Identifying and protecting significant indigenous biodiversity in the Wellington region

A guide to interpreting criteria in the Regional Policy Statement



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1. Introduction

The *Regional Policy Statement for the Wellington region* (RPS) became operative in 2013. Its purpose is to promote the sustainable management of natural and physical resources in the Wellington region under the Resource Management Act (RMA) 1991. The RPS also provides an overview of the resource management issues for the region and sets out the region-wide policies and methods that will be used to address them.

Two of the regionally significant issues identified in the RPS are the reduction in the extent of indigenous ecosystems, and their ongoing degradation and loss. Objective 16 of the RPS responds to these issues by aiming to maintain and, where necessary, restore indigenous ecosystems and habitats with significant biodiversity values in the Wellington region to a healthy functioning state (see Box 1). This objective is implemented through several RPS policies and methods, including Policies 23, 24 and 47 and Method 21.

1 Objective 16

Indigenous ecosystems and habitats with significant biodiversity values are maintained and restored to a healthy functioning state.

1.1 Scope of guide

This guide implements Method 21 of the RPS which requires Wellington Regional Council to assist with the interpretation of criteria set out in Policies 23 and 24 of the RPS (see Box 2). These policies require the identification and protection of ecosystems and habitats with significant indigenous biodiversity values (hereafter 'significant values'). Through the preparation and dissemination of this document, the Wellington Regional Council takes a lead role in ensuring the consistent interpretation of Policies 23 and 24 across the Wellington region.

Method 21: Information to assist with the identification of indigenous ecosystems and habitats with significant indigenous biodiversity values

Prepare and disseminate information to assist with the interpretation of the criteria set out in policies 23 and 24, which require the identification and protection of indigenous ecosystems and habitats with significant indigenous biodiversity values.

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Policy 47 is also relevant as it provides a process for assessing activities that affect ecosystems and habitats with significant values. This process is to be used until RPS Polices 23 and 24 are given effect in an operative regional plan and the relevant operative district plan.

This document is not legally binding or intended to determine individual sites for protection. Rather its purpose is to assist local decision makers in using RPS Policies 23 and 24 to identify and protect significant values through provisions in district plans. This is intended to complement the biodiversity protection work undertaken by the Department of Conservation and others in the region. Territorial authorities have been consulted during the development of this guide, and it is primarily for their use. However, it may also be useful to resource consent applicants and planning consultants.

1.2 Structure of guide

This guide is structured into three main sections:

- Section 2 provides a detailed explanation for how Policy 23, and the criteria it provides to identify significant values, should be interpreted. It explains what is meant by significant values, identifies who is tasked with identifying these in the Wellington region, and describes how Policy 23 can be used. The five criteria set out in Policy 23 are each further explained
- Section 3 provides interpretation of Policy 24 which requires district and regional plans to provide for the protection of significant values. It discusses how different plan provisions can be used to protect these values. Some of the strengths and limitations of each of these policy tools are identified
- Section 4 provides interpretation of Policy 47 which directs the consideration of effects on significant values in the interim until they are protected by the new regional plan and district plans. This part of the guide will be useful when carrying out planning and consenting processes until Policies 23 and 24 are incorporated into those plans

2. Identifying significant values

2.1 What is significant biodiversity?

The RMA contains several sections that support the identification and protection of biodiversity. Section 6(c), in particular, states that 'the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna' is a matter of national importance. This matter must be 'recognised and provided for' by all persons exercising functions and powers under the RMA, including local authorities under Sections 30 and 31. The criteria in RPS Policy 23 assist with applying RMA section 6(c) for the Wellington region by describing a process for identifying these significant values.

The term 'significant' is not defined in the RMA and the process of determining significance has been contentious since the RMA was enacted. This lack of clarity has resulted in regional variation in the interpretation of significance, and confusion among resource managers and users. Although a variety of criteria for assessing significance have been developed across New Zealand, the implementation of these has often been disputed.

Furthermore, while many sites contain significant values, those with less-obvious values have sometimes been overlooked due to a perception that they are not 'the best' or most important. The criteria for determining significance under RPS Policy 23 have been selected to address some of these ongoing issues around clarity for the Wellington region.

See Section 5 for further reading on the identification of significant values in New Zealand.

2.2 Who identifies significant biodiversity in the Wellington region?

Under the RPS, the identification of significant values is allocated between Wellington Regional Council and the region's nine territorial authorities. Councils are required to identify significant biodiversity through their regional and district plans. Responsibilities are allocated as follows:

Wellington Regional Council is responsible for identifying ecosystems and habitats with significant values in the coastal marine area, wetlands, and the beds of lakes and rivers. At the time of writing, these places are identified in the *Proposed Natural Resources Plan for the Wellington Region*.

The Wellington region's territorial authorities are responsible for identifying ecosystems and habitats with significant values for all land under their jurisdiction (excluding the coastal marine area and the beds of lakes and rivers). These are to be identified in each territorial authority's city or district plan.

2.3 What is classified as significant biodiversity?

Policy 23 of the RPS directs local authorities to *identify* and *evaluate* indigenous ecosystems and habitats with significant values (see Box 3). Criteria in Policy 23 are also to be used by local

authorities to assess applications for resource consent until Policies 23 and 24 have been given effect through operative provisions in district plans. Ecosystems or habitats will be considered significant if they meet *one or more* of five criteria:

- Representativeness
- Rarity
- Diversity
- Ecological context
- Tangata whenua values

The first four criteria identify the values associated with certain ecological states or conditions. The fifth criterion - tangata whenua values - addresses the cultural values of biodiversity for Māori with ancestral claims to that particular area of land or resource. It is important that identification of significance under the tangata whenua criterion is assessed alongside and in concert with the other four criteria.

Policy 23: Identifying indigenous ecosystems and habitats with significant indigenous biodiversity values – district and regional plans

District and regional plans shall identify and evaluate indigenous ecosystems and habitats with significant indigenous biodiversity values; these ecosystems and habitats will be considered significant if they meet one or more of the following criteria:

- (a) **Representativeness:** the ecosystems or habitats that are typical and characteristic examples of the full range of the original or current natural diversity of ecosystem and habitat types in a district or in the region, and:
 - (i) are no longer commonplace (less than about 30% remaining); or
 - (ii) are poorly represented in existing protected areas (less than about 20% legally protected).
- (b) Rarity: the ecosystem or habitat has biological or physical features that are scarce or threatened in a local, regional or national context. This can include individual species, rare and distinctive biological communities and physical features that are unusual or rare.
- (c) **Diversity:** the ecosystem or habitat has a natural diversity of ecological units, ecosystems, species and physical features within an area.
- (d) Ecological context of an area: the ecosystem or habitat:
 - (i) enhances connectivity or otherwise buffers representative, rare or diverse indigenous ecosystems and habitats; or
 - (ii) provides seasonal or core habitat for protected or threatened indigenous species.
- (e) **Tangata whenua values:** the ecosystem or habitat contains characteristics of special spiritual, historical or cultural significance to tangata whenua, identified in accordance with tikanga Māori.



For each criterion, significance must be assessed on a district, regional and national level (see Box 4). Although many ecosystems and habitats will meet multiple criteria, only one criterion needs to be met for an ecosystem or habitat to be considered significant. Policy 23 does not consider levels of significance – the values of an ecosystem or habitat are either significant or they are not. The criteria are also all equal. Ecological context, for example, is just as important for determining significance as rarity or representativeness. It is important to recognise that the criteria do not represent perfectly discrete categories. Some overlap between criteria is to be expected. The identification of an area with significant values in a regional or district plan does not confer any public or tangata whenua access rights. Public access to any site identified under Policy 23 is subject to agreement with individual landowners or legal arrangement. The collection of any flora or fauna from these sites must also adhere to any restrictions under the Wildlife Act 1953 and other legislation.

4. Ecological and political boundaries

When determining significance on local and regional levels, it is important to distinguish ecological districts and regions from political districts and regions. Local authorities are required to identify and protect significant values within their political jurisdictions. However, due to overlapping boundaries between ecological and political districts in the Wellington region (see Appendix 3), it is necessary to consider the outcomes of different approaches for identifying and protecting habitats and ecosystems that cross political boundaries.

2.4 Approach for determining significant values

Territorial authorities will need to use appropriate information to identify and evaluate the ecosystems and habitats that contain significant values within their jurisdictions. In doing this, they will need to work with tangata whenua, ecologists, local interest groups, and landowners. This information will then need to be analysed using the criteria in Policy 23. Using local expertise and involving local communities helps to ensure that the methods used to identify significant values are workable and fully recognised by local people. However, assessments of significance must be undertaken by appropriately qualified experts.

A high-level analysis of the ecosystems and habitats likely to contain significant values can be achieved at low cost by using existing national or regional biogeographic datasets, such as the Landcover Database and the LENZ Threatened Environments Classification. However, the assumptions used in generating these broadscale datasets sometimes mean that they contain inaccuracies when applied to the local scale. More detailed, local studies can provide more accurate evidence for determining significance, but these often require a higher level of investment. Territorial authorities will need to determine the level of accuracy that is necessary for their analysis and this will be influenced by the specific needs and concerns of their communities.

Appendix 2 provides further sources of information to assist with the identification of ecosystems and habitats with significant biodiversity values under each of the RPS significance criteria.

2.5 Interpreting the criteria used in Policy 23

The following sub-sections help to explain how each of the five criteria in Policy 23 are intended to be interpreted by authorities when identifying the significant values of ecosystems and habitats. The clarification for each criterion is divided into four parts: purpose, explanation, resources and examples.

- PURPOSE outlines the reason(s) why the criterion is important for identifying the significant values of ecosystems and habitats
- EXPLANATION clarifies the core factor(s) considered in the criterion. Some words are defined in the glossary and a summary of the explanation for each criterion is provided in Appendix 1
- **RESOURCES** are a concise summary of the kind of information that can be used to apply each criterion, and how it can be used to help determine significance. They represent only a sample of the potential resources that can be used. Links to these and to further resources to assist with the application of each of the criteria are provided in Appendix 2
- EXAMPLES illustrate which ecosystems or habitats could fit the definition for significance under the criterion. Note that ecosystems or habitats that do not meet the definition for significance under one criterion may still be significant under one of the other four

2.5.1 Representativeness

Ecosystems or habitats that are typical and characteristic examples of the full range of the original or current natural diversity of ecosystem and habitat types in a district or in the region, and that are no longer commonplace, or are poorly represented in existing protected areas.

PURPOSE: Why is representativeness important for assessing significance?

Representativeness is the degree to which a site contributes to the full diversity of habitats and ecosystems that occur in any given area. This includes the natural ecosystems and habitats that indicate how the environment would have functioned before the arrival of humans, as well as modified environments, which represent indigenous ecosystems and habitats as they are now. It is important to protect representative habitats and ecosystems because they form the basis of a healthy, resilient, and sustainable regional landscape and because they help ensure that the full diversity and character of an area is maintained.

EXPLANATION: Is the ecosystem or habitat representative?

Ecosystems or habitats are considered significant if they are typical and characteristic examples of the natural variety of ecosystems and habitat types in a district or in the region. 'Typical' and 'characteristic' ecosystems and habitats are those that contain either the pre-human or the presentday biodiversity of an area. To be considered representative, the ecosystem or habitat must **also** meet one of two sub-criteria. These specify that the ecosystem or habitat must be **either** no longer commonplace **or** poorly represented in existing protected areas.

- No longer commonplace: If less than about 30% of an ecosystem or habitat remains in a particular district or region then it is considered no longer commonplace and is therefore significant. If more than about 30% remains in a particular district or region then it is not considered significant under this sub-criterion
- **Poorly represented:** 'Existing protected areas' include indigenous ecosystems and habitats that are legally protected, such as in formal reserves or covenants. If less than about 20% of an ecosystem or habitat is legally protected in a district or region, then it is considered to be poorly represented and is therefore significant. If more than about 20% is legally protected in a particular district or region then it is not considered significant under this sub-criterion

Both of the above sub-criteria include percentages to guide the identification of ecosystems and habitats that fulfil the requirements for significance in terms of representativeness. However, these percentages are estimates that are not biologically determined. Territorial authorities and other parties tasked with determining significance should only use these as a **minimum** guide. Some ecosystem types, for example, may be considered no longer commonplace if less than 35 or 40% of them remain. Decision-makers are encouraged to follow a precautionary approach when determining significance for a given ecosystem or habitat.



RESOURCES: What information can be used to assess significance in terms of representativeness?

Ecological regions and districts of New Zealand A total of 85 ecological regions and 268 ecological districts of New Zealand were formalised in a series of maps and descriptors in the late 1980s. The Wellington region comprises five ecological regions and eight ecological districts. These divisions, and the descriptions that relate to them, are useful for determining what biodiversity could be considered to be representative of an area.

Singers' vegetation layer for the Wellington region Recently, the Department of Conservation carried out an analysis to characterise and broadly map 152 pre-human terrestrial ecosystem types across New Zealand. Both the current and historical extent of these ecosystem types has been mapped for the Wellington region. The maps produced through this analysis are useful for determining the natural variety of ecosystems and habitats in a district, as well as the remaining examples of those types.



EXAMPLES: What is significant under the representativeness criterion?

- Native kāmahi, broadleaved, podocarp forest was once common in a district. This forest type remains common in the district, but much has been felled and only 15% of what remains is legally protected
 - Significant. Less than about 20% of the native kāmahi, broadleaved, podocarp forest in the district is legally protected
- Native *Spinifex* grassland was once common in a district, but has now been reduced to 5% of its former range. 80% of the remaining *Spinifex* grassland in the district is legally protected
 - *Significant.* Less than about 30% of the native ecosystem remains in the district
- Native hard beech forest remains at around 50% of its past extent in a district, 40% of which is legally protected
 - Not significant. More than about 30% of the original extent of hard beech forest remains in the district and more than about 20% of those forests are legally protected. However, hard beech forest would likely still meet one or more of the other criteria for significance

2.5.2 Rarity

Ecosystems or habitats that have biological or physical features that are scarce or threatened in a local, regional or national context. This includes individual species, rare and distinctive biological communities, and physical features that are unusual or rare.

PURPOSE: Why is rarity important for assessing significance?

Some ecosystems or habitats contain distinctive, rare or threatened biological features (eg, species or biological communities) or physical features (eg, landforms) that have an elevated risk of extinction. Protection of these features is important for ensuring that the full range of biodiversity is maintained.

EXPLANATION: Does the ecosystem or habitat contain rare features?

Ecosystems or habitats will be considered significant if they contain biological or physical features that are scarce or threatened in a local, regional or national context. Rarity does not have to be a consequence of human actions. Species, biological communities, or physical features that are naturally uncommon may also trigger the criterion for rarity.

RESOURCES: What information can be used to assess significance in terms of rarity?

Department of Conservation Threat Classification Lists

These list indigenous species in New Zealand according to their threat of extinction. The system is made up of manuals and corresponding lists itemising the status of each species according to species group (eg, birds, reptiles). The status of the species in each group is assessed over a three-year cycle. These lists are the primary way of determining the rarity of each species at the national level. Wellington Regional Council has recently worked with the Department of Conservation to develop threat lists for birds, plants and lizards for the Wellington region.

Landcare Research Naturally Uncommon Ecosystems

Seventy two types of naturally uncommon ecosystems have been identified throughout New Zealand. These ecosystems exist due to unusual environmental conditions and are often small. Naturally uncommon ecosystems contribute disproportionately to national biodiversity but are often poorly recognised and managed. Information on the characteristics and locations of these ecosystems can be used to help determine rarity in a district.

EXAMPLES: What is significant under the rarity criterion?

- A small and regionally common area of forest that provides habitat for threatened native geckos
 - *Significant*. The ecosystem contains a species that is threatened
- Exotic grassland containing a species of native ground beetle that is common and not threatened
 - Not significant. The grassland contains a biological feature (the beetle) that is not scarce or threatened
- The ecosystem associated with a locally common but nationally rare form of karst topography
 - *Significant*. The ecosystem associated with the physical feature is nationally rare



2.5.3 Diversity

Ecosystems or habitats that have a natural diversity of ecological units, ecosystems, species and physical features within an area.

PURPOSE: Why is diversity important for assessing significance?

Diversity recognises the importance of habitat and ecosystem variability and complexity. While it is important to acknowledge landscape change and its effects on diversity, recognising the variety of ecosystems and habitats is fundamental to conserving the full range of indigenous plants and animals. This criterion recognises the ecological resilience provided by diverse habitats and ecosystems.

EXPLANATION: Does the ecosystem or habitat contain a natural diversity of features?

Ecosystems or habitats will be considered significant if they contain a typical diversity of biological, physical or ecological features for their respective natural ecosystem or habitat type. Because diversity differs markedly between different habitat and ecosystem types, environments must be compared 'like with like' when determining what classifies as typical.

RESOURCES: What information can be used to assess significance in terms of diversity? *eBird Database*

This database is an international online repository of information on the distribution and abundance of bird species. It collects field observations from recreational and professional bird watchers and is now one of the best sources of information on the distribution of native birds in New Zealand. The database can be used to determine the diversity of some bird species present in a district.

New Zealand Plant Conservation Network Plant Lists

The New Zealand Plant Conservation Network is a voluntary organisation comprising over 600 members around New Zealand. Its members work in various ways to protect New Zealand's indigenous plants, including by providing information about what species are present in different areas. Their plant lists provide a record of the species recorded during a visit to a site and can cover large areas or be specific to certain sites (eg, a single forest remnant). The Network now has an extensive collection of lists for sites in the Wellington region and these are good sources of information for determining current plant diversities.

EXAMPLES: What is significant under the diversity criterion?

- A native shrubland ecosystem existing on land once covered by forest. The shrubland contains a community of native plants that is typical of natural shrubland ecosystems in the district
 - Significant. The ecosystem contains a typical diversity of species for the district
- A regenerating native forest contains a low diversity of native tree species compared with other regenerating native forests in the district
 - Not significant. The ecosystem contains a low diversity of species
- A rock-land contains a typical diversity of coastal rock formations compared with other rock-land habitats in the district
 - *Significant*. The habitat contains a typical diversity of rock formations

2.5.4 Ecological context

Ecosystems or habitats that either enhance connectivity or otherwise buffer representative, rare or diverse indigenous ecosystems and habitats, or provide seasonal or core habitat for protected or threatened indigenous species.

PURPOSE: Why is ecological context important for assessing significance?

Many ecosystems and habitats do not contain significant values in themselves but can still provide buffering, connectivity or habitat for valued species and ecosystems. The value of these supporting services must be recognised as significant habitats and ecosystems cannot be maintained in isolation from surrounding ecosystems. EXPLANATION: Does the ecosystem or habitat enhance ecological connectivity or buffering between other valued ecosystems or habitats, or does it provide important habitat for threatened or protected species? Ecosystems or habitats will be considered

significant if they meet **either** one of two sub-criteria.

- **Connectivity and buffering:** If an ecosystem or habitat enhances connectivity (eg, provides stepping stones or linkages) or buffers (eg, provides shelter or protection) representative, rare or diverse indigenous ecosystems or habitats then it will be considered to have significant values
- Seasonal or core habitat: If an ecosystem or habitat provides seasonal habitat (eg, periodic breeding or moulting areas) or core habitat (ie, critical for survival) for protected or threatened indigenous species it will be considered to have significant values



RESOURCES: What information can be used to assess significance in terms of ecological context?

Landcare Research Landcover Database

This database provides a digital map of New Zealand showing land cover grouped into nine major classes. These include exotic forest, exotic shrubland, native forest, native vegetation, and other native land cover. This information can be useful in helping to determine the significant values of vegetation connecting or buffering other significant areas. For example, exotic forest surrounding an otherwise isolated area of coastal native forest may buffer the native forest from wind damage.

Greater Wellington Regional Council technical publications

Wellington Regional Council undertakes ongoing scientific monitoring and research to gauge the state and trends of ecosystems in the Wellington region. Technical publications produced by the council often contain ecological information that would be useful for determining the ecological context of sites. For example, a recent report on native bird distributions in Wellington City reserves could be used to determine whether some reserves provide seasonal or core habitat for threatened species.

EXAMPLES: What is significant under the ecological context criterion?

- A forest dominated by non-locally native pōhutukawa trees separates a major highway from a significant tract of native forest containing numerous species of threatened flora and fauna that are sensitive to the effects of the highway
 - Significant. The pōhutukawa forest reduces potential adverse effects (eg, air pollution, wind disturbance) on threatened biodiversity from the adjacent highway. In doing so, it buffers a rare and diverse indigenous ecosystem
- A native forest provides nesting habitat for kaka
 - *Significant*. The habitat provides core habitat for kaka
- An exotic grassland provides nesting habitat for introduced Canada geese
 - Not significant. The ecosystem does not provide habitat for indigenous species.
 However, if the exotic grassland provided habitat for a protected native bird species it might be considered significant

2.5.5 Tangata whenua values

Ecosystems or habitats that contain characteristics of special spiritual, historical or cultural significance to tangata whenua, identified in accordance with tikanga Māori.

PURPOSE: Why are tangata whenua values important for assessing significance?

The RPS recognises core Māori values of mauri, kaitiakitanga and mahinga kai as important for regional resource management. There are objectives, polices and methods in the RPS that require councils to engage tangata whenua in the identification and protection of significant values, including those for biodiversity under Policy 23. Incorporating tangata whenua perspectives helps to highlight and recognise the culturallydetermined nature of biodiversity values.

5 Tangata whenua of the Wellington region

The RPS identifies relationships with six tangata whenua tribal groups in the region which hold mana whenua (customary authority) and kaitiaki (duty of care) over their tribal areas.

They are:

- Ngāti Raukawa ki te Tonga
- Ngāti Toa Rangātira
- Rangitāne o Wairarapa
- Ngāti Kahungunu ki Wairarapa
- Taranaki Whānui ki te Upoko o te Ika a Maui
- Te Ati Awa ki Whakarongotai

EXPLANATION: Does the ecosystem or habitat contain characteristics of value to tangata whenua?

The Māori world view recognises the significance of all places in sustaining mauri, and emphasises the importance of connections between land and water, people and places. Places with rich or recovering biodiversity are regarded as particularly important because they possess a vibrant mauri that contributes to the wellbeing of all. This importance can be further enhanced through spiritual, cultural or historical associations.

Places where tangata whenua value biological resources (eg, for food, weaving, building or medicine) may be considered significant ecosystems or habitats. Mahinga kai is the term used for the harvest of cultural foods and the species, activities and places from which those resources are gathered. These places are significant not just for provision of resources, but also because of the role they play in the transmission of knowledge through the act of collection and the continuation of customary use. Cultural practices and historical associations can be sustained when flora and fauna remain intact in an area.

Cultural and spiritual relationships with a place can be expressed through tangata whenua practices, recreational activities and connections to the land passed down by tūpuna (ancestors) and through whakapapa (genealogy). If this relationship with a place relates to the presence of a species, habitat or ecosystem, then that place could be considered significant for indigenous biodiversity. There are places that are inherently connected to the identity or mana of the local iwi (tribe) or hapū (sub-tribe), and this could also be based on the presence of a species, habitat or ecosystem. For ecosystems to be considered significant under this criterion they should generally exhibit the values that are considered significant by tangata whenua. Nevertheless, the loss of some biodiversity values from an area does not necessarily detract from its significance to tangata whenua, as this can be retained through the association of people with the area and enhanced through restoration activities.

RESOURCES: What information can be used to assess significance in terms of tangata whenua value?

Tangata whenua kaitiaki, whānau (family), hapū and iwi hold the cultural knowledge needed to identify significant values within an area. The criterion states that these significant sites must be identified in accordance with tikanga Māori, the discernment of which varies from place to place.

Working with tangata whenua, most likely through nominated kaitiaki in accordance with their specific tikanga, is the only way to identify sites of significance (see Box 5). The better the relationship between councils and tangata whenua, the more confident tangata whenua will be that their knowledge and the values they associate with significant sites are being treated with care and respect, and that their cultural perspective is valued and accounted for in decision making. The continued provision by Māori of information supporting the identification of values relies on robust processes that ensure iwi retain ownership and oversight of the information they hold and make available to authorities.



EXAMPLES: What is significant under the tangata whenua values criterion?

- An area of forest where kaiwhatu (weavers) harvest kiekie for traditional and contemporary weaving mahi raranga (weaving)
 - Significant. The site contains mahi raranga resources. The kiekie and supporting habitat maintains the traditional association between the people, the place and the cultural practice of weaving
- A local hapū cites a pūrākau (legend) that identifies rāta flower as the blossom that led their ancestors to settle in the area
 - Significant. Both the rāta and its supporting habitat are particularly valued by tangata whenua who identify the presence and health of the species as an important indicator of both environmental and hapū wellbeing
- After undertaking a cultural assessment, a karaka tree grove is not identified as having tangata whenua values by local iwi
 - Not significant. The site is not recognised as significant by tangata whenua

3. Protecting significant biodiversity

RPS Policy 24 directs local authorities to protect indigenous habitats and ecosystems with significant values from inappropriate subdivision, use and development (see Box 6). This protection is to be achieved through policies, rules and other methods in regional and district plans. The RPS explains that Policy 24 is not intended to prevent the changes that development and other activities bring. Rather its purpose is to ensure that proposed changes are carefully considered and appropriate given the significant values identified by applying Policy 23.

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Policy 24: Protecting indigenous ecosystems and habitats with significant indigenous biodiversity values – district and regional plans

District and regional plans shall include policies, rules and methods to protect indigenous ecosystems and habitats with significant indigenous biodiversity values from inappropriate subdivision, use and development.

Policy 24 directs each city and district council to use its district plan to protect the significant values identified in its district. Each council will need to determine the mix of provisions (policies, rules and other methods) to use to protect significant values in alignment with their community's expectations. Although the provisions used may differ between districts, the protection of significant values must be provided for.

Many habitats and ecosystems will likely classify as significant according to one or more of the criteria in Policy 23. This may include some ecosystems and habitats that have not commonly been considered significant in the urban and rural landscape, such as pine plantations, shelterbelts, paddocks, urban parks and open space. Councils will need to consider a range of provisions for protecting these significant values while also allowing for the sustainable use and development of natural resources in their district.





Broadly, the following factors will influence the provisions each council uses to protect biodiversity in their district:

- 1. The distribution and abundance of indigenous biodiversity
- 2. Local threats to indigenous biodiversity, including development pressures and existing land uses under the control of the council
- The extent of indigenous biodiversity within existing protected areas in the district (see Box 7)
- The resources the council and local community can draw upon to protect indigenous biodiversity
- Existing local knowledge and attitudes regarding how indigenous biodiversity should be protected

District plan provisions that protect indigenous biodiversity will need to be tailored to the types of biodiversity identified in that district. For example, in a district containing extensive tracts of native vegetation, more permissive provisions might allow a degree of vegetation clearance while still maintaining the district's significant values. Alternatively, in a district with little native vegetation cover remaining, more restrictive provisions may be more appropriate.



7 Public conservation land

Provisions for protecting significant values in city and district plans must consider and incorporate the values of public conservation land within their jurisdictions. However, public conservation land administered by the Department of Conservation is not normally subject to district plan provisions providing the activity is consistent with a Conservation Management Strategy or Conservation Management Plan. Nevertheless, this land is subject to regional plan provisions, and private concessions on these areas are subject to district and regional plan provisions. Activities outside but nearby public land administered by the Department of Conservation can also have effects on the biodiversity within these areas, meaning that these activities may require regulation to avoid adverse effects on public conservation land.

To determine the level of protection appropriate for different habitats or ecosystems, councils could be guided by the criteria that were used to identify their significant values. For example, a bush remnant that met the representativeness, rarity and ecological context criteria could receive a higher level of protection than one that met the ecological context criterion alone. While both need to be protected because RPS Policy 23 directs that ecosystems and habitats will be considered significant if they meet one or more of the criteria, vegetation clearance in the first example might be regulated as a non-complying activity, whereas in the second example it could be considered a discretionary activity.

Alternatively, a threat-based approach could be used to determine the level of protection needed against the pressures that exist on ecosystems and habitats with significant values and that are under the jurisdiction of the council. Activities that pose a major threat to the significant values of ecosystems and habitats may justify a higher level of regulation than for activities that pose little or no threat to those values.

The protection of different significant values may be facilitated through the use of grading, ranking or scaling of importance (eg, low to high). However, all significant values must be protected in some way, regardless of any assigned level of importance. Some variables to consider when determining levels of importance include vegetation age, presence of keystone species, species diversity, or species' threat statuses.

The RMA Quality Planning Website (www. qualityplanning.org.nz/images/documents/plan_ topics/Indigenous_Biodiversity/Indigenous%20 Biodiversity.pdf) contains a comprehensive overview of the policy and planning methods councils may select to protect their local biodiversity. These include both regulatory and non-regulatory tools, and the strengths and limitations of using different options. Councils should use this overview to consider the range of methods to protect their district's biodiversity resources that are in line with the needs of their communities.

4. Managing effects on significant values

Policy 47 of the RPS provides an interim assessment framework for councils, resource consent applicants and other interested parties to use when assessing the effects an activity may have on significant values (see Box 8). It provides a list of things to consider when determining whether an activity will be deemed appropriate prior to the identification of significant areas under Policy 23 and their protection through plan provisions in accordance with Policy 24.

Policy 47 will cease to have effect in a given district once Policies 23 and 24 are in place in an operative district plan. Likewise it will cease to apply to resource uses managed by the regional council when Policies 23 and 24 are incorporated into a new regional plan. Until these planning changes have been made, councils must use the considerations in Policy 47 to guide their decision making in regard to potential effects on significant values.

The Environment Institute of Australia and New Zealand's recent Ecological Impact Assessment guidelines (www.eianz.org/document/item/2827) provide useful advice for managing effects on significant values in line with Policy 47 considerations. This includes advice on following the 'mitigation hierarchy' suggested in Policy 47(g), and the consideration of biodiversity offsetting, where appropriate.



Policy 47: Managing effects on indigenous ecosystems and habitats with significant indigenous biodiversity values – consideration

8

When considering an application for a resource consent, notice of requirement, or a change, variation or review of a district or regional plan, a determination shall be made as to whether an activity may affect indigenous ecosystems and habitats with significant indigenous biodiversity values, and in determining whether the proposed activity is inappropriate particular regard shall be given to:

- (a) maintaining connections within, or corridors between, habitats of indigenous flora and fauna, and/or enhancing the connectivity between fragmented indigenous habitats;
- (b) providing adequate buffering around areas of significant indigenous ecosystems and habitats from other land uses;
- (c) managing wetlands for the purpose of aquatic ecosystem health;
- (d) avoiding the cumulative adverse effects of the incremental loss of indigenous ecosystems and habitats;
- (e) providing seasonal or core habitat for indigenous species;
- (f) protecting the life supporting capacity of indigenous ecosystems and habitats;
- (g) remedying or mitigating adverse effects on the indigenous biodiversity values where avoiding adverse effects is not practicably achievable; and
- (h) the need for a precautionary approach when assessing the potential for adverse effects on indigenous ecosystems and habitats.



5. Further reading

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UNEP-WCMC. (2013). *Glossary of biodiversity terms*. Cambridge, United Kingdom, <u>www.biodiversitya-z.org/</u> themes/terms.

Walker, S., Brower, A.L., Clarkson, B.D., Lee, W.G., Myers, S.C., Shaw, W.B. & Stephens, R.T.T. (2008). Halting indigenous biodiversity decline: ambiguity, equity, and outcomes in RMA assessment of significance. *New Zealand Journal of Ecology*, 32(2): 1-13, http://newzealandecology.org/nzje/2881.pdf.

6. Glossary

Bed	(a) in relation to any river—				
	 (i) for the purposes of esplanade reserves, esplanade strips, and subdivision, the space of land which the waters of the river cover at its annual fullest flow without overtopping its banks: 				
	(ii) in all other cases, the space of land which the waters of the river cover at its fullest flow without overtopping its banks; and				
	(b) in relation to any lake, except a lake controlled by artificial means, $-$				
	 (i) for the purposes of esplanade reserves, esplanade strips, and subdivision, the space of land which the waters of the lake cover at its highest level without exceeding its margin; 				
	(ii) in all other cases, the space of land which the waters of the lake cover at its highest level without exceeding its margin; and				
	(c) in relation to any lake controlled by artificial means, the space of land which the waters of the lake cover at its maximum permitted operating level; and				
	(d) in relation to the sea, the submarine areas covered by the internal waters and the territorial sea. ¹				
Biodiversity	The variability among living organisms, and the ecological complexes of which the are a part, including diversity within species, between species, and of ecosystems ¹ .				
	are a part, including diversity within species, between species, and of ecosystems ¹ .				
Buffering	The capacity of certain habitats to provide protection to significant habitats .				
Buffering Coastal					
Coastal marine	The capacity of certain habitats to provide protection to significant habitats .				
Coastal	The capacity of certain habitats to provide protection to significant habitats . The foreshore, sea bed and coastal water, and the air space above the water:				
Coastal marine	 The capacity of certain habitats to provide protection to significant habitats. The foreshore, sea bed and coastal water, and the air space above the water: (a) of which the seaward boundary is the outer limits of the territorial sea; (b) of which the landward boundary is the line of mean high water springs, except that where that line crosses a river, the landward boundary at that point shall be 				
Coastal marine	 The capacity of certain habitats to provide protection to significant habitats. The foreshore, sea bed and coastal water, and the air space above the water: (a) of which the seaward boundary is the outer limits of the territorial sea; (b) of which the landward boundary is the line of mean high water springs, except that where that line crosses a river, the landward boundary at that point shall be whichever is the lesser of: 				
Coastal marine	 The capacity of certain habitats to provide protection to significant habitats. The foreshore, sea bed and coastal water, and the air space above the water: (a) of which the seaward boundary is the outer limits of the territorial sea; (b) of which the landward boundary is the line of mean high water springs, except that where that line crosses a river, the landward boundary at that point shall be whichever is the lesser of: (i) one kilometre upstream from the mouth of the river; or (ii) the point upstream that is calculated by multiplying the width of the river 				

Cumulative effects	Changes to the environment that are caused by an action in combination with other past, present and future human actions. ³				
Cultural assessment	A report prepared to consider and assess the potential impacts of an activity on the cultural values within an area. A cultural assessment may include, but is not limited to, Māori history, Treaty claims and settlements, presence of significant sites, social effects and the recommendations for avoiding, remedying and mitigating adverse effects. ⁴				
Ecological unit	A category for a distinctive assemblage of organisms and the environment in which they live such as ecosystem , community or biome.				
Ecosystem	Any system of interacting terrestrial and/or aquatic organisms within their natural and physical environment. ⁴				
Exotic species	See 'Introduced species'.				
Habitat	An area with the appropriate combination of resources – such as, food, water, nesting sites, shelter – and environmental conditions – such as, temperature, humidity or shade – for the survival of a species. ⁴				
Нарū	Sub-tribes of people, providing social and political units based on descent from a common ancestor. ⁴				
Indigenous species	A plant or animal species that occurs naturally in New Zealand. ⁴				
Indigenous vegetation	Any local indigenous plant community containing throughout its growth the complement of native species and habitats normally associated with that vegetation type or having the potential to develop these characteristics. It includes vegetation with these characteristics that has been regenerated with human assistance following disturbance, but excludes plantations and vegetation that have been established for commercial purposes. ⁴				
Introduced species	A plant or animal species that has been brought to New Zealand by humans, either by accident or design. ⁴				
Kaitiaki	A person or persons endowed with the responsibility of kaitiakitanga.				
Kaitiakitanga	The exercise of guardianship by tangata whenua of an area in accordance with tikanga Māori in relation to natural and physical resources. It includes the ethic of stewardship. ¹				

Keystone species	Species that has a disproportionate effect on its environment relative to its biomass and whose removal initiates significant changes in ecosystem structure and loss of biodiversity . ²				
Mahinga kai	The customary gathering of food and natural materials and the places where those resources are gathered. ⁴				
Mana	Respect, dignity, influence and/or authority associated with the energies and presences of the natural world, as well as of people. It is an essence, presence or energy and is linked to mauri and so can be lost, diminished or restored, innate, developed or won. ⁴				
Mauri	An energy or life force that tangata whenua consider exists in all things in the natural world, including people. Mauri binds and animates all things in the pl world. Without mauri , mana cannot flow into a person or object. ⁴				
Native species	See 'indigenous species'.				
Natural	Not made or caused by humans.				
Natural diversity	Diversity formed by natural processes , whether modified by human activity or not.				
Natural features	Elements of patterns arising as a result of natural processes. ⁴				
Natural processes	Dynamic natural , physical and ecological relationships and events that are characteristically natural in their occurrence and effects, that act to shape the natural environment, its landforms and features, such as beaches, dunes, wetlands, and rivers; and including processes of: wave formation, breaking and dissipation; swash run-up; nearshore currents; sediment transport, erosion and deposition, flooding, river meandering, aggradation and mass movement. ³				
Original	Pre-human (ie, before people arrived in New Zealand).				
Precautionary approach	Where there are threats of serious or irreversible damage, lack of full scientific evidence shall not be used as reason for postponing cost-effective measures to prevent environmental degradation (Principle 15 of the Rio Declaration 1992).				
Protected species	Species protected by the Wildlife Act 1953 and the Marine Mammals Protection Act 1978. ⁴				
Resilience	The ability of a species, or variety or breed of species, to respond and adapt to external environmental stresses. ⁶				

Rohe	Tribal areas for iwi and hapū. ⁴					
Scarce	A biological or physical feature that is unusual or rare but not threatened in either a local, regional or national context.					
Seasonal habitat	Habitat that is used by a species for part of the year, such as during breeding or moulting stages.					
Tangata whenua	Māori with ancestral claims to a particular area with land and resources. Literally, translated as "people of the land." Iwi are tangata whenua of a particular rohe , while all Māori are tangata whenua of Aotearoa (New Zealand). ⁴					
Taonga	Treasures, valued resources, both tangible and intangible. ⁴					
Threatened species	All species determined to be classified by the New Zealand Threat Classification System 2008 (or subsequent revisions) as Nationally Critical, Nationally Vulnerable, Nationally Endangered in the 'Threatened' category and all species determined to be classified as Declining, Relict, and Recovering categories of the 'At Risk' category. For biotic groups that have not been revised to conform with the New Zealand Threat Classification System 2008, all species determined to be classified by the New Zealand Threat Classification 2005 as Acutely Threatened and Chronically Threatened categories are included. ⁴ For the purposes of this guide, threatened species also include those deemed to be threatened in a regional or local context.					
Tikanga	Customary practices and values, typically followed in order to protect mauri and/or mana. ⁴					
Wāhi tapu	Places of sacredness and immense importance to tangata whenua . Wāhi tapu areas can be prohibited or forbidden places, or private places, where permission should be sought for access, and protocols followed. ⁴					

Sources:

- 1. Resource Management Act 1991
- 2. UNEP-WCMC 2013
- 3. EIANZ Guidelines 2015
- 4. Regional Policy Statement for the Wellington region 2013
- 5. Proposed Natural Resources Plan for the Wellington Region 2015
- 6. New Zealand Biodiversity Strategy 2000

Appendix 1. Summary of RPS Policy 23 criteria.

This table provides a quick reference summary of the criteria and the thresholds for each.

Criteria	Representativeness		Rarity	Diversity	Ecological context		Tangata whenua values
Policy wording	The ecosystems or habit and characteristic exam- range of the original or diversity of ecosystem a a district or region, and (i) are no longer com- than about 30% ref (ii) are poorly represen protected areas (les legally protected)	nples of the full current natural and habitat types in d: monplace (less maining); or nted in existing	The ecosystem or habitat has biological or physical features that are scarce or threatened in a local, regional or national context. This can include individual species, rare and distinctive biological communities and physical features that are unusual or rare.	The ecosystem or habitat has a natural diversity of ecological units, ecosystems, species and physical features within an area.	habitats; or (ii) provides seasona	tivity or otherwise tative, rare or ous ecosystems and	The ecosystem or habitat contains characteristics of special spiritual, historical or cultural significance to tangata whenua, identified in accordance with tikanga Māori.
Sites of significance	commonplace Ecosystems or habitats that are typical and characteristic of the original diversity or current remaining natural diversity in a district or region AND of which there is less than about 30%	(ii) poorly protected Ecosystems or habitats that are typical and characteristic of the original diversity or current remaining natural diversity in a district or region AND of which there is less than about 20% legally protected.	Ecosystems or habitats that have biological features (including individual species and rare or distinctive biological communities) or physical features that are unusual or threatened in a local, regional or national context.	Ecosystems or habitats that support a natural diversity of ecological units, ecosystems, species and physical features.	 (i) ecological connectivity or buffering Ecosystems or habitats that enhance the connectivity or otherwise buffer representative, rare or diverse indigenous ecosystems or habitats. 	 (ii) important seasonal or core habitat Ecosystems or habitats that provide seasonal or core habitat for protected or threatened indigenous species. 	Ecosystems or habitats that contain characteristics of special spiritual, historical or cultural significance to tangata whenua.

Appendix 2: Resources to assist in determining significance under the criteria in RPS policy 23.

Criterion	Subject	Тооі	Organisation	Access	Use note
Representativeness	Original extent	Singer's potential ecosystem layer for the Wellington region	Greater Wellington Regional Council	On request from Greater Wellington Regional Council	Ecosystem of http://www
					Regional de
Representativeness	Original extent	Land Environments NZ GIS layer	Landcare Research	www.landcareresearch.co.nz/resources/maps-satellites/lenz_	Land enviro environmen
Representativeness	Ecological zones	Department of Conservation Ecological districts	Department of Conservation	http://www.doc.govt.nz/maps	Layer deriv
Representativeness	Ecological zones	Ecodomains	Greater Wellington Regional Council	On request from Greater Wellington Regional Council	This layer is provide fine
Representativeness	Remaining habitat	Singer's remaining habitat layer for the Wellington region	Greater Wellington Regional Council	On request from Greater Wellington Regional Council	Remaining potential ec Regional de
Representativeness, rarity	Remaining habitat	Land Environments NZ GIS Threatened Ecosystems layer	Landcare Research	www.landcareresearch.co.nz/resources/maps-satellites/threatened-environment- classification	Nationally
Representativeness, ecological context	Current extent of habitat	Landcover Database	Landcare Research	https://lris.scinfo.org.nz/layer/423-lcdb-v41-land-cover-database-version-41-mainland- new-zealand/	Satellite ima (LCDB4 use
Representativeness, ecological context	Current extent of habitat	Google Earth	Google	https://www.google.com/earth/	Recent aeria
Representativeness, ecological context	Current extent of habitat	Greater Wellington Regional Council GIS Viewer	Greater Wellington Regional Council	http://mapping.gw.govt.nz/gwrc/	Recent aeria
Representativeness, rarity, diversity, ecological context	Site information	Department of Conservation Recommended areas for Protection	Department of Conservation	www.doc.govt.nz/publications/conservation/land-and-freshwater/land/wairarapa- plains-ecological-district-pna-survey-report/	On-ground Ecological I
				www.doc.govt.nz/publications/conservation/land-and-freshwater/land/eastern- wairarapa-ecological-distrct-pna-report/	On-ground Ecological I
				www.worldcat.org/title/foxton-ecological-district-survey-report-for-the-protected- natural-areas-programme/oclc/154037661	On-ground District (rep
				http://www.worldcat.org/title/manawatu-plains-ecological-district-survey-report-for- the-protected-natural-areas-programme/oclc/153687761	On-ground Ecological I
Representativeness, rarity, diversity, ecological context	Site information	Department of Conservation Recommended areas for Protection	Department of Conservation	Not online - in Findlay, JF 1992: Pahiatua Ecological Region: Protected Natural Area survey. Department of Conservation, Napier. 146pp	On-ground District (rep
Representativeness, rarity, diversity, ecological context	Site information	Department of Conservation Wellington Ecosites	Department of Conservation	On request from Greater Wellington Regional Council	Information in 1980s
Representativeness, rarity, diversity, ecological context	Site information	Greater Wellington Regional Council high biodiversity value sites	Greater Wellington Regional Council	On request from Greater Wellington Regional Council	Information
Representativeness, rarity, diversity, ecological context	Site information	Greater Wellington Regional Council Key Native Ecosystem sites	Greater Wellington Regional Council	http://www.gw.govt.nz/kne/	Information
Representativeness, rarity, diversity, ecological context	Site information	Greater Wellington Regional Council Coastal Inventory	Greater Wellington Regional Council	On request from Greater Wellington Regional Council	Ecological i

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- em classification based on national ecosystem descriptors. Potential ecosystems ww.doc.govt.nz/Documents/science-and-technical/sfc325entire.pdf
- l descriptions: On request from Greater Wellington Regional Council
- vironments derived from abiotic data (climate, landform, soils). Potential land ments
- erived from nationally identified ecological units
- ver is not used so much these days and has less scientific backing, but it does e finer detail for some areas
- ing vegetation in each of Singer's Wellington ecosystem types using LCDB over 1 ecosystems GIS layer
- l descriptions: On request from Greater Wellington Regional Council
- ally threatened land environments classification
- imagery-derived spatial extent of existing vegetation types uses 2012 data)
- erial photography
- erial photography
- and surveys, information about biota at selected sites in the Wairarapa Plains cal District (report completed 2000)
- and surveys, information about biota at selected sites in the Eastern Wairarapa cal District (report completed 2004)
- Ind surveys, information about biota at selected sites in the Foxton Ecological (report completed 1992)
- und surveys, information about biota at selected sites in the Manawatū Plains cal District (report completed 1995)
- ind surveys, information about biota at selected sites in the Puketoi Ecological (report completed 1995)
- ation about biota in sites selected by the Department of Conservation
- ation on selected high biodiversity value sites in the region
- tion on Key Native Ecosystems in the region
- cal information related to selected coastal sites on the Wairarapa coast

Criterion	Subject	ТооІ	Organisation	Access	Use not	
Representativeness, rarity, diversity, ecological context	Site information	Kapiti Coast Ecological Sites	Kapiti Coast District Council	http://www.kapiticoast.govt.nz/contentassets/87166782fd0d40f88774052166120f51/ wildlands-ecological-site-report.pdf		
Representativeness, rarity, diversity, ecological context	Site information	Porirua City Ecological Sites	Porirua City Council	http://www.pcc.govt.nz/About-Porirua/Porirua-s-heritage/Porirua-s-natural-cultural- and-historic-heritage/Porirua-s-natural-heritage/Porirua-s-Ecological-Sites-Inventory	Informatio	
Rarity	Rare ecosystems or habitats	Information about priority ecosystems	Landcare Research	www.biodiversity.govt.nz/pdfs		
Rarity	Rare species	Information about nationally threatened species	Department of Conservation	http://www.doc.govt.nz/about-us/science-publications/conservation-publications/nz- threat-classification-system/		
Rarity	Rare species	Information about regionally threatened species	Greater Wellington Regional Council	In draft		
Rarity	Naturally uncommon ecosystems	Information about naturally uncommon ecosystems	Landcare Research	http://www.landcareresearch.co.nz/publications/factsheets/rare-ecosystems	Informatio	
Rarity	Wetlands and dunes	Wetland and dune information	Landcare Research	http://ourenvironment.scinfo.org.nz/home	Use Ecosys	
Rarity	Wetlands and dunes	Wellington's wetland and dune inventory	Greater Wellington Regional Council	On request from Greater Wellington Regional Council	Greater We	
Diversity, rarity, representativeness, ecological context	Birds	Bird database	eBird	https://www.ebird.org/content/newzealand	Most recen	
Diversity, rarity, representativeness, ecological context	Birds	Bird database	Birds New Zealand	http://www.bird.org.nz/atlas.htm	Bird distril Birds New Zealand	
Diversity, rarity, representativeness, ecological context	Birds	Wellington publications	Greater Wellington Regional Council	http://www.gw.govt.nz/assets/Our-Environment/Environmental-monitoring/ Environmental-Reporting/A-review-of-coastal-and-freshwater-habitats-of-significance- for-indigenous-birds-in-the-Wellington-region.pdf	Sites select the basis o	
				http://www.gw.govt.nz/assets/Our-Environment/Environmental-monitoring/State- and-trends-in-the-diversity-abundance-and-distribution-of-birds-in-Wellington-City- reserves-September-2013.pdf	Informatio	
				http://www.gw.govt.nz/assets/Our-Environment/Environmental-monitoring/State-and- trends-in-the-diversity-abundance-and-distribution-of-birds-in-Upper-Hutt-reserves- September-2013.pdf	Informatio	
Diversity, rarity, representativeness	Plants	Plant lists	New Zealand Plant Conservation Network	www.nzpcn.org.nz		
Diversity, rarity, representativeness	Plants	Plant species records	Landcare Research	www.landcareresearch.co.nz/resources/data/national-vegetation-survey-nvs		
Diversity, rarity, representativeness	Reptiles, invertebrates, bats	Herpetofauna, invertebrate and bat records	Department of Conservation	http://dataversity.org.nz/guide/systems/		
Diversity, rarity, representativeness	Fish	Fish records	NIWA	http://dataversity.org.nz/guide/systems/nzffd/	Informatio	
Rarity, diversity	Geological features	Geopreservation inventory	New Zealand Geopreservation Inventory	http://www.gsnz.org.nz/geopreservation-inventories-c-0_2_4.html	Inventory	

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ation on selected high value sites in the Kapiti coast district

ation on selected high value sites in Porirua city

ound to priority ecosystems

oecies lists - national

becies lists - regional for birds, lizards and plants

ation about naturally uncommon ecosystem types

osystems and Habitats layer - not all wetlands or dunes present

r Wellington Regional Council's wetland and dunes inventory information

ecent and comprehensive database for birds in the region

stribution data recorded by the Ornithological Society of New Zealand (now Jew Zealand) over the period 1999-2004. Data available by request to Birds New

lected as significant for Greater Wellington Regional Council's regional plan on is of bird species present

ation about birds found in Wellington reserves

ation about birds found in Upper Hutt City reserves

ive collection of plant species lists from many locations in the Wellington region

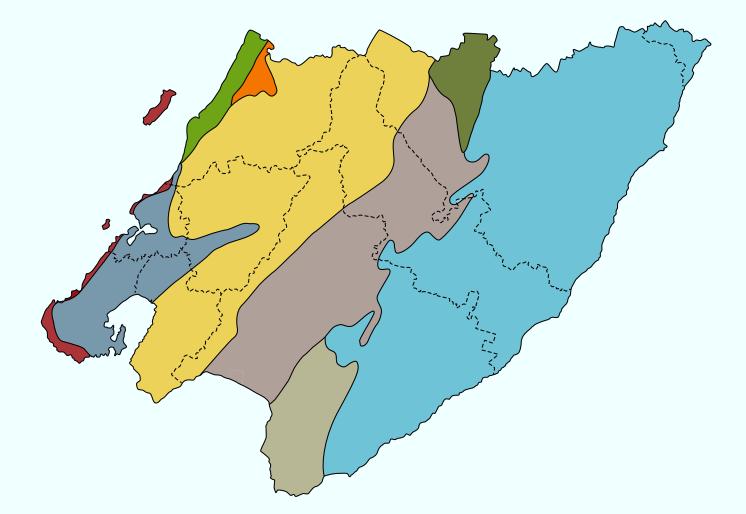
om plots at selected sites (mainly on Department of Conservation and Greater gton Regional Council land)

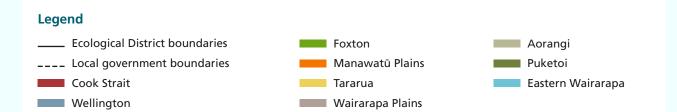
ation about presence of lizard, invertebrate and bat species

ation about presence of fish species

ory of geological features

Appendix 3: Ecological and political districts in the Wellington region





The Greater Wellington Regional Council's purpose is to enrich life in the Wellington region by building resilient, connected and prosperous communities, protecting and enhancing our natural assets, and inspiring pride in what makes us unique

For more information contact the Greater Wellington Regional Council:

Wellington office PO Box 11646 Manners Street Wellington 6142

T 04 384 5708 F 04 385 6960

info@gw.govt.nz



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