BEFORE THE ENVIRONMENT COURT

Decision No. [2015] NZEnvC 158

IN THE MATTER of appeals under clause 14 of the First Schedule to the Resource Management Act 1991 (**the Act**)

BETWEEN TRUSTEES OF THE GLENCALLY TRUST

(ENV-2013-AKL-000157)

ENVIRONMENTAL DEFENCE SOCIETY
(ENV-2013-AKL-000165)

DIRECTOR-GENERAL OF CONSERVATION

(ENV-2013-AKL-000167)

NEW ZEALAND TRANSPORT AGENCY
(ENV-2013-AKL-000168)

Appellants

AND NORTHLAND REGIONAL COUNCIL

Respondent

Court: Principal Environment Judge L J Newhook

DETERMINATION OF THE ENVIRONMENT COURT

[A] The appeals are allowed in part subject to the amendments set out in Annexure A and Annexure B to this Determination.

[B] The Indigenous Biodiversity topic is resolved in its entirety.

[C] Costs are reserved.

REASONS

Introduction

[1] On 9 April 2015 the Court received a draft consent order on these four appeals that related to the proposed Northland Regional Policy Statement – Indigenous Biodiversity topic.

[2] Far North District Council, Director General of Conservation, Horticulture New Zealand, Glencally Trust, Whangarei District Council, Northland Regional Council, Meridian Energy, Environmental Defence Society, Ngatiwai Trust Board, Te Runanga a Iwi o Ngapuhi, Te Runanga nui o te Aupouri, Winstone Aggregates, Royal Forest and Bird Protection Society and Glencally Trust either signed the consent memorandum or otherwise advised the Court that they agree to the amendments sought by the parties.

[3] Transpower New Zealand advised the Court that it has no interest in the matters to be resolved by this order.

[4] Farmers of New Zealand and New Zealand Transport Agency were given until 15 July 2015 to advise the Court of their position in relation to the resolution reached and did not respond within this timeframe.

[5] Federated Farmers of New Zealand signed the consent memorandum requesting the order, but requested (although it does not wish to take the point any further at this stage) that the Court take note of its comments in relation to Policy 4.4.1.

[6] Policy 4.4.1 as agreed by the parties reads:

Policy 4.4.1

4.4.1 Policy – Maintaining and protecting significant ecological areas and habitats

(1) In the coastal environment, avoid adverse effects, and outside the coastal environment avoid, remedy or mitigate adverse effects of subdivision, use and development so they are no more than minor on:
(a) Indigenous taxa that are listed as threatened or at risk in the New Zealand Threat Classification System lists;
(b) Areas of indigenous vegetation and habitats of indigenous fauna, that are significant using the assessment criteria in Appendix 5;
(c) Areas set aside for full or partial protection of indigenous biodiversity under other legislation.
(2) In the coastal environment, avoid significant adverse effects and avoid, remedy, or mitigate other adverse effects of subdivision, use and development on:
(a) Areas of predominantly indigenous vegetation;
(b) Habitats of indigenous species that are important for recreational, commercial, traditional or cultural purposes;
(c) Indigenous ecosystems and habitats that are particularly vulnerable to modification, including estuaries, lagoons, coastal wetlands, dunelands, intertidal zones, rocky reef systems, eelgrass, northern wet heathlands, coastal and headwater streams, floodplains, margins of the coastal marine area and freshwater bodies, spawning and nursery areas and saltmarsh.
(3) Outside the coastal environment and where clause (1) does not apply, avoid, remedy or mitigate adverse effects of subdivision, use and development so they are not significant on any of the following:
(a) Areas of predominantly indigenous vegetation;
(b) Habitats of indigenous species that are important for recreational, commercial, traditional or cultural purposes;
(c) Indigenous ecosystems and habitats that are particularly vulnerable to modification, including wetlands, dunelands, northern wet heathlands, headwater streams, floodplains and margins of freshwater bodies, spawning and nursery areas.
(4) For the purposes of clause (1), (2) and (3), when considering whether there are any adverse effects and/or any significant adverse effects:
(a) Recognise that a minor or transitory effect may not be an adverse effects;
(b) Recognise that where the effects are or maybe irreversible, then they are likely to be more than minor;
(c) Recognise that there may be more than minor cumulative effects from minor or transitory effects.
(5) For the purpose of clause (3) if adverse effects cannot be reasonably avoided, remedied or mitigated then it may be appropriate to consider the next steps in the mitigation hierarchy i.e. biodiversity offsetting followed by environmental biodiversity compensation, as methods to achieve Objective 3.4.

Explanation:

Policy 4.1 seeks to protect important indigenous ecosystems and habitats and maintain the diversity of indigenous species. The policy reflects Policy 11 of the New Zealand Coastal Policy Statement 2011, which applies in the coastal environment, and takes into account the decision of the Supreme Court in King Salmon (***Environmental Defence Society Inc v The New Zealand King Salmon Co Ltd*** [2014] NZSC 38)

The management approach has a tiered protection structure. Policy 4.4.1(1) provides the highest level of protection to ecosystems, habitats, and species (biological values) most at risk of irreversible loss, with the appropriate management response being to avoid adverse effects in the coastal environment and to ensure there are no more than minor effects elsewhere.

> Areas of significant indigenous vegetation and significant habitats fall within this first tier and the criteria to identify these areas are provided in Appendix 5.
> Policy 4.1 (2) and (3) provides a lower level of protection for ecosystems, habitats, and species at a lesser risk of loss. It covers the coastal environment and elsewhere. It should be noted that Policy 4.1 (2) and (3) are broader in scope than section 6(c) of the Resource Management Act, which requires the protection of areas of significant indigenous vegetation and significant habitats of indigenous species as a matter of national importance. This is because in Northland many such habitats have been degraded, so there is a greater need to give some protection to the valued habitats that remain extant.

[7] In its memorandum Federated Farmers sets out its concerns that Policy 4.4.1 will be invalid in part, in that it pre-empts the operation of section 85 of the Act.

[8] It submitted that Policy 4.4.1 is intended to apply to land that is in private ownership in rural areas and the reasonable use of such land is for rural production purposes such as grazing, chopping and forestry. It contended that the occurrence of these activities would appear to be very likely to give rise to types of effects that are more than minor or transitory on the natural resources that the policy seeks to protect them from. It submitted that this would mean that these activities would be prohibited.

[9] When the policy comes to be implemented in any relevant plan, it submitted that the prohibition of these land activities would render the interest that landowners have in their land incapable of any reasonable use.

[10] However, it also recognised that there is a difficulty in demonstrating the above to be the case in the absence of any rules that are driven by the policy.

[11] In light of Federated Farmers position that it does not wish to take the matter any further at this stage, the Court will not make a ruling on this issue. However, at this point the Court is satisfied that it has not been demonstrated that land has been rendered incapable of use under section 85 of the Act as a result of the wording of Policy 4.4.1. Accordingly, the Court will proceed to determine the Indigenous Biodiversity topic as agreed by the parties.

[12] In determining the Indigenous Biodiversity topic, the Court is satisfied and understands for present purposes that:

(a) All parties to the proceedings that have an interest in the matters to be resolved by this determination have executed the memorandum of the parties or advised the Court that they agree with the amendments to be made.

(b) All parties are satisfied that all matters proposed for the Court's endorsement fall within the Court's jurisdiction, and conform to the relevant requirements and objectives of the Act, including in particular Part 2.

Determination

[A] The appeals are allowed in part subject to the amendments set out in Annexure A and Annexure B to this Determination.

[B] The Indigenous Biodiversity topic is resolved in its entirety.

[C] Costs are reserved.

SIGNED at AUCKLAND this 5th day of September 2015

L J Newhook
Principal Environment Judge

Annexure A – Indigenous Biodiversity (tracked changes)

3.4 Indigenous ecosystems and biodiversity

Safeguard Northland's ecological integrity by:

a) *Protecting areas of significant indigenous vegetation and significant habitats of indigenous fauna;*

b) *Maintaining the extent and diversity of indigenous ecosystems and habitats in the region; and*

c) *Where practicable, enhancing indigenous ecosystems and habitats, particularly where this contributes to the reduction in the overall threat status of regionally and nationally threatened species.*

Objective 3.4 addresses the following issues:

2.1 Fresh and coastal water

2.2 Indigenous ecosystems and biodiversity

2.6 Issues of significance to tangata whenua – natural and physical resources

2.8 Natural character, features / landscapes and historic heritage

Objective 3.4 is achieved by the following policies:

4.1 Integrated catchment management

4.2 Region-wide water quality management

4.3 Region-wide water quantity management

4.4 Maintaining and enhancing indigenous ecosystems and species

4.5 Identifying the coastal environment, natural character, outstanding natural features, outstanding natural landscapes, and historic heritage resources

4.6 Managing effects on natural character, features / landscapes and heritage

4.7 Supporting management and improvement

Explanation:
Safeguarding and enhancing the ecological integrity of indigenous ecosystems is vital for the diversity and abundance of indigenous species. It is also important if the services that indigenous ecosystems provide, such as the water purification function of wetlands, are to be maintained.

This objective seeks to at least maintain the extent and diversity of indigenous ecosystems and habitats in the region. This is to be achieved through a combination of protection and enhancement activities and processes.

Part c) of the objective seeks an overall reduction in the threat status of threatened and at risk species. This applies to the management of activities that affect indigenous ecosystems and activities that impact on indigenous species living outside them.

In Northland, reduced indigenous biodiversity is due to both a loss of area and a loss of ecological condition. Currently the threats resulting from pest species and reduced

connectivity are considered greater than loss in overall area, although the latter is still important (for example with wetlands, very low fertility heathlands including gumlands, old growth forests, broadleaf forest, sand dunes and shrublands).

To date, voluntary efforts have been central to slowing down the decline in condition and area. Landowner and community stewardship takes many forms including the active management of pests, covenanting of significant natural areas, indigenous revegetation, habitat creation and good management practices in production environments.

However, regulation, including the use of permitted activity rules is necessary, as a backstop. Key regulatory methods to achieve the objective include the protection of significant natural areas, and controls on subdivision, use and development including discharges to water, water takes, and vegetation clearance.

Regulation should include incentives to encourage subdivision, use and development involving restoration and protection of ecosystems and indigenous biodiversity.

For safeguarding water and its ecosystems, the level of protection will be determined on a catchment-by-catchment basis, by establishing freshwater objectives and coastal water quality classifications.

4.4 Maintaining and enhancing indigenous ecosystems and species

The objectives relevant to policy and method package 4.4 are:

3.2 Region-wide water quality

3.3 Ecological flows and water levels

3.4 Indigenous ecosystems and biodiversity

3.14 Natural character, outstanding natural landscapes, outstanding natural features, and historic heritage

3.15 Active management

4.4.1 Policy – Maintaining and protecting significant ecological areas and habitats

(1) In the coastal environment, avoid adverse effects, and outside the coastal environment avoid, remedy or mitigate adverse effects of subdivision, use and development so they are no more than minor on:

(a) Indigenous taxa that are listed as threatened or at risk in the New Zealand Threat Classification System lists;

(b) Areas of indigenous vegetation and habitats of indigenous fauna, that are significant using the assessment criteria in Appendix 5;

(c) Areas set aside for full or partial protection of indigenous biodiversity under other legislation.

(2) In the coastal environment, avoid significant adverse effects and avoid, remedy, or mitigate other adverse effects of subdivision, use and development on:

(a) Areas of predominantly indigenous vegetation;

(b) Habitats of indigenous species that are important for recreational, commercial, traditional or cultural purposes;

(c) Indigenous ecosystems and habitats that are particularly vulnerable to modification, including estuaries, lagoons, coastal wetlands, dunelands, intertidal zones, rocky reef systems, eelgrass, northern wet heathlands, coastal and headwater streams, floodplains, margins of the coastal marine area and freshwater bodies, spawning and nursery areas and saltmarsh.

~~In all environments, avoid significant adverse effects and avoid, remedy, or mitigate other adverse effects of subdivision, use and development on:~~

~~(a) Areas of predominantly indigenous vegetation; and~~

(a) ~~Habitats of indigenous species that are important for recreational, commercial, traditional or cultural purposes.~~

(3) Outside the coastal environment and where clause (1) does not apply, avoid, remedy or mitigate adverse effects of subdivision, use and development so they are not significant on any of the following:

(a) Areas of predominantly indigenous vegetation;

(b) Habitats of indigenous species that are important for recreational, commercial, traditional or cultural purposes;

(c) Indigenous ecosystems and habitats that are particularly vulnerable to modification, including wetlands, dunelands, northern wet heathlands, headwater streams, floodplains and margins of freshwater bodies, spawning and nursery areas.

(4) For the purposes of clause (1), (2) and (3), when considering whether there are any adverse effects and/or any significant adverse effects:

(a) Recognise that a minor or transitory effect may not be an adverse effects;

(b) Recognise that where the effects are or maybe irreversible, then they are likely to be more than minor;

(c) Recognise that there may be more than minor cumulative effects from minor or transitory effects.

(5) For the purpose of clause (3) if adverse effects cannot be reasonably avoided, remedied or mitigated then it maybe appropriate to consider the next steps in the mitigation hierarchy i.e. biodiversity offsetting followed by environmental biodiversity compensation, as methods to achieve Objective 3.4.

Explanation:
Policy 4.1 seeks to protect important indigenous ecosystems and habitats and maintain the diversity of indigenous species. The policy reflects Policy 11 of the New Zealand Coastal Policy Statement 2011, which applies in the coastal environment, and takes into account the decision of the Supreme Court in King Salmon (*Environmental Defence Society Inc v The New Zealand King Salmon Co Ltd* [2014] NZSC 38).

The management approach has a ~~two~~-tiered protection structure. Policy 4.4.1-(1) ~~(first tier)~~ provides the highest level of protection to ecosystems, habitats, and species (biological values) most at risk of irreversible loss, with the appropriate management response being to avoid adverse effects in the coastal environment and to ensure there are no more than minor effects elsewhere.

Areas of significant indigenous vegetation and significant habitats fall within this first tier and the criteria to identify these areas are provided in Appendix 5.

Policy 4.1 (2) and (3) ~~(second tier)~~ provides a lower level of protection for ecosystems, habitats, and species at a lesser risk of loss. It covers the coastal environment and elsewhere.

It should be noted that Policy 4.1 (2) and (3) are~~is~~ broader in scope than section 6(c) of the Resource Management Act, which requires the protection of areas of significant indigenous vegetation and significant habitats of indigenous species as a matter of national importance. This is because in Northland many such habitats have been degraded, so there is a greater need to give some protection to the valued habitats that remain extant.

4.7 Supporting management and improvement

The objectives relevant to policy and method package 4.7 are:	
3.1 Integrated catchment management	*3.14 Natural character, outstanding natural landscapes, outstanding natural features, and historic heritage*
3.2 Region-wide water quality	
3.3 Ecological flows and water levels	*3.15 Active management*
3.4 Indigenous ecosystems and biodiversity	

4.7.1 Policy – Promote active management

In plan provisions and the resource consent process, recognise and promote the positive effects of the following activities that contribute to active management:

a) Pest control, particularly where it will complement an existing pest control project / programme;

b) Soil conservation / erosion control;

c) Measures to improve water quality in parts of the coastal marine area where it has deteriorated and is having significant adverse effects, or in freshwater bodies targeted for water quality enhancement;

d) Measures to improve flows and / or levels in over allocated freshwater bodies;

e) Re-vegetation with indigenous species, particularly in areas identified for natural character improvement;

f) Maintenance of historic heritage resources (including sites, buildings and structures);

g) Improvement of public access to and along the coastal marine area or the margins of rivers or lakes except where this would compromise the conservation of historic heritage or significant indigenous vegetation and / or significant habitats of indigenous fauna;

h) Exclusion of stock from waterways and areas of significant indigenous vegetation and / or significant habitats of indigenous fauna;

i) Protection of indigenous biodiversity values identified under Policy 4.4.1, outstanding natural character, outstanding natural landscapes or outstanding natural features either through legal means or physical works;

j) Removal of redundant or unwanted structures and / or buildings except where these are of historic heritage value or where removal reduces public access to and along the coast or lakes and rivers;

k) Restoration or creation of natural habitat and processes, including ecological corridors in association with indigenous biodiversity values identified under Policy 4.4.1, particularly wetlands and / or wetland sequences;

l) Restoration of natural processes in marine and freshwater habitats.

Explanation:
This policy recognises that regulation is typically only effective at preventing adverse effects and that other more proactive means are required if ongoing pressures / risks or 'legacy' effects are to be remedied. Appropriate subdivision, use and development can provide an opportunity to address risks or remedy ongoing legacy effects and the

policy seeks that these beneficial effects be given due weight in decision-making. The policy therefore states that items listed are to be seen as positive effects when assessing subdivision, use and development proposals, particularly where they target such pressures / risks in high value areas that may not otherwise be addressed.

Glossary

The glossary contains definitions of key terms used in the Regional Policy Statement. Terms defined in the Resource Management Act 1991 are not repeated in this glossary. Where another statutory document has an appropriate definition of a term, the term is included in the glossary with a reference to the relevant statutory document.

Term	Definition	Ref
Biodiversity offsets	*Note: this definition should be read in conjunction with the definition for Environmental Biodiversity Compensation* Biodiversity offsets are measureable outcomes resulting from actions designed to provide new positive effects to counter residual adverse effects of subdivision, use and development on indigenous biodiversity. Biodiversity offsetting proposals must address the following principles: (1) Offsetting measures compensate for residual adverse effects on biodiversity identified after adverse effects have been avoided, remedied, or mitigated,-according to the mitigation hierarchy ; (2) Offsetting measures achieve biodiversity outcomes above and beyond results that would have occurred if the offset had not taken place. The design and implementation of an offset should be based on sound science and avoid displacing activities harmful to biodiversity to other locations; (3) That there is no net loss and preferably a net gain of biodiversity values; (4) Offsetting measures re-establish or protect the same type of ecosystem or habitat that is adversely affected (like-for-like), unless an alternative ecosystem or habitat provides a significantly better biodiversity outcomes; (5) The offsetting measures should apply as close as possible to the site incurring the effect with benefit diminishing with distance; (6) The offsetting measures last at least as long as the effects of the activity, but preferably in perpetuity and incorporate monitoring and evaluation to allow for adaptive management where appropriate; (7) The delay between the loss of ecological values through development and the gain or maturation of biodiversity values through	4.4.1, 4.4.3, 5.3.3

	offsetting measures is minimised; (8) Compliance with offsetting measures is secured, as far as possible. (9) There are limits to what can be offset when affected biodiversity is irreplaceable or vulnerable. In such circumstances off-setting cannot be considered as a means of dealing with adverse effects. ~~Biodiversity offsets are measureable outcomes resulting from actions designed to provide new positive effects to counter residual adverse effects of subdivision, use and development on indigenous biodiversity.~~ ~~The goal of biodiversity offsets is that there is no net loss and preferably a net gain of biodiversity values.~~ ~~The offsetting measures should apply as close as possible to the site incurring the effect with benefit diminishing with distance; and last at least as long as the activity, but preferably in perpetuity.~~ ~~There are limits to what can be offset when affected biodiversity is irreplaceable or vulnerable.~~	
Environmental Biodiversity Compensation (EBC)	Environmental Biodiversity Compensation (EBC) consists of measureable outcomes resulting from actions designed to provide new positive effects to counter residual adverse effects of subdivision, use and development on indigenous biodiversity. EBC proposals must address the following principles: (1) EBC Measures compensate for residual adverse effects on biodiversity identified after adverse effects have been avoided, remedied, mitigated or offset,-according to the mitigation hierarchy; (2) EBC Measures achieve biodiversity outcomes above and beyond results that would have occurred if the EBC had not taken place. The design and implementation should be based on sound science and avoid displacing activities harmful to biodiversity to other locations; (3) That there is no net loss and preferably a net gain of biodiversity values; (4) Where EBC measures are unable to re-establish or protect the same type of ecosystem or habitat that is adversely affected (like-for-like), consider alternatives that demonstrate a better biodiversity outcome;	4.4.1

	(5) Where the benefit will diminish with distance, this should be taken into account when assessing the EBC measure (6) The measures last at least as long as the effects of the activity, but preferably in perpetuity and incorporate monitoring and evaluation to allow for adaptive management where appropriate; (7) The delay between the loss of ecological values through development and the gain or maturation of biodiversity values through the EBC measures is minimised; (8) Compliance with EBC measures is secured as far as possible. There are limits to what can be compensated when affected biodiversity is irreplaceable or vulnerable. In such circumstances EBC may not be appropriate as a means of dealing with adverse effects.	

Appendix 5 - Areas of significant indigenous vegetation and significant habitats of indigenous fauna in terrestrial, freshwater and marine environments

An area of indigenous vegetation or habitat(s) of indigenous fauna is significant if it meets one or more of the following criteria:

Note:
i) These criteria are intended to be applied by suitably qualified and experienced ecologists.
ii)The meaning of underlined italicised terms are described in ' ***Appendix 5 Definitions*** *'.*

1. Representativeness
   a) Regardless of its size, the *ecological site* is largely indigenous vegetation or habitat of indigenous fauna that is representative, typical or characteristic of the natural diversity at the relevant and recognised ecological classification and scale to which the *ecological site* belongs:
      i. If the *ecological site* comprises largely indigenous vegetation types; and
      ii. Is typical of what would have existed circa 1840; or
      iii. Is represented by faunal assemblages in most of the guilds expected for the habitat type; or
   b) The *ecological site*
      i. Is a large example of indigenous vegetation or habitat of indigenous fauna, or
      ii. Contains a combination of landform and indigenous vegetation and habitat of indigenous fauna, that is considered to be a good example of its type at the relevant and recognised ecological classification and scale.

2. Rarity / distinctiveness
   a) The *ecological site* comprises indigenous ecosystems or indigenous vegetation types that:
      i. Are either Acutely or Chronically Threatened[1] land environments associated with LENZ Level 4[2])
      ii. Excluding wetlands, are now less than 20% of their original extent; or
      iii. Excluding *man made wetlands*, are examples of the wetland classes[3] that either otherwise trigger Appendix 5 criteria or exceed any of the following area thresholds[4] (boundaries defined by Landcare delineation tool[5]):
         a) Saltmarsh greater than 0.5 hectare in area; or

[1] Guide for Users of the Threatened Environment Classification, August 2007, Authors: Walker S, Cieraad E, Grove P, Lloyd K, Myers S, Park T, Porteous T, for Landcare Research New Zealand Ltd.
[2] Landcare Research in Land Environments New Zealand (LENZ).
[3] Johnson P., Gerbeaux P. 2004. Wetland types in New Zealand. Department of Conservation, Wellington.
[4] The area thresholds for wetlands types in these criteria have been developed by ecologists to act as a trigger to identify indigenous wetlands, which due to their scale alone are likely to have significant biodiversity value above this size threshold. Wetlands of a smaller size may also be considered significant if other criteria are met (such as the presence of threatened species).
[5] A vegetation tool for wetland delineation in New Zealand, Landcare Research, March 2014 http://www.landcareresearch.co.nz/__data/assets/pdf_file/0003/71949/vegetation_tool_wetland_delineation.pdf

b) Shallow water (lake margins and rivers) greater than 0.5 hectare in area; or
c) Swamp greater than 0.4 hectare in area; or
d) Bog greater than 0.2 hectare in area; or
e) Wet Heathlands greater than 0.2 hectare in area; or
f) Marsh; Fen; Ephemeral wetlands or Seepage / flush greater than 0.05 hectares in area.

b) Indigenous vegetation or habitat of indigenous fauna that supports one or more indigenous taxa that are threatened, at risk, data deficient or uncommon, either nationally or at the relevant ecological scale.

c) The *ecological site* contains indigenous vegetation or an indigenous taxon that is:

i. Endemic to the Northland-Auckland region; or
ii. At its distributional limit within the Northland region;

D. The *ecological site* contains indigenous vegetation or an association of indigenous taxa that:

i. Is distinctive of a restricted occurrence; or
ii. Is part of an *ecological unit* that occurs on an originally rare ecosystem[6].
iii. Is an indigenous ecosystem and vegetation type that is naturally rare or has developed as a result of an unusual environmental factor(s) that occur or are likely to occur in Northland; or
iv. Is an example of nationally or regionally rare habitat as recognised in the New Zealand Marine Protected Areas Policy.

3. Diversity and pattern

A. Indigenous vegetation or habitat of indigenous fauna that contains a high diversity of:

i. Indigenous ecosystem or habitat types; or
ii. Indigenous taxa;

B. Changes in taxon composition reflecting the existence of diverse natural features or ecological gradients; or
C. Intact ecological sequences

4. Ecological context

a) Indigenous vegetation or habitat of indigenous fauna is present that provides or contributes to an important ecological linkage or network, or provides an important buffering function; or

[6] New Zealand's historically rare terrestrial ecosystems set in a physical and physiognomic framework Peter A. Williams, Susan Wiser, Bev Clarkson and Margaret C. Stanley December 2007, Landcare Research (Williams et al 2007).
Landcare Research hold a database of naturally rare (also known as 'originally or historically rare' or 'naturally uncommon') ecosystems and this excludes permanently wet areas of water bodies and below mean high water springs: http://newzealandecology.org/nzje/2829.pdf. On request Landcare Research can confirm where these ecosystems are known to be present.

b) The *ecological site* plays an important hydrological, biological or ecological role in the natural functioning of riverine, lacustrine, palustrine, estuarine, plutonic (including karst), geothermal or marine system; or

c) The *ecological site* is an important habitat for critical life history stages of indigenous fauna including breeding / spawning, roosting, nesting, resting, feeding, moulting, refugia or migration staging point (as used seasonally, temporarily or permanently).

Appendix 5 Definitions

Ecological site: the area under assessment comprising one or more ecological units. Ecological sites are comparable with each other at relevant and recognised scales within the landscape. Current ecological classification systems include the ecological districts framework, freshwater biogeographical units and LENZ, and are expected to evolve in terrestrial, freshwater and marine environments as new information and technology develops.

Ecological unit: Any combination of indigenous vegetation types (or suite of interrelated types) plus the landform they occur on. The Ecological Unit may include exotic vegetation types where they support indigenous fauna.

Man made wetlands: these are wetlands developed deliberately by artificial means or have been constructed on sites where:

a) Wetlands have not occurred naturally previously; and
b) The current vegetation cover cannot be delineated as indigenous wetland; or
c) Man made wetlands have been previously constructed legally.

Man made wetlands do not include *induced wetlands; reverted wetlands* or wetlands created for conservation purposes for example as a requirement of resource consent.

Examples of man made wetlands include wetlands created and subsequently maintained principally for or in connection with:

i) Effluent treatment and disposal systems; or
ii) Stormwater management; or
iii) Water storage; or
iv) Other artificial wetlands and water bodies including or open drainage channels (that have been legally established) such as those in drainage schemes).

These may contain emergent indigenous vegetation such as mangroves, rushes and sedges.

Induced wetlands:

This are wetlands that have formed naturally on ecological sites where wetlands did not previously exist, as a result of human activities such as construction of roads, railways, bunds etc. While such wetlands have not been constructed for a specific purpose, they can be considered to be artificial in many cases given they arise through physical alteration of hydrology through mechanical human modification. However these should be assessed on their ecological merits i.e. are not excluded from any Appendix 5 significance criteria.

Reverted wetlands:

Where a wetland reverts over time (e.g. stock exclusion allows a wetland to revert to a previous wetland state). In this instance, the wetland has not been purposefully constructed by mechanical change to hydrological conditions.
Indigenous wetlands of this sort should be treated as natural wetlands i.e. not excluded from any Appendix 5 significance criteria.

~~The significance of an area of indigenous vegetation or habitat(s) of indigenous fauna is to be assessed using the following criteria.~~

~~**1. Representativeness**~~
~~The extent to which the ecological site containing the indigenous vegetation or habitat(s) of indigenous fauna is representative, typical or characteristic of the natural diversity at the relevant ecological classification and scale, and whether it;~~

- ~~i. Supports most of the species of indigenous vegetation and / or fauna expected for the habitat type; or~~
- ~~ii. Is a large example of its type at the relevant and recognised ecological classification and scale.~~

~~**2. Rarity / distinctiveness**~~
~~The rarity of the indigenous vegetation or habitat(s) of indigenous fauna, including whether:~~

- ~~i. It is indigenous vegetation associated with land environments (defined by LENZ Level 4[7]) that are either acutely or chronically threatened[8]; or~~
- ~~ii. It is indigenous vegetation within ecological unit(s) that are now less than 20% of their original extent in the region; or~~
- ~~iii. It is distinctive of a naturally restricted occurrence; or~~
- ~~iv. It has developed as a result of unusual environmental factor(s) or is part of an ecological unit that occurs within an originally rare ecosystem. (See Table 1 for Northland's known examples[9] (bold text) and those likely to occur)[10]; or~~
- ~~v. It is nationally or regionally rare habitat(s) identified in accordance with the New Zealand Marine Protected Areas Policy and Implementation Plan; or~~
- ~~vi. It supports indigenous species that are threatened, at risk, or uncommon, nationally or within the relevant ecological scale; or~~
- ~~vii. It supports species endemic to the Northland Auckland region or that are at distributional limits within the Northland region.~~

~~[7] Landcare Research in Land Environments New Zealand (LENZ).~~
~~[8] Guide for Users of the Threatened Environment Classification, August 2007, Authors: Walker S, Cieraad E, Grove P, Lloyd K, Myers S, Park T, Porteous T, for Landcare Research New Zealand Ltd.~~
~~[9] Source Landcare Research and Department of Conservation.~~
~~[10] Department of Conservation.~~

~~Table 1 — Naturally rare indigenous ecosystem and vegetation types~~					
~~Coastal~~					
~~**Active sand dunes**~~	~~**Coastal rock stacks**~~	~~Shell barrier beaches~~	~~**Coastal turfs**~~	~~Stony beach ridges~~	~~**Shingle beaches**~~
~~**Stable sand dunes**~~	~~**Dune deflation hollows**~~	~~Coastal cliffs on quartzose rocks~~	~~**Coastal cliffs on acidic rocks**~~	~~**Basic coastal cliffs & rock outcrops**~~	~~Calcareous coastal cliffs~~
~~**Ultra-basic sea-cliffs, screes & rock outcrops**~~	~~**Seabird guano deposits**~~	~~**Seabird-burrowed soils**~~	~~**Marine mammal rookeries & haul-outs**~~	~~damp sand plains~~	~~**Dune slacks Damp sand plains**~~
~~Wetlands~~					
~~**Lake margins**~~	~~**Lagoons**~~	~~**Seepages & flushes** *(including soda springs)*~~		~~**Ephemeral wetlands including Gumlands *see Note below**~~	
~~**Bogs**~~	~~**Estuaries**~~				
~~Inland~~					
~~**Volcanic debris flows**~~	~~**Volcanic boulderfields**~~	~~Basic cliffs scarps and tors~~	~~**Ultra-basic hills**~~	~~**Cloud forests**~~	~~Vegetation on extremely low fertility soils~~
~~Geothermal systems~~					
~~**Heated (dry) ground**~~	~~Fumeroles~~	~~Geothermal streamsides~~	~~**Hydrothermally altered (now cool) ground**~~		
~~Subterranean or semi-subterranean~~					
~~**Cave entrances**~~	~~Caves and cracks in karst~~	~~Sinkholes~~	~~Subterranean basalt fields~~		

~~***Note: Gumlands** are included in wetlands because it is recognised that they are seasonally wet and are often mosaics including other low fertility habitat such as bogs and heathland.*~~

~~3. Diversity and pattern~~

~~(a) The extent to which the ecological site containing indigenous vegetation or habitat(s) of indigenous fauna contains a high diversity of:~~

- ~~i. indigenous ecosystem or habitat types; or~~
- ~~ii. indigenous taxa; or~~
- ~~iii. its composition reflects the existence of diverse natural features or ecological gradients; or~~

~~(b) Whether the indigenous vegetation or habitat of indigenous fauna contains intact ecological sequences such as estuarine wetland adjoining forest.~~

~~4. Ecological context~~

~~The role of the ecological site containing the indigenous vegetation or habitat(s) of indigenous fauna:~~

- ~~i. In providing or contributing to ecological linkages, networks, or buffering functions; or~~
- ~~ii. For the natural functioning of freshwater or coastal ecosystems; or~~
- ~~iii. For life stages of indigenous fauna including breeding / spawning, roosting, nesting, resting, feeding, moulting, refugia or migration staging point (either seasonally, temporarily or permanently).~~

Annexure B – Indigenous Biodiversity (clear copy)

3.4 Indigenous ecosystems and biodiversity

Safeguard Northland's ecological integrity by:

a) *Protecting areas of significant indigenous vegetation and significant habitats of indigenous fauna;*

b) *Maintaining the extent and diversity of indigenous ecosystems and habitats in the region; and*

c) *Where practicable, enhancing indigenous ecosystems and habitats, particularly where this contributes to the reduction in the overall threat status of regionally and nationally threatened species.*

Objective 3.4 addresses the following issues:

2.1 Fresh and coastal water

2.2 Indigenous ecosystems and biodiversity

2.6 Issues of significance to tangata whenua – natural and physical resources

2.8 Natural character, features / landscapes and historic heritage

Objective 3.4 is achieved by the following policies:

4.1 Integrated catchment management

4.2 Region-wide water quality management

4.3 Region-wide water quantity management

4.4 Maintaining and enhancing indigenous ecosystems and species

4.5 Identifying the coastal environment, natural character, outstanding natural features, outstanding natural landscapes, and historic heritage resources

4.6 Managing effects on natural character, features / landscapes and heritage

4.7 Supporting management and improvement

Explanation:
Safeguarding and enhancing the ecological integrity of indigenous ecosystems is vital for the diversity and abundance of indigenous species. It is also important if the services that indigenous ecosystems provide, such as the water purification function of wetlands, are to be maintained.

This objective seeks to at least maintain the extent and diversity of indigenous ecosystems and habitats in the region. This is to be achieved through a combination of protection and enhancement activities and processes.

Part (c) of the objective seeks an overall reduction in the threat status of threatened and at risk species. This applies to the management of activities that affect indigenous ecosystems and activities that impact on indigenous species living outside them.

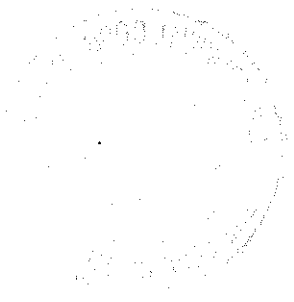
In Northland, reduced indigenous biodiversity is due to both a loss of area and a loss of ecological condition. Currently the threats resulting from pest species and reduced connectivity are considered greater than loss in overall area, although the latter is still important (for example with wetlands, very low fertility heathlands including gumlands, old growth forests, broadleaf forest, sand dunes and shrublands).

To date, voluntary efforts have been central to slowing down the decline in condition and area. Landowner and community stewardship takes many forms including the active management of pests, covenanting of significant natural areas, indigenous revegetation, habitat creation and good management practices in production environments.

However, regulation, including the use of permitted activity rules is necessary, as a backstop. Key regulatory methods to achieve the objective include the protection of significant natural areas, and controls on subdivision, use and development including discharges to water, water takes, and vegetation clearance.

Regulation should include incentives to encourage subdivision, use and development involving restoration and protection of ecosystems and indigenous biodiversity.

For safeguarding water and its ecosystems, the level of protection will be determined on a catchment-by-catchment basis, by establishing freshwater objectives and coastal water quality classifications.



4.4 Maintaining and enhancing indigenous ecosystems and species

The objectives relevant to policy and method package 4.4 are:

3.2 Region-wide water quality

3.3 Ecological flows and water levels

3.4 Indigenous ecosystems and biodiversity

3.14 Natural character, outstanding natural landscapes, outstanding natural features, and historic heritage

3.15 Active management

4.4.1 Policy – Maintaining and protecting significant ecological areas and habitats

(1) In the coastal environment, avoid adverse effects, and outside the coastal environment avoid, remedy or mitigate adverse effects of subdivision, use and development so they are no more than minor on:

(a) Indigenous taxa that are listed as threatened or at risk in the New Zealand Threat Classification System lists;

(b) Areas of indigenous vegetation and habitats of indigenous fauna, that are significant using the assessment criteria in Appendix 5;

(c) Areas set aside for full or partial protection of indigenous biodiversity under other legislation.

(2) In the coastal environment, avoid significant adverse effects and avoid, remedy, or mitigate other adverse effects of subdivision, use and development on:

(a) Areas of predominantly indigenous vegetation;

(b) Habitats of indigenous species that are important for recreational, commercial, traditional or cultural purposes;

(c) Indigenous ecosystems and habitats that are particularly vulnerable to modification, including estuaries, lagoons, coastal wetlands, dunelands, intertidal zones, rocky reef systems, eelgrass, northern wet heathlands, coastal and headwater streams, floodplains, margins of the coastal marine area and freshwater bodies, spawning and nursery areas and saltmarsh.

(3) Outside the coastal environment and where clause (1) does not apply, avoid, remedy or mitigate adverse effects of subdivision, use and development so they are not significant on any of the following:

(a) Areas of predominantly indigenous vegetation;

(b) Habitats of indigenous species that are important for recreational, commercial, traditional or cultural purposes;

(c) Indigenous ecosystems and habitats that are particularly vulnerable to modification, including wetlands, dunelands, northern wet heathlands, headwater streams, floodplains and margins of freshwater bodies, spawning and nursery areas.

(4) For the purposes of clause (1), (2) and (3), when considering whether there are any adverse effects and/or any significant adverse effects:

(a) Recognise that a minor or transitory effect may not be an adverse effects;

(b) Recognise that where the effects are or maybe irreversible, then they are likely to be more than minor;

(c) *Recognise that there may be more than minor cumulative effects from minor or transitory effects.*

(5) *For the purpose of clause (3) if adverse effects cannot be reasonably avoided, remedied or mitigated then it maybe appropriate to consider the next steps in the mitigation hierarchy i.e. biodiversity offsetting followed by environmental biodiversity compensation, as methods to achieve Objective 3.4.*

Explanation:
Policy 4.1 seeks to protect important indigenous ecosystems and habitats and maintain the diversity of indigenous species. The policy reflects Policy 11 of the New Zealand Coastal Policy Statement 2011, which applies in the coastal environment, and takes into account the decision of the Supreme Court in King Salmon (*Environmental Defence Society Inc v The New Zealand King Salmon Co Ltd* [2014] NZSC 38)

The management approach has a tiered protection structure. Policy 4.4.1(1) provides the highest level of protection to ecosystems, habitats, and species (biological values) most at risk of irreversible loss, with the appropriate management response being to avoid adverse effects in the coastal environment and to ensure there are no more than minor effects elsewhere.

Areas of significant indigenous vegetation and significant habitats fall within this first tier and the criteria to identify these areas are provided in Appendix 5.

Policy 4.1 (2) and (3) provides a lower level of protection for ecosystems, habitats, and species at a lesser risk of loss. It covers the coastal environment and elsewhere.

It should be noted that Policy 4.1 (2) and (3) are broader in scope than section 6(c) of the Resource Management Act, which requires the protection of areas of significant indigenous vegetation and significant habitats of indigenous species as a matter of national importance. This is because in Northland many such habitats have been degraded, so there is a greater need to give some protection to the valued habitats that remain extant.

4.7 Supporting management and improvement

The objectives relevant to policy and method package 4.7 are:	
3.1 Integrated catchment management	*3.14 Natural character, outstanding natural landscapes, outstanding natural features, and historic heritage*
3.2 Region-wide water quality	
3.3 Ecological flows and water levels	*3.15 Active management*
3.4 Indigenous ecosystems and biodiversity	

4.7.1 Policy – Promote active management

In plan provisions and the resource consent process, recognise and promote the positive effects of the following activities that contribute to active management:

a) *Pest control, particularly where it will complement an existing pest control project / programme;*

b) *Soil conservation / erosion control;*

c) *Measures to improve water quality in parts of the coastal marine area where it has deteriorated and is having significant adverse effects, or in freshwater bodies targeted for water quality enhancement;*

d) *Measures to improve flows and / or levels in over allocated freshwater bodies;*

e) *Re-vegetation with indigenous species, particularly in areas identified for natural character improvement;*

f) *Maintenance of historic heritage resources (including sites, buildings and structures);*

g) *Improvement of public access to and along the coastal marine area or the margins of rivers or lakes except where this would compromise the conservation of historic heritage or significant indigenous vegetation and / or significant habitats of indigenous fauna;*

h) *Exclusion of stock from waterways and areas of significant indigenous vegetation and / or significant habitats of indigenous fauna;*

i) *Protection of indigenous biodiversity values identified under Policy 4.4.1, outstanding natural character, outstanding natural landscapes or outstanding natural features either through legal means or physical works;*

j) *Removal of redundant or unwanted structures and / or buildings except where these are of historic heritage value or where removal reduces public access to and along the coast or lakes and rivers;*

k) *Restoration or creation of natural habitat and processes, including ecological corridors in association with indigenous biodiversity values identified under Policy 4.4.1, particularly wetlands and / or wetland sequences;*

l) *Restoration of natural processes in marine and freshwater habitats.*

Explanation:
This policy recognises that regulation is typically only effective at preventing adverse effects and that other more proactive means are required if ongoing pressures / risks

or 'legacy' effects are to be remedied. Appropriate subdivision, use and development can provide an opportunity to address risks or remedy ongoing legacy effects and the policy seeks that these beneficial effects be given due weight in decision-making. The policy therefore states that items listed are to be seen as positive effects when assessing subdivision, use and development proposals, particularly where they target such pressures / risks in high value areas that may not otherwise be addressed.

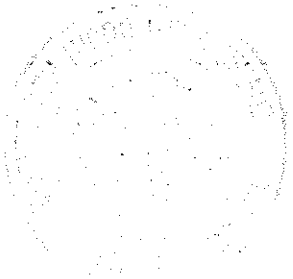
Glossary

The glossary contains definitions of key terms used in the Regional Policy Statement. Terms defined in the Resource Management Act 1991 are not repeated in this glossary. Where another statutory document has an appropriate definition of a term, the term is included in the glossary with a reference to the relevant statutory document.

Term	Definition	Ref
Biodiversity offsets	*Note: this definition should be read in conjunction with the definition for Environmental Biodiversity Compensation* Biodiversity offsets are measureable outcomes resulting from actions designed to provide new positive effects to counter residual adverse effects of subdivision, use and development on indigenous biodiversity. Biodiversity offsetting proposals must address the following principles: (1) Offsetting measures compensate for residual adverse effects on biodiversity identified after adverse effects have been avoided, remedied, or mitigated,-according to the mitigation hierarchy ; (2) Offsetting measures achieve biodiversity outcomes above and beyond results that would have occurred if the offset had not taken place. The design and implementation of an offset should be based on sound science and avoid displacing activities harmful to biodiversity to other locations; (3) That there is no net loss and preferably a net gain of biodiversity values; (4) Offsetting measures re-establish or protect the same type of ecosystem or habitat that is adversely affected (like-for-like), unless an alternative ecosystem or habitat provides a significantly better biodiversity outcomes; (5) The offsetting measures should apply as close as possible to the site incurring the effect with benefit diminishing with distance; (6) The offsetting measures last at least as long as the effects of the activity, but preferably in perpetuity and incorporate monitoring and evaluation to allow for adaptive management where appropriate; (7) The delay between the loss of ecological values through development and the gain or maturation of biodiversity values through	4.4.1, 4.4.3, 5.3.3

	offsetting measures is minimised; (8) Compliance with offsetting measures is secured, as far as possible. (9) There are limits to what can be offset when affected biodiversity is irreplaceable or vulnerable. In such circumstances off-setting cannot be considered as a means of dealing with adverse effects.	
Environmental Biodiversity Compensation (EBC)	Environmental Biodiversity Compensation (EBC) consists of measureable outcomes resulting from actions designed to provide new positive effects to counter residual adverse effects of subdivision, use and development on indigenous biodiversity. EBC proposals must address the following principles: (1) EBC measures compensate for residual adverse effects on biodiversity identified after adverse effects have been avoided, remedied, mitigated or offset,-according to the mitigation hierarchy; (2) EBC measures achieve biodiversity outcomes above and beyond results that would have occurred if the EBC had not taken place. The design and implementation should be based on sound science and avoid displacing activities harmful to biodiversity to other locations; (3) That there is no net loss and preferably a net gain of biodiversity values; (4) Where EBC measures are unable to re-establish or protect the same type of ecosystem or habitat that is adversely affected (like-for-like), consider alternatives that demonstrate a better biodiversity outcome; (5) Where the benefit will diminish with distance, this should be taken into account when assessing the EBC measure (6) The measures last at least as long as the effects of the activity, but preferably in perpetuity and incorporate monitoring and evaluation to allow for adaptive management where appropriate; (7) The delay between the loss of ecological values through development and the gain or maturation of biodiversity values through the EBC measures is minimised; (8) Compliance with EBC measures is secured as far as possible. There are limits to what can be compensated when affected biodiversity is irreplaceable or vulnerable. In such	4.4.1

	circumstances EBC may not be appropriate as a means of dealing with adverse effects.	



Appendix 5 - Areas of significant indigenous vegetation and significant habitats of indigenous fauna in terrestrial, freshwater and marine environments

An area of indigenous vegetation or habitat(s) of indigenous fauna is significant if it meets one or more of the following criteria:

Note:
i) These criteria are intended to be applied by suitably qualified and experienced ecologists.
ii) The meaning of underlined italicised terms are described in ' ***Appendix 5 Definitions*** *'.*

1. Representativeness

(a) Regardless of its size, the *ecological site* is largely indigenous vegetation or habitat of indigenous fauna that is representative, typical or characteristic of the natural diversity at the relevant and recognised ecological classification and scale to which the *ecological site* belongs:
   i. If the *ecological site* comprises largely indigenous vegetation types; and
   ii. Is typical of what would have existed circa 1840; or
   iii. Is represented by faunal assemblages in most of the guilds expected for the habitat type; or

(b) The *ecological site*
   i. Is a large example of indigenous vegetation or habitat of indigenous fauna, or
   ii. Contains a combination of landform and indigenous vegetation and habitat of indigenous fauna, that is considered to be a good example of its type at the relevant and recognised ecological classification and scale.

2. Rarity / distinctiveness

(a) The *ecological site* comprises indigenous ecosystems or indigenous vegetation types that:
   i. Are either Acutely or Chronically Threatened1 land environments associated with LENZ Level 42)
   ii. Excluding wetlands, are now less than 20% of their original extent; or
   iii. Excluding *man made wetlands*, are examples of the wetland classes3 that either otherwise trigger Appendix 5 criteria or exceed any of the following area thresholds4 (boundaries defined by Landcare delineation tool5):

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[1] Guide for Users of the Threatened Environment Classification, August 2007, Authors: Walker S, Cieraad E, Grove P, Lloyd K, Myers S, Park T, Porteous T, for Landcare Research New Zealand Ltd.
[2] Landcare Research in Land Environments New Zealand (LENZ).
[3] Johnson P., Gerbeaux P. 2004. Wetland types in New Zealand. Department of Conservation, Wellington.
[4] The area thresholds for wetlands types in these criteria have been developed by ecologists to act as a trigger to identify indigenous wetlands, which due to their scale alone are likely to have significant biodiversity value above this size threshold. Wetlands of a smaller size may also be considered significant if other criteria are met (such as the presence of threatened species).
[5] A vegetation tool for wetland delineation in New Zealand, Landcare Research, March 2014

a) Saltmarsh greater than 0.5 hectare in area; or
b) Shallow water (lake margins and rivers) greater than 0.5 hectare in area; or
c) Swamp greater than 0.4 hectare in area; or
d) Bog greater than 0.2 hectare in area; or
e) Wet Heathlands greater than 0.2 hectare in area; or
f) Marsh; Fen; Ephemeral wetlands or Seepage / flush greater than 0.05 hectares in area.

(b) Indigenous vegetation or habitat of indigenous fauna that supports one or more indigenous taxa that are threatened, at risk, data deficient or uncommon, either nationally or at the relevant ecological scale.

(c) The *ecological site* contains indigenous vegetation or an indigenous taxon that is:
i. Endemic to the Northland-Auckland region; or
ii. At its distributional limit within the Northland region;

(d) The *ecological site* contains indigenous vegetation or an association of indigenous taxa that:
i. Is distinctive of a restricted occurrence; or
ii. Is part of an *ecological unit* that occurs on an originally rare ecosystem[6].
iii. Is an indigenous ecosystem and vegetation type that is naturally rare or has developed as a result of an unusual environmental factor(s) that occur or are likely to occur in Northland; or
iv. Is an example of nationally or regionally rare habitat as recognised in the New Zealand Marine Protected Areas Policy.

3. Diversity and pattern

(a) Indigenous vegetation or habitat of indigenous fauna that contains a high diversity of:
i. Indigenous ecosystem or habitat types; or
ii. Indigenous taxa;

(b) Changes in taxon composition reflecting the existence of diverse natural features or ecological gradients; or

(c) Intact ecological sequences.

4. Ecological context

(a) Indigenous vegetation or habitat of indigenous fauna is present that provides or contributes to an important ecological linkage or network, or provides an important buffering function; or

(b) The *ecological site* plays an important hydrological, biological or ecological role in the natural functioning of riverine, lacustrine, palustine, esturine, plutonic (including karst), geothermal or marine system; or

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http://www.landcareresearch.co.nz/__data/assets/pdf_file/0003/71949/vegetation_tool_wetland_delineation.pdf

[6] New Zealand's historically rare terrestrial ecosystems set in a physical and physiognomic framework Peter A. Williams, Susan Wiser, Bev Clarkson and Margaret C. Stanley December 2007, Landcare Research (Williams et al 2007).
Landcare Research hold a database of naturally rare (also known as 'originally or historically rare' or 'naturally uncommon') ecosystems and this excludes permanently wet areas of water bodies and below mean high water springs: http://newzealandecology.org/nzje/2829.pdf. On request Landcare Research can confirm where these ecosystems are known to be present.

(c) The *ecological site* is an important habitat for critical life history stages of indigenous fauna including breeding / spawning, roosting, nesting, resting, feeding, moulting, refugia or migration staging point (as used seasonally, temporarily or permanently).

Appendix 5 Definitions

Ecological site: the area under assessment comprising one or more ecological units. Ecological sites are comparable with each other at relevant and recognised scales within the landscape. Current ecological classification systems include the ecological districts framework, freshwater biogeographical units and LENZ, and are expected to evolve in terrestrial, freshwater and marine environments as new information and technology develops.

Ecological unit: Any combination of indigenous vegetation types (or suite of interrelated types) plus the landform they occur on. The Ecological Unit may include exotic vegetation types where they support indigenous fauna.

Man made wetlands: These are wetlands developed deliberately by artificial means or have been constructed on sites where:
a) Wetlands have not occurred naturally previously; and
b) The current vegetation cover cannot be delineated as indigenous wetland; or
c) Man made wetlands have been previously constructed legally.

Man made wetlands do not include *induced wetlands*; *reverted wetlands* or wetlands created for conservation purposes for example as a requirement of resource consent.

Examples of man made wetlands include wetlands created and subsequently maintained principally for or in connection with:
a) Effluent treatment and disposal systems; or
b) Stormwater management; or
c) Water storage; or
d) Other artificial wetlands and water bodies including or open drainage channels (that have been legally established) such as those in drainage schemes).

These may contain emergent indigenous vegetation such as mangroves, rushes and sedges.

Induced wetlands: This are wetlands that have formed naturally on ecological sites where wetlands did not previously exist, as a result of human activities such as construction of roads, railways, bunds etc. While such wetlands have not been constructed for a specific purpose, they can be considered to be artificial in many cases given they arise through physical alteration of hydrology through mechanical human modification.

However these should be assessed on their ecological merits i.e. are not excluded from any Appendix 5 significance criteria.

Reverted wetlands: Where a wetland reverts over time (e.g. stock exclusion allows a wetland to revert to a previous wetland state). In this instance, the wetland has not been purposefully constructed by mechanical change to hydrological conditions. Indigenous wetlands of this sort should be treated as natural wetlands i.e. not excluded from any Appendix 5 significance criteria.