayment opposite the Moutere wharf and jetty. There are intertidal flats with clean sands & shellfish	Largely indigenous cover and infauna. There is a relatively low level of human-mediated hydrological and geomorphological change. There are no obvious human structures within the unit. There is generally a low level of non-natural sounds, odours and light (excluding some port noise)	SW	H	0.48
AA17/MT2 3	Moutere Inlet	Upper tidal flats with saltmarsh & salt meadow on the north/true left bank of the lower Moutere River. State Highway 6 causeway & bridge are on the eastern	Largely indigenous cover and infauna in the unit.	SW	H	0.44

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		boundary. The unit includes the river. Modifications include power poles, drains, reclamation spoil dumping, vehicle tracks through the saltmarsh, and some weeds. Cover on the intertidal mudflats includes <i>Juncus kraussii</i> & marsh ribbonwood saltmarsh & salt herbfield				
AB17/01	Moutere catchment	Low hill slopes with agricultural land uses		ER	T	
AB17/02	Jackett Island	Low sand island largely planted in pines. There are also areas of introduced grasses with alien & native trees		DU	T	
AB17/03	Kina Peninsula	Low sand and shingle peninsula. It presently has a pine plantation, introduced grasses, mixed native and alien plants along much of the outer coast, housing, roads & tracking. The shingle-armoured sand spit tip has a mosaic of native & non-native low trees, shrubs, rushes and grasses. The intertidal flats are included within other units		DU	T	
AB17/MT1	Moutere Inlet	Ebb-tide delta, sand/cobbles, mid-tide & low-tide lagoons, partly exposed waters. Towards the south there are extensive sea grass beds on fine sand and there are some low blue mussel reefs on cobbles. There are some areas of salt herbfield.	Natural surface and indigenous infauna. There has been minimal human-mediated hydrological and geomorphological change. There are few obvious human structures. There is generally a low level of non-natural sounds, odours and light.	SW	H	0.61
AB17/MT2	Moutere Inlet	Main SE arm of the Moutere Inlet. There is good marginal saltmarsh (<i>Juncus kraussii</i> &	Largely indigenous cover and infauna. There has generally been a low level of	SW	H	0.57

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		oioi) & salt herbfield (<i>Sarcocornia</i> & iceplants). Riprap along road margins. Diatom film on sandflats. There is traffic noise from the state highway.	human-mediated hydrological and geomorphological change (excluding some increases in nutrients). There are few obvious human structures.			
AB17/MT9	Moutere Inlet	SH6 causeway with large cut-off saltwater lagoon, with saltmarsh and sandflats	Largely indigenous cover and infauna.	SW	H	0.51
AB17/MT10	Moutere Inlet	Low sand island on floodtide delta. Cover includes native <i>Stipa</i> & <i>Juncus</i> with manuka & some introduced grasses	Largely indigenous vegetation with few pest plants. There has been minimal human-mediated hydrological and landform change. There are few obvious human structures.	SW	H	0.60
AB17/MT11	Moutere Inlet	SH6 causeway with small cut-off saltwater lagoon. Good saltmarsh, bare mid-tide flats		SW	T	0.31
AB17/MT12	Moutere Inlet	SH6 causeway with large cut-off saltwater lagoon. Saltmarsh and fine-sand flat with <i>Amphibola</i>	Largely indigenous cover and infauna.	SW	H	0.62
AB17/MT13	Moutere Inlet	Midsection of Inlet between entrances. Includes Moutere River lower channel. Limited fringing salt meadow with patches of saltmarsh throughout bare tidal flats. Some algae that indicate higher nutrient levels are present.	Largely indigenous cover, natural surface and indigenous infauna.	SW	H	0.51
AB17/MT14	Moutere Inlet	SH6 causeway with small cut-off saltwater lagoon. Saltmarsh & raupo/flax in upper intertidal. Eutrophic algae patches on mid-tidal flats.		SW	T	0.37
AB17/MT15	Moutere Inlet	SH6 causeway with small cut-off saltwater lagoon. Saltmarsh and salt meadow in upper intertidal with several old buildings on poles. Bare mid-tidal flats.		SW	T	0.33

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
AB17/MT2 2	Moutere Inlet	SH6 causeway bounding SE half of Moutere River estuary, excludes. river channel. Extensive upper tidal flat with good saltmarsh at head.	Largely indigenous cover and infauna.	SW	H	0.56
AC17/MT0 5	Moutere Inlet	SH6 causeway & local causeways with 3 cut-off saltwater lagoons (to MHWS). Roading debris in lagoons. Limited saltmarsh & salt herbfield.		SW	T	0.35
AC17/MT0 6	Moutere Inlet	SH6 causeway with cutoff lagoon, turbid freshwater and not tidal. Waterfowl habitat		SW	T	0.22
AC17/MT0 7	Moutere Inlet	2 small islands, manuka dominant shrubland, saltmarsh fringe	Largely indigenous vegetation with few pest plants. There has been minimal human-mediated hydrological and landform change. There are no obvious human structures.	DU	H	0.54
AC17/MT0 8	Moutere Inlet	SH6 causeway with 2 cutoff lagoons, with saltmarsh and mudflats		SW	T	0.32
AC18/01	Kina	Narrow steep eroding conglomerate cliffs with pines on the edge falling or potentially falling onto the beach. There is an occasional narrow gully with mahoe-willow-leaved hakea shrubland & low forest. Inland there is low density settlement, some small patches of native shrubland, introduced grasses & introduced trees (e.g. olives, eucalypts, willows)		ER	T	
AC18/02	Kina	Campground, low density settlement, introduced grasses and plantings. Eroding		ER	T	

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		conglomerate coastal cliffs with patches of pines on part of shore.				
AC18/03	Kina	In the north this is a narrow strip between the Kina Beach Recreation Reserve campground & the road. Here the vegetation is mixed broadleaved forest (ngaio-mahoe) with kanuka, willow-leaved hakea and other introduced tree (80% native in the canopy). In the south there is a wider area of planted mixed broadleaved-kanuka shrubland & low forest	Largely indigenous vegetation with relatively few pest plants. There has been minimal human-mediated hydrological and geomorphological change. There are few obvious human structures in the unit.	ER	T	0.41
AC18/MT03	Moutere Inlet	SE part of the Inlet after recent removal of causeway & roadway, with replanting with saltmarsh species. Elsewhere cover is primarily saltmarsh & salt herbfield	Largely indigenous cover and infauna. Part of unit is being restored following the removal of a causeway. The unit now has few obvious human structures.	SW	H	0.47
AC18/MT04	Moutere Inlet	SH6 causeway with cut-off lagoon to MHWS. Pampas & gorse margins excluded. Cover is primarily saltmarsh with limited marsh ribbonwood, & sandflats. Some algal blooms present		SW	T	0.42
AD18/01	Moutere Bluff	Eroding conglomerate cliffs adjoining the golf course on a coastal terrace. There are greens (introduced grasses) on the terrace with mixed pines, native trees & shrubs (much planted). There are small pockets of high natural character (too small to map) in gullies with some black beech and mixed broadleaved species		ER	T	
AD18/02	Moutere Bluff	Eroding conglomerate coastal cliffs with		ER	T	

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		more stable areas for self-seeded pines. There are pockets of mixed broadleaved shrubland with hakea & wattle. Inland terrace has introduced grasses, new rural residential development, introduced trees and native plantings				
AD18/03	Moutere Bluff	Upper reaches of a small gully with mixed broadleaved forest (dominated by mahoe). There are weeds on the margins	Largely indigenous vegetation. There has been minimal human mediated hydrological or landform change. There are a few obvious human structures within the unit. There is generally a low level of non-natural sounds, odours and light	ER	H	0.44
AD18/04	Moutere Bluff	Steep erosion prone clips and colluvium below the road. The vegetation is primarily: mixed broadleaved forest dominated by ngaio and mahoe; and mature titoki forest with emergent matai. There is also some kanaka-mixed broadleaved forest and a few slips. This is a Department of Conservation reserve and there has been intensive animal pest control for some years.	Largely mature indigenous forest. There has been minimal human-mediated hydrological or landform change. There are few obvious human structures within the unit. There is generally a low level of non-natural sounds, odours and light apart from uphill traffic noise and seasonal use of the campground adjoining.	ER	O	0.71
AE18/01	Ruby Bay	The Moutere Bluffs between the road and housing on the upper terrace. Most of the forest is on the colluvium at the base of the cliffs. The cliffs are actively eroding. The vegetation is primarily: mixed broadleaved forest dominated by mature titoki; mixed broadleaved forest dominated by mahoe	Much of the unit includes mature indigenous forest, but there is also moderately mature indigenous forest. There has been minimal human mediated hydrological or landform change. There are few obvious human structures within the unit.	ER	H	0.56

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		(younger forest). There is also a small amount of eroding cliffs with weed species. There is traffic noise from the nearby road.				
AE18/02	Ruby Bay	Steeper conglomerate cliffs and the associated gullies. The vegetation is primarily relatively mature mixed broadleaved forest dominated by mahoe. The forest in the gullies and on the colluvium is most mature. On the margins there is younger forest and shrubland with some horticultural plantings (at the top) and tagasaste (near the road). There are also some large slips with weed species. In the South there is a cliff face and colluvium with mixed broadleaved forest with some titoki.	Relatively mature and moderately mature indigenous forest. There has been minimal human mediated hydrological or landform change within the unit itself. There are few obvious human structures within the unit.	ER	H	0.56
AE18/03	Ruby Bay	Coastal terraces and lower faces with the Ruby Bay settlement, introduced grasses, areas of plantings, and roads		ER	T	
AF18/02	Waimea Inlet & catchment	Low hill slopes adjoining the western shores of Waimea Inlet and extending inland to the coastal environment boundary. The land is largely used for agricultural purposes. There are roads (including part of SH6) and some rural – residential housing development		ER	T	
AF18/03	Waimea Inlet & catchment	Coastal faces/margins adjoining Waimea Inlet largely with mixed broadleaved and kanuka-manuka shrubland & low forest with the occasional emergent pine. An area	Largely indigenous vegetation with relatively few pest plants. There has been minimal human-mediated hydrological and landform change.	ER	H	0.43

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		of eucalypts adjoins part of the unit	There are few obvious human structures. There is a relatively low level of non-natural sounds, odours and light.			
AF19/01	Waimea Inlet & catchment	Small arm of Waimea Estuary cut-off from the main estuary by the Mapua causeway. There is a reasonable size culvert but it has recently been flap-gated. This means that there is an increased proportion of fresh water because of the flap-gate barrier to incoming tidal flows. The unit consists of intertidal flats with saltmarsh over 40% with a limited amount of salt herbfield. The terrestrial margins are largely in alien species.	Largely indigenous cover and infauna. There is generally a low level of non-natural sounds, odours and light.	SW	H	0.45
AF19/02	Waimea Inlet & catchment	Largely alluvial flats and coastal terrace. Includes much of the Mapua settlement as well as land used for agricultural purposes		ER	T	
AF19/03	Waimea Inlet & catchment	Rabbit Island is largely a pine plantation with some cleared areas. There is a domain area in the north with introduced grasses, pines and some small patches of planted ngaio dominant forest with introduced grass understory. There is Coast Care spinifex & pingao planting along a narrow band associated with the domain.		DU	T	
AF19/04	Waimea Inlet & catchment	Low island at the Mapua entrance to Waimea Inlet. Mixed native & alien trees & shrubs & introduced grasses. Pines are dominant over the northern half of the island		DU	T	

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
AF19/05	Waimea Inlet & catchment	Bird Island. Largely introduced grasses. There are a few totara & mapou and some pines. There is also some marsh ribbonwood with gorse		DU	T	
AF19/06	Waimea Inlet & catchment	Mapua settlement frontage. Includes a mooring area		SW	T	
AG19/01	Waimea Inlet & catchment	Western Waimea Inlet. There are extensive intertidal flats and a small amount of channels. There is a relatively high level of mud (from greywacke) compared to Golden Bay sands (from granite and sandstone) estuaries. There is good productivity with a reasonable number of crabs. There is stop-banking along the southern alluvial flats with a series of flap-gates. Large amounts of Entromorpha (indicative of raised nutrient levels) were found near the causeway and around functioning flap-gates. There are areas of saltmarsh with patches of salt herbfield on the upper flats. On other margins there can be narrow bands of saltmarsh with some Stipa (estuary tussock).	Largely indigenous cover and infauna. There are relatively few obvious human structures apart from the causeways-most of which are excluded from the unit. In general there is a low level of non-natural sounds, odours and light.	SW	H	0.45
AG19/02	Waimea Inlet & catchment	NW tip of Rough Island. The unit consists of patches of primarily native (totara-mixed broadleaved) forest & tall shrubland with tagasaste in a matrix of introduced grasses (where the latter is largely excluded from the unit). There is some planting.	Largely indigenous vegetation with relatively few pest plants. There are few obvious human structures. In general there is a low level of non-natural sounds, odours and light but this may be higher with weekend & holiday	DU	H	0.44

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
			visitor use of the area.			
AG19/03	Waimea Inlet & catchment	Long narrow inlet with a causeway to the east. There is a limited amount of fringing saltmarsh and some salt herbfield. The inlet drains to the SE arm through a culvert with a high invert level which prevents the water from draining too much. The Inlet includes a water-ski area with buoys. There may be high levels of non-natural sounds at times.		SW	T	
AG19/04	Waimea Inlet & catchment	Extensive area of saltmarsh in the inner estuary. Much of the saltmarsh is on slightly higher ground and has introduced grasses. On the higher areas there are islands of gorse, some native shrubs, and introduced trees & shrubs. This unit adjoins the inland stopbanks. There are patches of good saltmarsh but the average is less than high.		SW	T	
AG19/05	Waimea Inlet & catchment	Rough Island. Largely pine plantation & introduced grasses.		DU	T	
AG20/01	Waimea Inlet & catchment	Western section of Waimea Inlet within Tasman district boundaries. While this section is more modified than the eastern section the most modified parts are outside of the district boundaries. While parts of this section of the Waimea Inlet (within the District) adjoin urban and industrial development with reclamations, the landward boundaries are primarily	Largely indigenous cover and infauna. There are a few obvious human structures within the unit boundaries. Over much of the unit there is generally a low to moderate level of non—natural sounds odours and light	SW	H	0.44

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		<p>agricultural development and forestry.</p> <p>The unit includes extensive sand & cobble intertidal flats and a limited area of channels. Saltmarsh is of limited extent. It is largely found in deeper arms with smaller patches near the causeways. On the upper or inland margins there is saltmarsh, in some places with marsh ribbonwood and estuary tussock (<i>Stipa</i>). There are also some areas of salt herbfield. There is some aircraft noise- with the magnitude depending on wind direction and speed.</p>				
AG20/02	Waimea Inlet & catchment	Bell Island. Low island with oxidation ponds, cleared plantation forestry & introduced grasses		DU	T	0.00
AG20/03	Waimea Inlet & catchment	Best island. Low island with a golf course, a settlement, agricultural land uses, and created ponds		DU	T	0.00
AG21/01	Waimea Inlet & catchment	Sand-spit at the eastern end of Rabbit Island. About 10% of the unit is a prograding spit being colonised by marram. Most of the unit was once a dune swale (still some flax) but the pines have lowered the water table so the cover is now introduced grasses. Pines are now invading (approximately 10% unit)		DU	T	0.20
AH19/01	Waimea Inlet & catchment	Alluvial flats primarily used for agricultural purposes. It also includes SH6 and some		AL	T	0.00

Unique ID	Locality	Summary description	Factors contributing to ranking	Environment type	Ranking	NCI
		industrial development on reclaimed land adjoining the Inlet.				
AH19/02	Waimea Inlet & catchment	The Waimea River upstream of the coastal marine area but within the coastal environment. This unit includes the active cobble & gravel beds. There is a reasonably natural meander pattern with largely native biota (excluding trout)	Largely indigenous biota. Few obvious human structures within the unit. Excluding the area around the SH6 bridge there is generally a low level of non—natural sounds odours and light	AL	H	0.45
AH20/01	Waimea Inlet & catchment	Saxton Island -Low long and narrow barrier-like sand island and a small low islet surrounded by intertidal flats. The vegetation is primarily: mixed broadleaved shrubland, kanuka shrubland, saltmarsh and introduced grasses with some pines. There are four small groupings of small buildings	Largely indigenous vegetation with relatively few alien plant species. There has been minimal human-mediated hydrological or landform change. There are few obvious human structures (apart some small buildings). There is generally a low level of non—natural sounds odours and light, apart from noise from the airport	DU	H	0.50
AH20/02	Waimea Inlet & catchment	Oyster Island- low sand island. The vegetation is mainly mixed broadleaved & kanuka shrubland. There are also patches of introduced grasses and there are a few pines in the south	Largely indigenous vegetation with relatively few alien plant species. There has been minimal human-mediated hydrological or landform change. There are few obvious human structures. There is generally a low level of non—natural sounds odours and light, apart from noise from the airport	DU	H	0.48