

mechanism or type of covenant (e.g. two QEII covenants and two WDC covenants cover Kokopu Block Road Bush) or part of the NAES is protected and part isn't. Table 7 provides an overview of the area and number of WDC covenants that include NAES. Approximately half of the WDC covenants include both NAES and areas that are not NAES, and on average the proportion of a WDC covenant that is NAES is 66% ± 4% (95% confidence interval), but this ranges from 1% to 99% NAES.

Furthermore, "sliver" polygons, where the GIS layers don't quite line up when overlaid, may be artificially affecting the overall numbers. Where possible these slivers of overlap have been removed, but it is not possible to remove all slivers by just looking at the tabulated (not mapped) data.

Table 7: Area and number of Whangarei District Council (WDC) covenants that are Natural Areas of Ecological Significance (NAES). QEII: Queen Elizabeth II covenants; CPCA: Community Pest Control Area; F&G: NZ Fish and Game wetlands. Data provided 11 January 2008.

| | WDC | WDC & QEII | WDC & CPCA | WDC & F&G | Grand Total | % |
|----------------------------|----------------|--------------|-------------|------------|----------------|-------|
| Area in ha | | | | | | |
| Not NAES | 862.9 | 139.5 | 29.8 | 2.3 | 1,034.5 | 45.7% |
| NAES | 904.8 | 323.1 | 3.3 | | 1,231.5 | 54.3% |
| Total | 1,767.6 | 462.5 | 33.1 | 2.3 | 2,266.0 | |
| % of total ha that is NAES | 78.0% | 20.4% | 1.5% | 0.1% | | |
| Numbers | | | | | | |
| Not NAES | 584 | 84 | 5 | 1 | 588 | 95.9% |
| NAES | 311 | 67 | 2 | | 316 | 51.5% |
| Total | | | | | 613 | |

| | Area | Numbers | % Total ha | % Total Number |
|--------------|----------------|------------|------------|----------------|
| Not NAES | 536.1 | 302 | 23.7% | 49.3% |
| NAES | 330.2 | 26 | 14.6% | 4.2% |
| Both | 1,399.7 | 285 | 61.8% | 46.5% |
| Total | 2,266.0 | 613 | | |

7. OTHER PROTECTION MECHANISMS (NON-PNAS)

7.1 Kaipara District Council Biodiversity Improvement Fund

The aim of the fund is to help and encourage people to restore and improve Kaipara District's natural environment. Examples of projects that may be funded include fencing and restoration of bush or wetlands, dune care, and animal and pest control. Individuals, private landowners, community groups, conservation organisations, iwi and school groups may apply (Kaipara District Council 2007).

Most of the location data provided is point data, not mapped area data, and therefore no mapped extent or overlaps of area could be calculated. Only three projects had information about the geographical extent of the project and the data was received

long after all other data had been analysed. A summary of Kaipara District Council Biodiversity Improvement Fund Projects are provided in Table 8.

Table 8: Kaipara District Council Biodiversity Improvement Fund Projects. Data provided 27 February 2008.

| Applicant | Aim of Project | Habitat and Ecological District | LENZ Threat Category | Area (ha) |
|----------------------------------|------------------------------|-----------------------------------|----------------------------|-----------|
| Hua Raukau Trust | Dune care | Coastal Sand and Gravel, Pouto ED | At Risk | 28.06 |
| Glinks Gully Coastcare | Dune care/planting | Flaxland, Pouto ED | At Risk | 20.65 |
| Friends of Mangawhai Harbour | Riparian management | | | |
| Mangawhai Harbour Restoration | Dune restoration/planting | | | |
| Mangawhai Pride | Riparian/estuary protection | | | |
| Private Landowner | Bush restoration and fencing | | | |
| Paparoa Lions | Predator control | | | |
| Private landowner/ QEII covenant | Possum control | Indigenous Forest, Tokatoka | Critically Under-protected | 10.12 |
| Private Landowner | Bush restoration and fencing | | | |
| Private Landowner | Bush protection/fencing | | | |
| Northern Wairoa Flax Community | Bush protection/fencing | | | |
| Mangawhai River Enhancement | Riparian Planting | | | |
| Private Landowner | Bush protection/fencing | | | |

7.2 Northland Regional Council Community Pest Control Areas

Communities can propose to the NRC that an area should be protected from a particular plant and/or animal pest. If the Council agrees, the area becomes a Community Pest Control Area (CPCA), pests defined in the proposal become total control pests for that area, and the landholder(s) must follow a programme of control (following an initial knockdown) (Northland Regional Council 2008).

There are 14 Approved CPCAs in the Northland Region. Another nine have been proposed. They range in size from approximately 9 ha to nearly 6,500 ha (Table 9). Nine CPCAs were included in the analysis (they had mapped areas). Nearly all are on private land (98.5% of total area), with a further 1.1% (92.8 ha) on Public Conservation Land, 0.4% (33.1 ha) within Whangarei District Council covenants, and 4.4 ha of QEII covenant included in one project. Northland Regional Council currently contributes to protecting biodiversity values on nearly 12,000 ha of private land. This area will roughly double when the pending projects are included.

Table 9: Approved Community Pest Control Areas and NAES. Data provided 31 January 2008.

| Approved Community Pest Control Areas | Area (ha) | Number and area of NAES |
|--|----------------|-------------------------|
| Skudders Beach | 8.8 | 1 (0.2 ha) |
| Mangaiti Bay | 13.9 | 1 (0.4 ha) |
| Manganese Point | 116.5 | 1 (6.4 ha) |
| Petley Road | 230.7 | 3 (17.2 ha) |
| Maungaraho Rock | 423.8 | 0 |
| Waiare Valley, Kaeo | 812.6 | 8 (426.2 ha) |
| Linton road | 879.2 | 13 (169.0 ha) |
| Te Kuri | 1,710.7 | 0 |
| Oneriri | 3,757.9 | 30 (650.1 ha) |
| Subtotal | 7,954.2 | 57 (1,269.5 ha)* |
| Additional CPCA received after analysis | | |
| Nook | 121 | approved |
| Tutukaka | 231 | approved |
| Takahoa Bay | 226 | approved |
| Purerua Peninsula | 3,212 | approved |
| Opara Estuary | 158 | approved |
| Subtotal | 3,948 | |
| Pending CPCA received after analysis | | |
| Ranganui | 921 | pending |
| Hoanga | 1,690 | pending |
| Swan Lake | 664 | pending |
| Mangaru | 6,438 | pending |
| Marohemo | 992 | pending |
| Pataua North | 789 | pending |
| Waione | 137 | pending |
| Dargaville wetland | 55 | pending |
| Rawhiti | 61 | pending |
| Total approved | 11,902 | |
| Total pending | 11,747 | |
| Total | 23,649 | |

* Two CPCAs protect part of the Arapaoa River NAES, Linton Road, and Petley Road.

Nearly all the projects included in the analysis contained one or more (whole or part) Natural Area of Ecological Significance (NAES). Nearly fifteen percent of the area under CPCA projects is also NAES (Table 10). Fourteen percent of private land included in the CPCAs is NAES and 77% of Public Conservation Land is also NAES.

Table 10: Area of Community Pest Control Areas (CPCAs) that are NAES. Data provided 31 January 2008.

| Administration | Area (ha) | | | % NAES |
|------------------|----------------|----------------|----------------|---------------|
| | Not NAES | NAES | Total | |
| Private land | 7,361.4 | 1,192.0 | 8,553.4 | 13.94% |
| DOC managed land | 21.5 | 71.3 | 92.8 | 76.82% |
| QEII | 1.5 | 2.9 | 4.4 | 65.22% |
| WDC covenant | 29.8 | 3.3 | 33.1 | 9.97% |
| Total | 7,414.3 | 1,269.5 | 8,683.8 | 14.62% |

7.3 Northland Regional Council CoastCare Groups

Northland Regional Council, through its Environment Fund, also supports a number of CoastCare Groups. The Northland Regional Council Environment Fund has provided over \$1.5 million to help people improve and protect Northland's natural environment since 1996. In 2007 the contestable fund increased from \$450,000 to around \$500,000. The Regional Council recognises the effort and commitment that Northlanders are putting into improving native biodiversity and the increase in funding reflects this. The fund is targeted at several different areas with most projects funded at 50% of their total costs (Northland Regional Council 2007).

Projects must be of long-term benefit to the local environment and show evidence of good resource management. Examples of projects funded previously include protecting native bush and wetlands by fencing out stock, replanting streamsides, dune management, and pest control to enhance native habitat (Northland Regional Council 2007). Laura Shaft is the CoastCare Co-ordinator for the Northland Regional Council and provided the list (Table 11) and map (Figure 4) of Current coast Care Groups. From the names of the Coast Care Groups it would appear that there is some overlap with the Northland Region Community Pest Control Areas, but due to the late acquisition of this information and the lack of a GIS data (mapping) layer it is not possible to provide any further analysis.

Table 11: List of Northland Region Coast Care Groups. Data provided 10 April 2008.

| Coast Care Group |
|--|
| Baylys Beach Society Inc |
| Bream Bay Coastal Care Trust |
| Doubtless Bay Marine Protection Group |
| Glinks Gully Protection Society Inc |
| Hokianga Harbour Foreshore Restoration Society Inc (HHFRS) |
| Hua Rakau Ki Omamari Trust |
| Kaimaumu Coastal Reserve Group |
| Karikari Peninsula Beach Care Group |
| Mangawhai Heads Restoration Society |
| Ocean Beach Protection Group |
| Owhata Ahu Whenua Trust |
| Taipa Beach Improvement Society |
| Taupo Bay Progressive Association Inc |
| Tauranga Bay Community Association |
| Te Ngare Bay CoastCare Group |
| Te Roopu Whakaoranga O Te Taha Moana |
| Waipapakauri Coastal Care Group |
| Whananaki CoastCare Group |

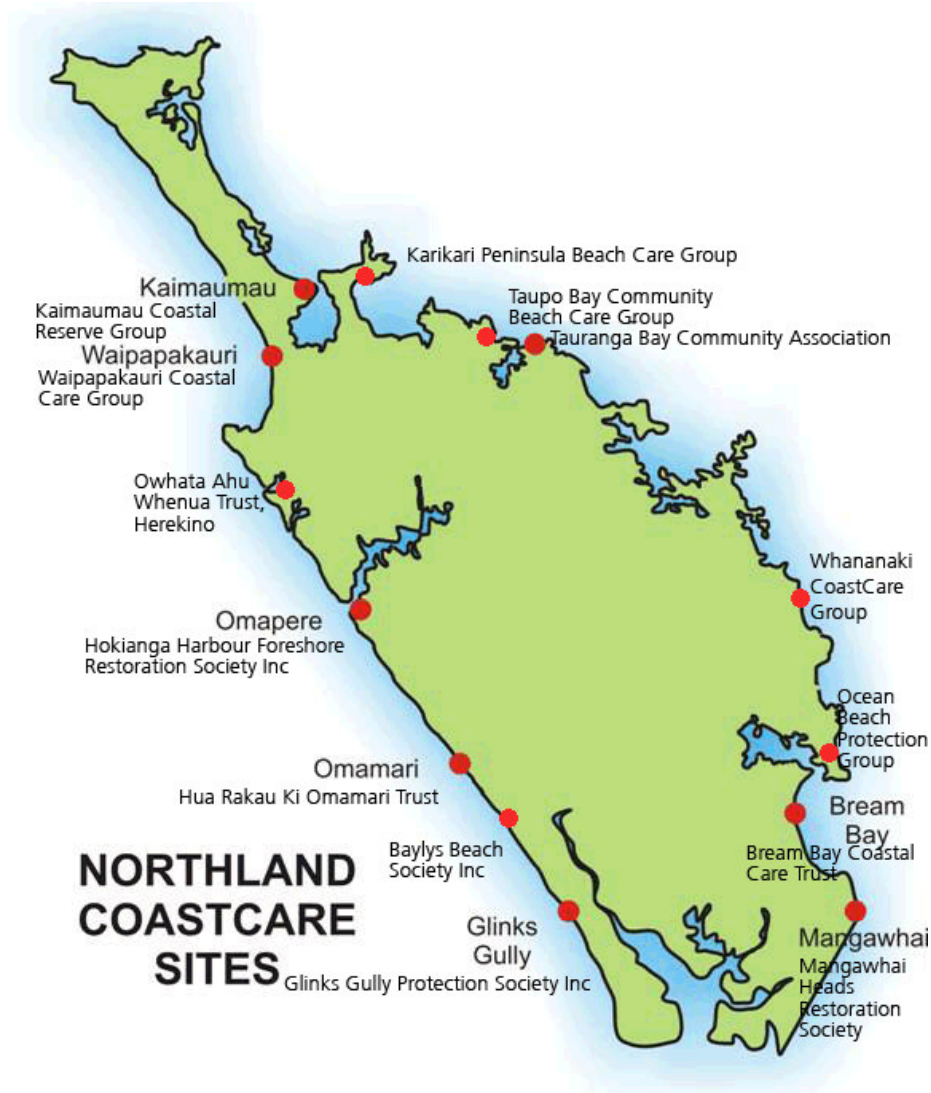


Figure 4: Map of Coast Care Groups in Northland Region.

(Image provided by Laura Shaft, Northland Regional Council)

7.4 Fish and Game wetlands

New Zealand Fish and Game looks after five wetland areas in Northland. These range in size from 22.5 ha to 56.5 ha. Three include part of a single NAES; Jack Bisset Wetlands includes 25.8 of Draffin Farm Wetland; Kawakawa Wetlands includes 17.0 ha of Kawakawa Flood plain; and Waitangi Wetlands includes 3.6 ha of Waitangi Wetlands and Environs. By area, 67% of the Fish and Game administered land is private land or land owned by Fish and Game. A further 31.6% is Public Conservation Land and a very small percentage is a QEII covenant or a Whangarei District Council covenant (Table 12).

Table 12: Fish and Game Wetlands and NAES. Data provided 23 January 2008.

| Fish and Game Wetlands | Total | Number of NAES |
|-------------------------------|---------------|-----------------------|
| Kawakawa Wetlands | 22.53 | 1 |
| Awakino River Reserve | 23.82 | 0 |
| Waitangi Wetlands | 47.43 | 1 |
| Jack Bisset Wetlands | 54.58 | 1 |
| Flaxmill | 56.53 | 0 |
| Total | 204.89 | 3 |

Of the public conservation land, 66% is also an NAES, while 34% of the private/Fish and Game owned land is NAES (Table 13).

Table 13: New Zealand Fish and Game wetlands that are also a NAES. Data provided 23 January 2008.

| Administration | Area (ha) | | | % NAES |
|--------------------------|--------------|-------------|--------------|--------------|
| | Not NAES | NAES | Total | |
| Private/Fish and Game | 91.1 | 46.5 | 137.6 | 33.8% |
| Public Conservation Land | 22.0 | 42.8 | 64.8 | 66.1% |
| QEII | 0.2 | - | 0.2 | 0.0% |
| WDC covenant | 2.3 | 0.0 | 2.3 | 0.0% |
| Total | 115.6 | 89.3 | 204.9 | 43.6% |

7.5 Landcare Groups

There are 60 Landcare Groups within the Northland Region. For 27 of these we have GIS polygons (and therefore maps) showing the extent of the cared for land. We have compared these areas with NAES below. The unmapped Landcare Groups are listed in Appendix 3. We have not done detailed analysis of their relationship to NAES.

The 27 Landcare Groups that were analysed care for areas ranging from 4 ha to 24,844 ha (Table 14). These 27 Landcare Groups look after about 121,512 ha. This total area may not be accurate. The GIS data layers show six Landcare Groups all look after exactly the same area. This may indicate data errors.

Sixteen of these Landcare Group areas include one or more Natural Areas of Ecological Significance (NAES) (Tables 14 & 15). The area managed for kiwi by the NZ Kiwi Foundation includes portions of 153 NAES. In addition, ten unmapped Landcare Groups are also likely to include one or more NAES. One of Landcare Groups includes Public Conservation land and three are Fish and Game wetlands.

Table 14: Landcare Group areas and NAES. Data provided 23 January 2008.

| Landcare Groups | Area (ha) | Number of NAES |
|--|------------------|----------------|
| Te Puia Waipounamu Aotearoa Charitable Trust | 3.79 | 0 |
| Friends of Matakoho/Limestone Island Society | 39.09 | 0 |
| Jack Bisset Wetlands Committee | 54.58 | 0 |
| Manganese Point Landcare Group | 123.87 | 1 |
| Waipoua Forest Trust | 146.05 | 2 |
| Taupo Bay Kiwi Group/NZ Kiwi Foundation | 267.98 | 0 |
| Kaiaatea Landcare Group | 352.60 | 2 |
| Mahinepua-Radar Hill Landcare Group Incorporated | 1,048.19 | 13 |
| Herekino Landcare Group | 1,059.20 | 7 |
| Hupara Landcare Group | 1,111.52 | 7 |
| Tutukaka Landcare Coalition | 1,230.43 | 8 |
| Wekaweka Landcare Group | 1,458.66 | 3 |
| Whakaangi Landcare Trust | 2,178.09 | 10 |
| Mangakahia Landcare Group | 2,304.27 | 1 |
| Guardians of the Bay of Islands Incorporated | 3,035.16 | 34 |
| Russell Landcare Trust | 3,035.16 | 0 |
| Te Oho Mai Puketi | 3,164.43 | 1 |
| Muriwhaneua Incorporation | 3,810.85 | 31 |
| Bream Bay Restoration Committee | 8,860.22 | 25 |
| Little Munro Landcare Group | 8,860.22 | 0 |
| Papakarahi Landcare Group | 8,860.22 | 0 |
| Taiharuru Catchment Care Group | 8,860.22 | 0 |
| Taurikura Landcare Group | 8,860.22 | 0 |
| Whangarei Heads Landcare Group | 8,860.22 | 0 |
| Waimate North Landcare Group | 9,405.38 | 40 |
| Takou Were-Te-Mokai Charitable Trust | 9,677.21 | 0 |
| NZ Kiwi Foundation | 24,844.70 | 153 |
| Grand Total | 121,512.6 | 338 |

Table 15: Number of NAES contained within Landcare Group areas. Data provided 23 January 2008.

| Number of NAES | Number of Landcare Groups |
|----------------|---------------------------|
| 0 | 11 |
| 1 | 3 |
| 2 | 2 |
| 3 | 1 |
| 4 | 0 |
| 5 | 0 |
| 6-10 | 4 |
| 11-15 | 1 |
| 16-20 | 0 |
| 21-30 | 1 |
| 31-40 | 3 |
| 153 | 1 |
| n/a | 10 ¹ |

¹ No GIS data showing the location/extent of the area managed by these groups was available.

The majority of the land, by area, looked after by Landcare Groups is private land (89.6%), followed by DOC managed land (6.2%), QEII covenants (2.7%), Whangarei District Council covenants (0.8%), and Nga Whenua Rahui Kawenata (0.6%) (Table 16). Only 21.5% of private land includes NAES, but 48.8% of Public Conservation lands include NAES. QEII covenants and Nga Whenua Rahui Kawenata have high proportions of NAES.

The high correlation between QEII covenant areas and NAES is largely due to the NZ Kiwi Foundation encouraging QEII covenantors to undertake pest control to protect kiwi within covenanted areas. This is due in part to a NZ Kiwi Foundation Trustee (Greg Blunden) also being the QEII representative. Forty percent of QEII covenants with Landcare Groups fall under the management of the NZ Kiwi Foundation. In total about 25.5% of the area looked after by Landcare Groups has been identified as NAES in a Northland PNAP report.

Table 16: Proportion of Landcare Group areas by administration type, and the proportion of each that is also a NAES. Data provided 23 January 2008.

| Administration | Area (ha) | | | % NAES |
|--------------------------|-----------------|-----------------|-----------------|--------------|
| | Not NAES | NAES | Total | |
| Private | 40,726.3 | 11,123.4 | 51,849.8 | 21.5% |
| Public Conservation Land | 1,841.6 | 1,754.4 | 3,596.0 | 48.8% |
| QEII | 330.3 | 1,260.2 | 1,590.6 | 79.2% |
| Nga Whenua Rahui | 5.3 | 365.7 | 371.0 | 98.6% |
| WDC covenant | 188.8 | 268.6 | 457.4 | 58.7% |
| Total | 43,092.4 | 14,772.5 | 57,864.8 | 25.5% |

7.6 Far North District Council significant natural areas

Since 2006 the Far North District Council has had a Significant Natural Areas Fund to assist landowners with the protection of these areas. Thus far 18 organisations (mostly Landcare Groups, some schools and farms) and three private individuals have benefitted from this fund (Table 17). The project boundaries are currently not digitally mapped and it is therefore not possible to accurately determine the size or location of the areas protected. Four of the projects are likely to include all or some of a NAES, nine of the projects (including all those with NAES) have Landcare Group involvement, and one of these is also a QEII covenant.

Table 17: Far North District Council, Significant Natural Areas funding recipients. Data provided 23 January 2008.

| Recipient |
|--|
| Herekino Landcare Group |
| Lake Omapere Project Management Team |
| Mahinepua-Radar Hill Landcare |
| Moturoa Island Ltd |
| Ngai Tupoto ki Motukaraka Trust |
| Omapere-Rangihamama Trust |
| Private landowner |
| Private landowner |
| Private landowner |
| Taikapiti Farm |
| Taipa Area School |
| Takou Were-Te Mokaï Charitable Trust |
| Te Kuta Wetland Restoration Group |
| Te Puia Waipounamu Aoteroa Charitable |
| Te Rere I Tiria Charitable Trust |
| Te Toru Farms Ltd |
| Totara Park Farms |
| Waimate North Landcare Group |
| Wekaweka Landcare Group |
| Whakaangi Landcare Trust |
| Whangaoreore Hakaraia Private Rd Committee |

7.7 Areas afforded some level of protection investment through the Biodiversity Condition and Advice Funds

A total of just over 2.5 million dollars has been allocated under the Biodiversity Condition and Advice Funds to projects in Northland to assist with the protection of biodiversity values. About half a million was allocated to advice projects, which supports the provision of information and advice to land managers to assist them in managing indigenous biodiversity. The Advice Fund funds projects that inspire landholders or groups to improve the condition of indigenous biodiversity (outside of public conservation lands) (Department of Conservation 2008).

The Biodiversity Condition Fund aims to improve and maintain the condition of areas of indigenous vegetation, species and habitats (including wetlands and water bodies). The Fund seeks to broaden community effort in the management of indigenous biodiversity, and to complement contributions for its enhancement. It will fund projects that enhance biodiversity outside public conservation lands, and particularly on areas under legal protection. Projects could involve, for example, fencing or pest control (Department of Conservation 2008).

The number of projects, the total funds allocated, and the total area protected by the Condition Fund all vary greatly from one year to the next (Table 18). GIS data were point data only, not polygon. So no spatial comparison could be made with PNAs or NAES.

Table 18: Funds approved in various rounds for the Biodiversity Condition and Advice Funds. Data provided 10 December 2007.

| Funding Round | Advice ¹ | Condition ¹ | \$ Total | Area protected (Condition ²) | Cost/ha (Condition ²) |
|---------------|--------------------------|----------------------------|-----------------------|--|-----------------------------------|
| 2 | 150,000.00 (2) | 414,425.00 (10) | 564,425.00 | 9,952 ³ | 41.64 |
| 3 | 59,725.00 (2) | 296,562.40 (14) | 356,287.40 | 17,465 | 16.98 |
| 4 | | 291,916.00 (20) | 291,916.00 | 30,358 | 9.62 |
| 5 | 103,000.00 (2) | 265,973.13 (14) | 368,973.13 | 9,502 | 27.99 |
| 6 | 13,732.00 (3) | 122,124.00 (13) | 135,856.00 | 1,222 | 99.94 |
| 7 | 6,373.00 (1) | 74,895.00 (4) | 81,268.00 | 10,103 | 7.41 |
| 8 | 187,800.00 (2) | 327,319.00 (14) | 515,119.00 | 8,576 | 38.17 |
| 9 | 24,327.00 (2) | 199,292.00 (6) | 223,619.00 | 7,812 | 25.51 |
| Total | \$544,957.00 (14) | \$1,992,506.53 (95) | \$2,537,463.53 | 94,990 | \$20.98 |

¹Numbers in brackets are the number of projects funded.

²No area or cost/ha are provided for any of the Advice Fund projects.

³Area data was not available for all projects in Round 2.

Numerically, Northland Regional Council and Landcare Trust type organisations have been very successful in securing funds from this source (38 and 26 approved applications respectively) and Landcare Trust type organisations have both obtained the greatest total amount of funds and achieved the lowest cost per hectare over all Condition Fund projects (Table 19).

The GIS data relevant to this dataset is incomplete and inaccurate (e.g. no grid references and grid references out at sea) and it is therefore hard to draw accurate conclusions about the types of areas protected. The following are indicative trends only. Of the 37 projects with some location data:

- one includes Public Conservation land (Kiwi recovery in Whangarei Heads);
- three others involve QEII covenants (one of which is also a WDC covenant);
- eleven NAES are fully or partially protected;
- two projects are a CPCA project (Linton Road);
- one is a Fish and Game wetland (Jack Bisset Wetlands).

8. ECOLOGICAL FEATURES THAT OCCUR WITHIN PROTECTED AREAS

There is currently no consistent classification of ecological features within the protected areas. Different organisations use different descriptions and often the descriptions within an organisation are inconsistent. The only nationwide classification of vegetation cover that is relatively consistent across the entire country is the Land Cover Database vs 2 (LCDB2). Satellite imagery has been used to classify land use and landcover types and these have been spot checked on the ground to ensure consistency.

Table 19: Types of organisations that successfully applied for funds. Data provided 10 December 2007.

| Organisation | Number | | | Funds granted | | | Area (ha) (Condition ¹) | Cost/ha (Condition ¹) |
|-------------------------------------|-----------|-----------|------------|------------------|--------------------|--------------------|--|--------------------------------------|
| | Advice | Condition | Total | Advice | Condition | Total | | |
| Company | 0 | 3 | 3 | 0 | 42,500 | 42,500 | 2,037 | 20.86 |
| NZ Kiwi Foundation Charitable Trust | 1 | 3 | 4 | 22,800 | 233,500 | 256,300 | 20,823 | 11.21 |
| Landcare Trust or similar | 10 | 26 | 36 | 459,549 | 1,030,683 | 1,490,232 | 66,028 | 15.61 |
| Northland Regional Council | 1 | 38 | 39 | 50,000 | 327,372 | 377,372 | 974 | 336.11 |
| Private | 2 | 7 | 9 | 12,608 | 61,079 | 73,687 | 248 | 246.29 |
| QEII | 0 | 18 | 18 | 0 | 297,373 | 297,373 | 4,880 | 60.94 |
| Grand Total | 14 | 95 | 109 | \$544,957 | \$1,992,507 | \$2,537,464 | 94,990 | \$20.98 |

¹ No area or cost/ha are provided for any of the Advice Fund projects.

There are, however, still limitations with these data, as some types of landcover were difficult to distinguish from satellite imagery (e.g. wetlands, tussock vs rough pasture) and other landcover classes may have been misclassified (e.g. confusion between gorse and native scrub). LCDB2 also does not account for originally rare ecosystems or special ecosystem types of less than one hectare (e.g. limestone outcrops). Some of the outlying island groups have not been included in LCDB2, including the Mokohinau and Kermadec groups in the Northland Region. Nevertheless, this is currently the most consistent vegetation classification available.

This report cannot determine whether vegetation that was included as a NAES still exists. It may well be that the indigenous vegetation cover in some NAES has been completely removed since it was reported in a PNAP report. In that case LCDB2 will report the vegetation type as what it was when the satellite image was taken.

Classification of ecological features within the QEII database does include some of these rarer ecotypes (as per Williams *et al.* 2007) and is broadly internally consistent within the organisation.

8.1 Types of habitats protected as classified by LCDB2

The New Zealand Land Cover Database (LCDB) is a Crown database that translates satellite images of New Zealand into information on the different types of land cover that exist on the ground. The areas are mapped with a minimum size of 1 ha. This information can be used, over time, to monitor and report on the changes to the state of our environment and provide the basis for better resource management decisions, more efficient use of natural resources and improved environmental management. LCDB2 was used in the analysis and has 61 classes. Not all of the landcover is indigenous; Table 20 outlines which landcover classes are found within the Northland Region and which of these are considered to be mostly or generally indigenous in nature.

Table 20: List of indigenous and non-indigenous land use and landcover classifications used in the Landcover Database (LCDB2). Data provided 24 January 2008.

| Not Indigenous | Indigenous |
|-------------------------------------|-------------------------------------|
| Afforestation (imaged, post LCDB 1) | Alpine gravel and rock |
| Afforestation (not imaged) | Broadleaved indigenous hardwoods |
| Built-up area | Coastal sand and gravel |
| Deciduous hardwoods | Estuarine open water |
| Dump | Fernland |
| Forest harvested | Flaxland |
| Gorse and broom | Grey scrub |
| High producing exotic grassland | Herbaceous freshwater vegetation |
| Low producing grassland | Herbaceous saline vegetation |
| Major shelterbelts | Indigenous forest |
| Mixed exotic shrubland | Lake and pond |
| Orchard and other perennial crops | Landslide |
| Other exotic forest | Mangrove |
| Pine forest - closed canopy | Manuka and or kanuka |
| Pine forest - open canopy | River |
| Short-rotation cropland | River and lakeshore gravel and rock |
| Surface mine | |

| Not Indigenous | Indigenous |
|---------------------------|------------|
| Transport infrastructure | |
| Urban parkland/open space | |
| Vineyard | |

Over the entire Northland Region, 11.9% of the area (including estuarine areas) is a PNA, a further 5.8% is legally protected but not a PNA (legislative mandate is not protection of natural values) or is being looked after by community or Landcare Groups (Table 21a). This leaves 82% of Northland Region without any form of protection, or care. There is still considerable scope for protection of natural values as nearly 37% of Northland Region is still covered in indigenous vegetation.

Eleven ecological districts have less than 10% of their total area covered in PNAs; Otamatea (0.7%), Tokatoka (1.3%), Hokianga (3.1%), Whangarei (3.3%), Kaikohe (3.6%), Rodney (4.2%), Kerikeri (6.1%), Tangihua (6.4%), Pouto (7.1%), Aupouri (7.6%), and Waipu (9.1%) (Table 21a). Other EDs are nearly completely protected (Poor Knights, Three Kings, Manaia, Taranga). There is only a slight, non-significant, correlation between the size of the ecological district and the percentage area covered in PNAs or the percentage of indigenous landcover remaining.

Generally the PNAs within EDs only include a small percentage of Acutely Threatened (1.7% over total region) and Chronically Threatened (4.2% over total region) LENZ categories. This information can be found in Table 21b under “Native vegetation in PNA”, which lists the the amount or percentage of the Acutely Threatened (13.8% over total region) or Chronically Threatened (16.4% over total region) indigenous landcover protected by the PNA network within each ecological district. In many cases there still are significant areas with predominantly native vegetation that could be protected. The focus for protection should be those ecological districts where there still is some unprotected native vegetation in the Acutely or Chronically Threatened LENZ categories. Other reserves, those that are not legislated to protect natural values and areas managed by community and care groups, are listed in Table 21c.

The categories of native vegetation that require urgent protection are Alpine Gravel and Rock (0.0% protected), Depleted Tussock Grassland (0.0% protected), and Estuarine Open Water (2% protected) and fernland (10% protected) (Tables 22a, 22b, 22c). Many other vegetation categories also warrant further protection. Some of the categories are likely to change over time, e.g. kanuka may colonise landslips, or grey scrub may succeed to taller forest. Table 22d provides a further breakdown by LENZ threat classes (i.e. the proportion that is Acutely or Chronically Threatened).

8.2 Types of habitats protected under QEII Trust covenants

The QEII National Trust uses a one line description to summarise the values in each covenant. This description has been analysed for each of the covenants that falls within the Northland Region (Tables 23 & 24). One covenant can contain multiple habitats but only the two largest or most significant (from the way the QEII covenant description is structured) were used in this analysis. This type of analysis will give some indication as to the range of habitats found within NRC territory, but may not accurately reflect the proportions of those habitats within the area, or the proportions of those habitats protected by other mechanisms.

Ninety-five percent of QEII covenants (by number or area) are predominantly coastal, semi-coastal, or lowland forest, scrub or shrubland. All other categories, by number or area, are generally represented in less than 5% of QEII covenants. The features or habitats that are not well represented in QEII covenants include:

- Archaeological site or remnants
- Artificial wetland
- Coastal dune or sand habitat
- Coastal primary forest
- Coastal revegetated area
- Coastal salt influenced wetland
- Coastal scrub or shrub forest
- Coastal secondary forest
- Coastal wetland (not salt influenced)
- Geological feature
- Lowland flaxland
- Lowland revegetated area
- Lowland scrub or shrub forest
- Lowland secondary forest
- Lowland wetland
- Semi-coastal scrub or shrub forest
- Semi-coastal secondary forest
- Semi-coastal wetland

Table 21a: Proportion of ecological district currently protected¹, partially protected² or not protected at all, and amount of native vegetation remaining. Data provided 15 April 2008.

| Ecological District | ED Area (ha) | ED in PNA ¹ | % of ED in PNA ¹ | ED in non-PNA ² | % of ED in non-PNA ² | ED in not protected | % of ED not protected | All Threat Categories | |
|---------------------|--------------------|------------------------|-----------------------------|----------------------------|---------------------------------|---------------------|-----------------------|---|---------------|
| | | | | | | | | Remaining Native Vegetation in ED (ha, %) | |
| Ahipara | 32,271.5 | 15,607.7 | 48.36% | 2,670.6 | 8.28% | 13,993.2 | 43.36% | 26,107.5 | 80.90% |
| Aupouri | 119,817.5 | 9,093.1 | 7.59% | 2,645.3 | 2.21% | 108,079.2 | 90.20% | 41,340.0 | 34.50% |
| Hokianga | 88,199.5 | 2,709.1 | 3.07% | 700.8 | 0.79% | 84,789.7 | 96.13% | 36,342.7 | 41.21% |
| Kaikohē | 67,261.3 | 2,451.2 | 3.64% | 7,676.7 | 11.41% | 57,133.4 | 84.94% | 18,626.1 | 27.69% |
| Kerikeri | 67,349.5 | 4,109.6 | 6.10% | 18,362.8 | 27.26% | 44,877.1 | 66.63% | 18,519.6 | 27.50% |
| Kermadec | - | - | - | - | - | - | - | - | - |
| Manaia | 6,356.6 | 1,157.8 | 18.21% | 5,160.7 | 81.19% | 38.1 | 0.60% | 2,648.6 | 41.67% |
| Maungataniwha | 98,407.0 | 15,945.9 | 16.20% | 549.4 | 0.56% | 81,911.7 | 83.24% | 43,786.1 | 44.49% |
| Mokohinau | - | - | - | - | - | - | - | - | - |
| Otamatea | 57,953.3 | 414.2 | 0.71% | 4.8 | 0.01% | 57,534.2 | 99.28% | 17,410.2 | 30.04% |
| Poor Knights | 308.0 | 286.8 | 93.13% | | 0.00% | 21.1 | 6.87% | 307.3 | 99.78% |
| Pouto | 92,913.4 | 6,557.5 | 7.06% | 11.8 | 0.01% | 86,344.0 | 92.93% | 16,059.0 | 17.28% |
| Puketi | 24,516.1 | 15,050.3 | 61.39% | 233.0 | 0.95% | 9,232.8 | 37.66% | 19,391.2 | 79.10% |
| Rodney | 20,578.8 | 866.4 | 4.21% | 8.9 | 0.04% | 19,703.4 | 95.75% | 4,826.0 | 23.45% |
| Tangihua | 167,024.4 | 10,631.0 | 6.36% | 2,392.9 | 1.43% | 154,000.5 | 92.20% | 40,986.2 | 24.54% |
| Taranga | 989.8 | 984.2 | 99.44% | | 0.00% | 5.6 | 0.56% | 989.8 | 100.00% |
| Te Paki | 31,134.7 | 5,632.0 | 18.09% | 20,531.1 | 65.94% | 4,971.6 | 15.97% | 22,877.3 | 73.48% |
| Three Kings | 523.2 | 497.0 | 94.99% | | 0.00% | 26.2 | 5.01% | 523.2 | 100.00% |
| Tokatoka | 74,669.4 | 935.4 | 1.25% | 31.1 | 0.04% | 73,702.9 | 98.71% | 9,326.0 | 12.49% |
| Tutamoe | 81,690.5 | 33,206.3 | 40.65% | 1,574.0 | 1.93% | 46,910.3 | 57.42% | 49,578.9 | 60.69% |
| Waipu | 50,072.1 | 4,577.7 | 9.14% | 212.0 | 0.42% | 45,282.4 | 90.43% | 15,099.3 | 30.16% |
| Whangarei | 76,950.6 | 2,521.6 | 3.28% | 2,249.0 | 2.92% | 72,180.0 | 93.80% | 17,518.6 | 22.77% |
| Whangaroa | 31,944.2 | 3,724.0 | 11.66% | 3,063.6 | 9.59% | 25,156.6 | 78.75% | 15,470.6 | 48.43% |
| Whangaruru | 120,437.6 | 19,497.0 | 16.19% | 8,508.4 | 7.06% | 92,432.1 | 76.75% | 64,376.1 | 53.45% |
| Grand Total | 1,311,369.0 | 156,456.1 | 11.93% | 76,586.9 | 5.84% | 1,078,326.1 | 82.23% | 482,110.3 | 36.76% |

1 Protected Natural Areas (PNA) includes Conservation Area, Conservation Park, Ecological Area, Fish and Game, Government Purpose Reserve under Reserves Act (Wildlife), Marginal Strip, Nature Reserve, Nga Whenua Rahui, Protected Private Land under Reserves Act, QEII, Sanctuary, Scenic Reserve, Scientific Reserve, Seabed, Stewardship Land under Conservation Act, WDC covenant, Wildlife Management Reserve, and Wildlife Refuge.

2 Reserves and community care areas, that are not PNA. They include Government Purpose Reserve under Reserves Act, Historic Reserve, Historical Area, Landcare Group, Local Purpose Reserve under Reserves Act (including esplanade and streams), NAES, Recreation Reserve, and Waitangi Endowment Act Forest under Waitangi Endowment Act.

Table 21b: Proportion of ecological district currently protected by PNA, with special attention to Acutely and Chronically Threatened LENZ categories. Data provided 15 April 2008.

| Ecological District | All Threat Categories | | Acutely Threatened | | | | Chronically Threatened | | | |
|---------------------|-----------------------------------|---------------|-----------------------------|--------------|---|---------------|------------------------|--------------|---|---------------|
| | Remaining Native Vegetation in ED | | Remaining Native Vegetation | | Native Acutely Threatened Veg in PNA ¹ | | Remaining Native Veg | | Native Chronically Threatened Veg in PNA ¹ | |
| | Area (ha) | % | ha | % | ha | % | ha | % | ha | % |
| Ahipara | 26,107.5 | 80.90% | 47.9 | 0.18% | 2.8 | 5.80% | 2,388.9 | 9.15% | 1,321.2 | 55.31% |
| Aupouri | 41,340.0 | 34.50% | 729.0 | 1.76% | 277.7 | 38.09% | 2,290.6 | 5.54% | 676.8 | 29.55% |
| Hokianga | 36,342.7 | 41.21% | 793.3 | 2.18% | 17.4 | 2.19% | 555.1 | 1.53% | 23.3 | 4.20% |
| Kaikohe | 18,626.1 | 27.69% | 775.0 | 4.16% | 105.5 | 13.62% | 2,327.6 | 12.50% | 47.0 | 2.02% |
| Kerikeri | 18,519.6 | 27.50% | 358.7 | 1.94% | 12.6 | 3.52% | 1,345.9 | 7.27% | 155.9 | 11.58% |
| Kermadec | - | - | - | - | - | - | - | - | - | - |
| Manaiā | 2,648.6 | 41.67% | 15.2 | 0.58% | 0.4 | 2.35% | 48.3 | 1.82% | 4.2 | 8.76% |
| Maungataniwha | 43,786.1 | 44.49% | 652.2 | 1.49% | 24.5 | 3.75% | 284.7 | 0.65% | 15.4 | 5.40% |
| Mokohinau | - | - | - | - | - | - | - | - | - | - |
| Otamatea | 17,410.2 | 30.04% | 68.3 | 0.39% | 0.2 | 0.31% | 1,814.7 | 10.42% | 42.8 | 2.36% |
| Poor Knights | 307.3 | 99.78% | - | 0.00% | - | - | 1.7 | 0.54% | 1.3 | 77.90% |
| Pouto | 16,059.0 | 17.28% | 1,142.2 | 7.11% | 179.7 | 15.73% | 953.8 | 5.94% | 110.4 | 11.58% |
| Puketī | 19,391.2 | 79.10% | 12.3 | 0.06% | 8.2 | 66.68% | 35.3 | 0.18% | 4.7 | 13.19% |
| Rodney | 4,826.0 | 23.45% | 166.1 | 3.44% | 3.7 | 2.23% | 398.3 | 8.25% | 20.2 | 5.06% |
| Tangihua | 40,986.2 | 24.54% | 1,389.9 | 3.39% | 16.6 | 1.19% | 1,698.5 | 4.14% | 131.0 | 7.71% |
| Taranga | 989.8 | 100.00% | - | 0.00% | - | - | 2.4 | 0.24% | 2.3 | 97.13% |
| Te Pākī | 22,877.3 | 73.48% | 0.2 | 0.00% | - | 0.00% | 227.5 | 0.99% | 154.2 | 67.76% |
| Three Kings | 523.2 | 100.00% | - | 0.00% | - | - | - | 0.00% | - | - |
| Tokatoka | 9,326.0 | 12.49% | 144.8 | 1.55% | 0.7 | 0.49% | 1,380.7 | 14.81% | 162.0 | 11.73% |
| Tutamoe | 49,578.9 | 60.69% | 232.5 | 0.47% | 27.4 | 11.76% | 225.6 | 0.45% | 70.3 | 31.16% |
| Waipu | 15,099.3 | 30.16% | 364.2 | 2.41% | 20.8 | 5.72% | 377.0 | 2.50% | 26.9 | 7.15% |
| Whangarei | 17,518.6 | 22.77% | 1,051.1 | 6.00% | 425.1 | 40.45% | 1,829.2 | 10.44% | 130.5 | 7.14% |
| Whangaroa | 15,470.6 | 48.43% | 122.0 | 0.79% | 0.0 | 0.04% | 28.5 | 0.18% | 3.1 | 10.88% |
| Whangaruru | 64,376.1 | 53.45% | 111.4 | 0.17% | 10.6 | 9.53% | 1,795.6 | 2.79% | 171.0 | 9.52% |
| GrandTotal | 482,110.3 | 36.76% | 8,176.4 | 1.70% | 1,133.9 | 13.87% | 20,009.7 | 4.15% | 3,274.5 | 16.36% |

¹ Protected Natural Areas (PNA) includes Conservation Area, Conservation Park, Ecological Area, Fish and Game, Government Purpose Reserve under Reserves Act (Wildlife), Marginal Strip, Nature Reserve, Nga Whenua Rahui, Protected Private Land under Reserves Act, QEII, Sanctuary, Scenic Reserve, Scientific Reserve, Seabed, Stewardship Land under Conservation Act, WDC covenant, Wildlife Management Reserve, and Wildlife Refuge.

This does **not** include Government Purpose Reserve under Reserves Act, Historic Reserve, Historical Area, Landcare or Community Groups, Local Purpose Reserve under Reserves Act (including esplanade and streams), NAES, Recreation Reserve, and Waitangi Endowment Act Forest under Waitangi Endowment Act.

Table 21c: Proportion of other protected areas in Northland Region for which legislative mandate is not protection of natural values, by ecological district, and with special attention to Acutely and Chronically Threatened LENZ categories. Data provided 15 April 2008.

| Ecological District | All Threat Categories | | Acutely Threatened | | | | Chronically Threatened | | | |
|---------------------|-----------------------------------|---------------|-----------------------------|--------------|---|--------------|------------------------|--------------|---|--------------|
| | Remaining Native Vegetation in ED | | Remaining Native Vegetation | | Native Acutely Threatened Veg in Non-PNA ² | | Remaining Native Veg. | | Native Chronically Threatened Veg in Non-PNA ² | |
| | Area (ha) | % | ha | % | ha | % | ha | % | ha | % |
| Ahipara | 26,107.5 | 80.90% | 47.9 | 0.18% | 2.6 | 5.33% | 2,388.9 | 9.15% | 278.6 | 11.66% |
| Aupouri | 41,340.0 | 34.50% | 729.0 | 1.76% | 0.0 | 0.00% | 2,290.6 | 5.54% | 1.7 | 0.07% |
| Hokianga | 36,342.7 | 41.21% | 793.3 | 2.18% | 0.0 | 0.00% | 555.1 | 1.53% | 2.1 | 0.38% |
| Kaikohe | 18,626.1 | 27.69% | 775.0 | 4.16% | | 0.00% | 2,327.6 | 12.50% | 322.4 | 13.85% |
| Kerikeri | 18,519.6 | 27.50% | 358.7 | 1.94% | 77.2 | 21.52% | 1,345.9 | 7.27% | 308.1 | 22.89% |
| Kermadec | - | - | | | | | | | | |
| Manaia | 2,648.6 | 41.67% | 15.2 | 0.58% | 14.9 | 97.54% | 48.3 | 1.82% | 42.5 | 87.89% |
| Maungataniwha | 43,786.1 | 44.49% | 652.2 | 1.49% | 13.1 | 2.01% | 284.7 | 0.65% | 0.1 | 0.04% |
| Mokohinau | - | - | | | | | | | | |
| Otamatea | 17,410.2 | 30.04% | 68.3 | 0.39% | | 0.00% | 1,814.7 | 10.42% | 0.0 | 0.00% |
| Poor Knights | 307.3 | 99.78% | | 0.00% | | | 1.7 | 0.54% | | 0.00% |
| Pouto | 16,059.0 | 17.28% | 1,142.2 | 7.11% | | 0.00% | 953.8 | 5.94% | | 0.00% |
| Puketi | 19,391.2 | 79.10% | 12.3 | 0.06% | 0.3 | 2.58% | 35.3 | 0.18% | 0.2 | 0.61% |
| Rodney | 4,826.0 | 23.45% | 166.1 | 3.44% | 0.0 | 0.00% | 398.3 | 8.25% | 1.0 | 0.25% |
| Tangihua | 40,986.2 | 24.54% | 1,389.9 | 3.39% | 28.9 | 2.08% | 1,698.5 | 4.14% | 57.8 | 3.40% |
| Taranga | 989.8 | 100.00% | | 0.00% | | | 2.4 | 0.24% | | 0.00% |
| Te Pahi | 22,877.3 | 73.48% | 0.2 | 0.00% | 0.2 | 100.00% | 227.5 | 0.99% | 22.1 | 9.71% |
| Three Kings | 523.2 | 100.00% | | 0.00% | | | | 0.00% | | |
| Tokatoka | 9,326.0 | 12.49% | 144.8 | 1.55% | 0.0 | 0.00% | 1,380.7 | 14.81% | | 0.00% |
| Tutamoe | 49,578.9 | 60.69% | 232.5 | 0.47% | 14.6 | 6.30% | 225.6 | 0.45% | | 0.00% |
| Waipu | 15,099.3 | 30.16% | 364.2 | 2.41% | 2.5 | 0.67% | 377.0 | 2.50% | 0.3 | 0.07% |
| Whangarei | 17,518.6 | 22.77% | 1,051.1 | 6.00% | 136.6 | 13.00% | 1,829.2 | 10.44% | 25.8 | 1.41% |
| Whangaroa | 15,470.6 | 48.43% | 122.0 | 0.79% | 0.3 | 0.28% | 28.5 | 0.18% | | 0.00% |
| Whangaruru | 64,376.1 | 53.45% | 111.4 | 0.17% | 18.5 | 16.65% | 1,795.6 | 2.79% | 94.4 | 5.26% |
| GrandTotal | 482,110.3 | 36.76% | 8,176.4 | 1.70% | 309.8 | 3.79% | 20,009.7 | 4.15% | 1,157.1 | 5.78% |

Table 22a: LCDB2 native landcover or land-use types in Protected Natural Areas¹ in each ecological district. Data provided 15 April 2008.

| Ecological District | Alpine Gravel and Rock | Broadleaved Indigenous Hardwoods | Coastal Sand and Gravel | Depleted Tussock Grassland | Estuarine Open Water | Fernland | Flaxland | Grey Scrub | Herbaceous Freshwater Vegetation | Herbaceous Saline Vegetation | Indigenous Forest | Lake and Pond | Landslide | Mangrove | Manuka and or Kanuka | River | River and Lakeshore Gravel and Rock | Seabed | Native Total | Not native Total | Grand Total |
|-------------------------------|------------------------|----------------------------------|-------------------------|----------------------------|----------------------|-------------|--------------|--------------|----------------------------------|------------------------------|-------------------|---------------|--------------|--------------|----------------------|-------------|-------------------------------------|-------------|------------------|------------------|------------------|
| Protected Natural Area | | | | | | | | | | | | | | | | | | | | | |
| Ahipara | | 60.6 | 1,094.2 | | | | | 1.8 | | | 11,951.4 | | | | 2,080.1 | 4.3 | | | 15,192.5 | 415.2 | 15,607.7 |
| Aupouri | | 159.2 | 1,133.5 | | 31.1 | | | | 683.3 | 52.0 | 219.8 | 204.3 | | 75.8 | 4,551.5 | 6.9 | | | 7,117.4 | 1,975.7 | 9,093.1 |
| Hokianga | | 3.8 | 301.7 | | 1.0 | | | | | 16.0 | 1,264.7 | | | 129.5 | 707.9 | 2.6 | | | 2,427.2 | 282.0 | 2,709.1 |
| Kaikohu | | 58.1 | | | | | | | 123.3 | | 1,714.6 | 5.6 | | | 354.5 | | | | 2,256.0 | 195.2 | 2,451.2 |
| Kerikeri | | 354.8 | 6.4 | | 0.0 | 3.9 | | | 12.9 | 1.8 | 2,025.1 | 17.6 | | 21.0 | 1,130.0 | | | | 3,573.4 | 536.2 | 4,109.6 |
| Manaiā | | 74.9 | 9.8 | | | | | | | 0.0 | 644.0 | | | 0.5 | 286.9 | | | | 1,016.1 | 141.7 | 1,157.8 |
| Maungataniwha | | 224.0 | 1.6 | | 2.3 | | | | 7.2 | 1.5 | 14,871.2 | | | 3.1 | 562.9 | 0.1 | | | 15,673.8 | 272.1 | 15,945.9 |
| Otamatea | | 48.0 | 0.2 | | 10.7 | | | | | 0.3 | 193.3 | 12.2 | | 20.0 | 41.3 | | 0.2 | | 326.1 | 88.1 | 414.2 |
| Poor Knights | | | 34.8 | | | | | | | | 251.3 | | | | | | | | 286.2 | 0.7 | 286.8 |
| Pouā | | 81.2 | 2,056.6 | | 13.4 | | 5.1 | 49.0 | 104.7 | 218.6 | 64.6 | 200.6 | | 159.5 | 2,225.9 | 1.1 | | | 5,180.2 | 1,377.3 | 6,557.5 |
| Puketī | | 18.8 | | | | | | | | | 14,448.3 | | | | 264.8 | 0.6 | | | 14,732.4 | 317.9 | 15,050.3 |
| Rodney | | 40.9 | 237.0 | | 0.5 | | | 0.3 | 1.0 | 2.2 | 445.6 | 3.5 | | 1.8 | 82.5 | 0.2 | | | 815.6 | 50.9 | 866.4 |
| Tangihua | | 160.0 | | | | | | | 37.8 | | 9,440.9 | 1.0 | 0.3 | | 343.0 | 3.5 | | | 9,986.4 | 644.6 | 10,631.0 |
| Taranga | | 20.7 | 8.4 | | | | | | | | 841.8 | | 1.0 | | 112.3 | | | | 984.2 | | 984.2 |
| Te Pākī | | 176.4 | 500.0 | | 2.3 | | | | 98.2 | 7.2 | 159.7 | 6.3 | 0.7 | 3.0 | 4,467.7 | 1.6 | | | 5,423.1 | 208.9 | 5,632.0 |
| Three Kings | | 186.4 | 134.7 | | | | | | | | 175.3 | | | | 0.7 | | | | 497.0 | | 497.0 |
| Tokatoka | | 4.6 | | | | | | | 87.9 | | 560.7 | 0.1 | | | 66.3 | 0.4 | | | 720.1 | 215.4 | 935.4 |
| Tutamoe | | 267.6 | 63.4 | | | | | 85.1 | 20.0 | | 30,071.1 | 8.4 | | | 1,294.7 | 0.1 | | | 31,810.5 | 1,395.7 | 33,206.3 |
| Waipu | | 40.1 | 170.8 | | 9.2 | | | | 0.6 | 9.9 | 3,393.6 | 2.9 | | 3.0 | 464.2 | 0.9 | | | 4,095.2 | 482.4 | 4,577.7 |
| Whangarei | | 35.8 | | | | | 26.8 | | 39.3 | 24.1 | 1,453.8 | 10.4 | | 4.9 | 420.2 | 3.2 | | | 2,018.5 | 503.1 | 2,521.6 |
| Whangaroa | | 11.4 | 1.3 | | | | | 4.9 | | 0.2 | 2,027.7 | | | 4.4 | 1,539.0 | | | | 3,588.9 | 135.1 | 3,724.0 |
| Whangaruru | | 377.6 | 269.4 | | 0.4 | 1.6 | | 0.5 | 13.2 | 8.4 | 13,509.4 | 3.9 | 1.3 | 100.5 | 4,134.1 | | | | 18,420.2 | 1,076.8 | 19,497.0 |
| Total | | 2,404.7 | 6,023.6 | | 70.9 | 5.5 | 31.8 | 141.7 | 1,229.4 | 342.3 | 109,728.1 | 476.6 | 3.2 | 526.7 | 25,130.5 | 25.7 | 0.2 | | 146,141.1 | 10,315.0 | 156,456.1 |
| % of NR | 0.0% | 13.4% | 36.3% | 0.0% | 0.2% | 9.6% | 18.9% | 41.1% | 17.6% | 11.1% | 42.8% | 11.4% | 20.3% | 3.3% | 21.3% | 1.3% | 0.7% | 0.0% | 30.3% | 1.2% | 11.9% |

¹ Protected Natural Areas includes all those noted for Table 21.

Table 22b: LCDB2 native landcover or land-use types 'protected' by non-PNA reserves or community care groups in each ecological district. Data provided 15 April 2008.

| Ecological District | Alpine Gravel and Rock | Broadleaved Indigenous Hardwoods | Coastal Sand and Gravel | Depleted Tussock Grassland | Estuarine Open Water | Fernland | Flaxland | Grey Scrub | Herbaceous Freshwater Vegetation | Herbaceous Saline Vegetation | Indigenous Forest | Lake and Pond | Landslide | Mangrove | Manuka and or Kanuka | River | River and Lakeshore Gravel and Rock | Seabed | Native Total | Not native Total | Grand Total |
|---|------------------------|----------------------------------|-------------------------|----------------------------|----------------------|-------------|--------------|-------------|----------------------------------|------------------------------|-------------------|---------------|-------------|----------------|----------------------|-------------|-------------------------------------|---------------|-----------------|------------------|-----------------|
| Legal protection, but not natural values mandate, and community care groups. | | | | | | | | | | | | | | | | | | | | | |
| Ahipara | | 26.7 | 7.4 | | | | | | | 0.0 | 1,136.9 | | | | 491.9 | | | | 1,662.9 | 1,007.7 | 2,670.6 |
| Aupouri | | 2.9 | 1,811.8 | | 3.4 | | | | 91.8 | 3.9 | 36.6 | 55.6 | | 7.1 | 419.9 | 1.8 | 9.1 | | 2,443.9 | 201.3 | 2,645.3 |
| Hokianga | | | 13.0 | | 0.9 | | | | | 0.0 | 50.4 | | | 51.1 | 214.6 | | | 1.5 | 331.6 | 369.2 | 700.8 |
| Kaikohu | | 288.2 | | | | | | | 3.3 | | 1,184.0 | 0.9 | | | 328.8 | | | | 1,805.1 | 5,871.6 | 7,676.7 |
| Kerikeri | | 458.1 | 260.9 | | 65.5 | | | | 116.7 | 3.0 | 1,918.3 | 18.1 | 0.0 | 42.2 | 1,811.3 | | 2.0 | 1.4 | 4,697.5 | 13,665.3 | 18,362.8 |
| Manaiā | | 89.1 | 198.4 | | | | | | 14.9 | 2.9 | 496.0 | 8.0 | | 0.5 | 794.6 | | | | 1,604.5 | 3,556.3 | 5,160.7 |
| Maungataniwha | | 3.5 | 5.3 | | 7.3 | 0.5 | | | | | 205.6 | | | 4.9 | 21.6 | | | | 248.6 | 300.8 | 549.4 |
| Otamatea | | | | | 0.0 | | | | | | | | | | | | | | 0.0 | 4.8 | 4.8 |
| Pouā | | | 5.4 | | | | | | | | | | | 0.7 | 3.3 | | | | 9.4 | 2.4 | 11.8 |
| Puketī | | | | | | | | | | | 96.3 | | | | 2.8 | | | | 99.1 | 133.9 | 233.0 |
| Rodney | | 0.2 | | | | | | | | | 4.5 | | | | | | | | 4.7 | 4.2 | 8.9 |
| Tangihua | | 4.8 | | | | | | | 51.8 | | 223.2 | | | | 18.2 | 0.0 | | | 298.0 | 2,094.9 | 2,392.9 |
| Te Pākī | | 337.1 | 1,300.3 | | 25.7 | | 38.1 | | 733.2 | 28.0 | 836.1 | 67.9 | 1.5 | 5.4 | 11,184.3 | | 3.6 | | 14,561.2 | 5,969.9 | 20,531.1 |
| Tokatoka | | | | | | | | | | | 4.9 | | | | | 0.0 | | | 4.9 | 26.2 | 31.1 |
| Tutamoe | | 95.4 | 3.6 | | | | | | | | 730.4 | | | | 30.7 | | | | 860.0 | 714.1 | 1,574.0 |
| Waipu | | 1.0 | 42.8 | | 1.6 | | | | | 0.6 | | | | 53.6 | | | | | 99.7 | 112.3 | 212.0 |
| Whangarei | | 0.9 | 45.2 | | 461.5 | | | | 19.7 | 16.3 | 4.9 | 6.1 | | 1,544.9 | 8.0 | 0.2 | | | 2,107.6 | 141.4 | 2,249.0 |
| Whangaroa | | 273.9 | 31.9 | | 0.8 | | | 26.0 | | 1.3 | 403.7 | | | 0.9 | 949.7 | | | | 1,688.2 | 1,375.4 | 3,063.6 |
| Whangaruru | | 197.6 | 112.8 | | 48.6 | | | | 19.9 | 36.7 | 1,578.3 | 1.4 | | 157.3 | 2,401.8 | | | | 4,554.3 | 3,954.1 | 8,508.4 |
| Total | 0.0 | 1,779.3 | 3,838.7 | | 615.3 | 0.5 | 38.1 | 26.0 | 1,051.3 | 92.8 | 8,910.1 | 158.0 | 1.5 | 1,868.6 | 18,681.5 | 1.9 | 14.6 | 2.9 | 37,081.1 | 39,505.8 | 76,586.9 |
| % | 0.0% | 9.9% | 23.2% | 0.0% | 1.5% | 0.9% | 22.6% | 7.6% | 15.0% | 3.0% | 3.5% | 3.8% | 9.1% | 11.8% | 15.8% | 0.1% | 43.7% | 100.0% | 7.7% | 4.8% | 5.8% |

Table 22c: LCDB2 native landcover or land-use types currently not afforded any protection in each ecological district and total of each landcover type within Northland Region. Data provided 15 April 2008.

| Ecological District | Alpine Gravel and Rock | Broadleaved Indigenous Hardwoods | Coastal Sand and Gravel | Depleted Tussock Grassland | Estuarine Open Water | Fernland | Flaxland | Grey Scrub | Herbaceous Freshwater Vegetation | Herbaceous Saline Vegetation | Indigenous Forest | Lake and Pond | Landslide | Mangrove | Manuka and or Kanuka | River | River and Lakeshore Gravel and Rock | Seabed | Native Total | Not native Total | Grand Total |
|--|------------------------|----------------------------------|-------------------------|----------------------------|----------------------|--------------|--------------|--------------|----------------------------------|------------------------------|-------------------|----------------|--------------|-----------------|----------------------|----------------|-------------------------------------|-------------|------------------|------------------|--------------------|
| Not protected | | | | | | | | | | | | | | | | | | | | | |
| Ahipara | | 221.4 | 446.9 | | 7.0 | 21.2 | | | 19.7 | 18.8 | 5,349.8 | 11.2 | 1.5 | 7.7 | 3,143.4 | 3.6 | | | 9,252.2 | 4,741.0 | 13,993.2 |
| Aupouri | | 437.4 | 2,995.5 | | 13,168.0 | 3.4 | | | 1,958.6 | 876.8 | 634.9 | 534.6 | 1.2 | 4,132.2 | 6,934.1 | 101.3 | 0.5 | | 31,778.7 | 76,300.5 | 108,079.2 |
| Hokianga | | 855.2 | 555.0 | | 8,243.6 | 18.0 | 4.6 | | 239.0 | 717.0 | 9,560.9 | 10.8 | | 2,826.3 | 10,464.2 | 89.5 | | | 33,584.0 | 51,205.7 | 84,789.7 |
| Kaikohu | | 713.2 | 1.0 | | 45.4 | | 4.5 | | 330.8 | | 7,627.8 | 1,397.5 | | 121.2 | 4,274.5 | 45.7 | 3.4 | | 14,565.0 | 42,568.4 | 57,133.4 |
| Kerikeri | | 579.8 | 33.7 | | 206.8 | 0.0 | | | 257.6 | 24.9 | 4,403.9 | 230.0 | 2.9 | 410.7 | 4,061.0 | 37.5 | | | 10,248.7 | 34,628.4 | 44,877.1 |
| Manaia | | 0.8 | 3.2 | | | | | | | 0.0 | 9.5 | | | | 14.4 | | | | 28.0 | 10.1 | 38.1 |
| Maungataniwha | | 2,014.7 | 33.3 | | 716.0 | | | 20.3 | 19.3 | 108.0 | 14,383.2 | 8.0 | 1.1 | 396.3 | 10,142.0 | 21.3 | | | 27,863.7 | 54,048.0 | 81,911.7 |
| Otamatea | | 537.1 | 106.3 | | 10,183.5 | | | | 16.1 | 5.8 | 3,228.8 | 58.2 | | 1,847.8 | 1,077.2 | 15.7 | 7.7 | | 17,084.1 | 40,450.2 | 57,534.2 |
| Poor Knights | | | 15.9 | | | | | | | | 5.3 | | | | | | | | 21.1 | | 21.1 |
| Pouto | | 342.2 | 1,490.8 | | 2,326.3 | 2.5 | 82.6 | 103.7 | 421.1 | 440.2 | 518.8 | 762.6 | | 647.2 | 2,754.4 | 973.0 | 4.0 | | 10,869.4 | 75,474.6 | 86,344.0 |
| Puketapu | | 184.4 | | | | | 2.0 | | 5.2 | | 3,736.3 | 0.7 | | | 626.4 | 4.6 | | | 4,559.6 | 4,673.1 | 9,232.8 |
| Rodney | | 794.3 | 35.5 | | 51.2 | | | 5.4 | 7.1 | 72.7 | 2,546.2 | 35.3 | | 83.1 | 367.1 | 7.2 | 0.7 | | 4,005.7 | 15,697.7 | 19,703.4 |
| Tangihua | | 1,759.5 | | | | | 1.1 | | 630.5 | | 21,524.4 | 98.3 | 0.7 | | 6,425.3 | 261.9 | | | 30,701.8 | 123,298.7 | 154,000.5 |
| Taranga | | 0.1 | 0.8 | | | | | | | | 2.4 | | | | 2.3 | | | | 5.6 | | 5.6 |
| Te Pahi | | 32.7 | 177.7 | | 46.8 | | 0.2 | | 39.0 | 49.7 | 31.6 | 0.0 | | 29.3 | 2,486.1 | | | | 2,893.0 | 2,078.6 | 4,971.6 |
| Three Kings | | 1.7 | 23.1 | | | | | | | | 1.4 | | | | | | | | 26.2 | | 26.2 |
| Tokatapu | | 1,351.3 | | | 1.6 | 3.3 | 0.4 | | 309.4 | | 5,861.3 | 119.6 | | | 824.4 | 129.6 | | | 8,601.0 | 65,101.9 | 73,702.9 |
| Tutamoe | | 1,125.4 | 127.0 | | | | | 13.0 | 81.9 | | 13,524.1 | 7.1 | | | 1,988.6 | 41.3 | | | 16,908.4 | 30,001.9 | 46,910.3 |
| Waipoua | 0.2 | 643.6 | 87.6 | | 114.0 | | 1.5 | | 5.2 | 12.8 | 8,041.3 | 44.5 | | 27.7 | 1,846.2 | 79.6 | | | 10,904.4 | 34,378.1 | 45,282.4 |
| Whangarei | | 558.0 | 5.7 | | 3,056.2 | | 1.5 | | 270.8 | 23.3 | 7,528.4 | 173.1 | | 565.0 | 1,115.9 | 94.5 | | | 13,392.5 | 58,787.5 | 72,180.0 |
| Whangaroa | | 576.9 | 157.0 | | 848.4 | | | 8.4 | 4.2 | 65.8 | 3,080.5 | 1.2 | 3.2 | 137.8 | 5,310.0 | | | | 10,193.5 | 14,963.1 | 25,156.6 |
| Whangaruru | | 1,058.6 | 417.0 | | 872.6 | 2.5 | | 25.9 | 99.8 | 222.9 | 26,186.5 | 56.9 | 0.6 | 2,146.3 | 10,302.0 | 0.8 | 2.3 | | 41,401.5 | 51,030.6 | 92,432.1 |
| Total | 0.2 | 13,788.4 | 6,713.0 | 6.8 | 39,887.5 | 51.0 | 98.4 | 176.7 | 4,715.4 | 2,638.6 | 137,787.2 | 3,549.6 | 11.2 | 13,378.5 | 74,159.4 | 1,907.3 | 18.6 | 0.0% | 298,888.1 | 779,437.9 | 1,078,326.1 |
| | 100.0% | 76.7% | 40.5% | 100.0% | 98.3% | 89.5% | 58.5% | 51.3% | 67.4% | 85.8% | 53.7% | 84.8% | 70.5% | 84.8% | 62.9% | 98.6% | 55.6% | 0.0% | 62.0% | 94.0% | 82.2% |
| Total for Entire Northland Region | 0.2 | 17,972.5 | 16,575.4 | 6.8 | 40,573.7 | 57.0 | 168.4 | 344.4 | 6,996.1 | 3,073.7 | 256,425.4 | 4,184.2 | 15.9 | 15,773.8 | 117,971.5 | 1,934.9 | 33.5 | 2.9 | 482,110.3 | 829,258.7 | 1,311,369.0 |

Table 22d: Area (ha) comprising Acutely or Chronically Threatened categories of LENZ for each LCDB2 native landcover or land-use class and summarised by ecological district. Data grouped by Protected Natural Areas, legally protected (but not for natural values) or cared for sites, and not protected sites. Data provided 15 April 2008.

| Ecological District | Alpine Gravel and Rock | Broadleaved Indigenous Hardwoods | Coastal Sand and Gravel | Depleted Tussock Grassland | Estuarine Open Water | Fermland | Flaxland | Grey Scrub | Herbaceous Freshwater Vegetation | Herbaceous Saline Vegetation | Indigenous Forest | Lake and Pond | Landslide | Mangrove | Manuka and or Kanuka | River | River and Lakeshore Gravel and Rock | Seabed | Native Total | Not Native Total | Grand Total |
|-------------------------------------|------------------------|----------------------------------|-------------------------|----------------------------|----------------------|-------------|--------------|--------------|----------------------------------|------------------------------|-------------------|---------------|--------------|--------------|----------------------|-------------|-------------------------------------|-------------|------------------|------------------|------------------|
| Protected Natural Area | | | | | | | | | | | | | | | | | | | | | |
| Acutely Threatened | | | | | | | | | | | | | | | | | | | | | |
| Ahipara | | | 66.5 | | | | | | 46.5 | 0.0 | 2.8 | 23.6 | | 0.2 | 131.2 | 3.1 | | | 2.8 | 0.1 | 2.9 |
| Aupouri | | | | | | | | | | | 6.5 | | | | | | | | 277.7 | 55.4 | 333.1 |
| Hokianga | | 0.0 | | | | | | | | | 13.6 | | | | 3.8 | | | | 17.4 | 25.0 | 42.4 |
| Kaikohe | | 0.4 | | | | | | | 79.6 | | 22.3 | 1.3 | | | 2.0 | | | | 105.5 | 35.4 | 141.0 |
| Kerikeri | | 4.2 | | | | | | | 1.9 | | 0.1 | | | | 6.4 | | | | 12.6 | 5.4 | 18.1 |
| Manaia | | 0.0 | | | | | | | | | 0.3 | | | | 0.1 | | | | 0.4 | 0.3 | 0.6 |
| Maungataniwha | | 0.8 | | | 0.2 | | | | 0.1 | | 17.9 | | | 0.0 | 5.4 | 0.1 | | | 24.5 | 26.9 | 51.3 |
| Otamatea | | | | | | | | | | | | | | | 0.2 | | | | 0.2 | 0.7 | 0.9 |
| Pouto | | 0.2 | 0.0 | | 0.2 | | | | 56.0 | 2.1 | 16.9 | | | 14.5 | 89.3 | 0.5 | | | 179.7 | 58.6 | 238.3 |
| Puketi | | | | | | | | | | | 8.2 | | | | | | | | 8.2 | 0.3 | 8.6 |
| Rodney | | | | | 0.2 | | | | 0.6 | 1.9 | 0.6 | | | 0.5 | | | | | 3.7 | 2.4 | 6.1 |
| Tangihua | | 0.1 | | | | | | | | | 14.4 | 0.0 | | | 0.3 | 1.8 | | | 16.6 | 62.0 | 78.6 |
| Tokatoka | | | | | | | | | 0.0 | | 0.4 | | | | | 0.3 | | | 0.7 | 5.3 | 6.0 |
| Tutamoe | | 0.3 | 0.1 | | | | | | 14.4 | | 11.7 | 0.4 | | | 0.5 | | | | 27.4 | 22.0 | 49.4 |
| Waipu | | | 7.5 | | 0.0 | | | | | | 7.6 | | | 2.6 | 2.7 | 0.4 | | | 20.8 | 19.1 | 39.9 |
| Whangarei | | 5.0 | | | | | 26.8 | | 26.5 | | 30.2 | 0.6 | | 0.6 | 335.3 | 0.1 | | | 425.1 | 69.1 | 494.2 |
| Whangaroa | | | | | | | | | | | | | | 0.0 | 0.0 | | | | 0.0 | 0.2 | 0.3 |
| Whangaruru | | 0.0 | 0.3 | | | | | | | | 5.8 | | | | 4.4 | | | | 10.6 | 30.0 | 40.6 |
| Acutely Threatened Total | | 11.0 | 74.4 | | 0.5 | | 26.8 | | 225.6 | 4.0 | 159.3 | 25.8 | | 18.5 | 581.8 | 6.3 | | | 1,133.9 | 418.2 | 1,552.2 |
| % | 0.0% | 0.1% | 0.4% | 0.0% | 0.0% | 0.0% | 15.9% | 0.0% | 3.2% | 0.1% | 0.1% | 0.6% | 0.0% | 0.1% | 0.5% | 0.3% | 0.0% | 0.0% | 0.2% | 0.1% | 0.1% |
| Protected Natural Area | | | | | | | | | | | | | | | | | | | | | |
| Chronically Threatened | | | | | | | | | | | | | | | | | | | | | |
| Ahipara | | 0.1 | 23.5 | | | | | | | | 309.0 | | | | 988.5 | | | | 1,321.2 | 97.1 | 1,418.3 |
| Aupouri | | 42.3 | 18.9 | | | | | | 52.5 | 1.2 | 1.0 | 9.1 | | 1.5 | 550.3 | | | | 676.8 | 240.4 | 917.2 |
| Hokianga | | | | 0.0 | | | | | | | 3.4 | | | 0.0 | 7.2 | | | | 23.3 | 30.3 | 53.6 |
| Kaikohe | | 6.9 | | | | | | | | | 37.3 | | | | 2.7 | | | | 47.0 | 24.7 | 71.7 |
| Kerikeri | | 31.7 | 0.3 | | | 3.9 | | | 4.5 | | 36.1 | 1.0 | | 9.6 | 68.8 | | | | 155.9 | 94.0 | 249.9 |
| Manaia | | | 2.2 | | | | | | | | 0.8 | | | | 1.3 | | | | 4.2 | 0.0 | 4.3 |
| Maungataniwha | | 1.2 | | | 0.1 | | | | 6.3 | 0.1 | 4.6 | | | 0.0 | 3.0 | | | | 15.4 | 10.5 | 25.9 |
| Otamatea | | 3.2 | | | 1.5 | | | | | | 23.9 | | | 1.8 | 12.3 | | | | 42.8 | 14.2 | 56.9 |
| Poor Knights | | | 1.0 | | | | | | | | 0.3 | | | | | | | | 1.3 | | 1.3 |
| Pouto | | 0.5 | | | 0.3 | | | | 3.7 | 0.5 | 22.6 | 2.5 | | 0.1 | 80.3 | | | | 110.4 | 40.6 | 151.0 |
| Puketi | | | | | | | | | | | 4.6 | | | | | 0.0 | | | 4.7 | 0.5 | 5.2 |
| Rodney | | 1.7 | 0.7 | | 0.3 | | | | 0.5 | 0.3 | 14.3 | | | 0.0 | 2.4 | | | | 20.2 | 12.9 | 33.1 |
| Tangihua | | 4.4 | | | | | | | 31.9 | | 72.7 | 0.6 | 0.0 | | 20.8 | 0.5 | | | 131.0 | 55.0 | 186.0 |
| Taranga | | | 1.0 | | | | | | | | | | | | 1.3 | | | | 2.3 | | 2.3 |
| Te Pahi | | | 16.9 | | | | | | | | | | | | 136.6 | | | | 154.2 | 1.6 | 155.8 |
| Tokatoka | | 1.6 | | | | | | | 80.5 | | 62.6 | 0.0 | | | 17.2 | | | | 162.0 | 136.0 | 298.0 |
| Tutamoe | | 2.3 | 11.9 | | | | | | 4.0 | | 40.4 | 0.4 | | | 11.4 | | | | 70.3 | 42.8 | 113.0 |
| Waipu | | 0.8 | 0.1 | | | | | | | | 23.3 | | | | 2.6 | 0.1 | | | 26.9 | 18.2 | 45.1 |
| Whangarei | | 1.3 | | | | | | | 10.5 | | 100.2 | 5.5 | | 0.6 | 10.4 | 2.1 | | | 130.5 | 118.3 | 248.9 |
| Whangaroa | | | | | | | | | | | 0.4 | | | | 2.7 | | | | 3.1 | 0.5 | 3.7 |
| Whangaruru | | 0.9 | 6.5 | | 0.0 | | | | 10.6 | 1.9 | 50.0 | 1.8 | | 6.1 | 93.3 | | | | 171.0 | 146.2 | 317.2 |
| Chronically Threatened Total | | 98.9 | 83.1 | | 2.2 | 3.9 | | | 204.8 | 16.6 | 807.6 | 20.9 | 0.7 | 19.7 | 2,013.4 | 2.7 | | | 3,274.5 | 1,083.9 | 4,358.4 |
| % | 0.0% | 0.6% | 0.5% | 0.0% | 0.0% | 6.8% | 0.0% | 0.0% | 2.9% | 0.5% | 0.3% | 0.5% | 4.3% | 0.1% | 1.7% | 0.1% | 0.0% | 0.0% | 0.7% | 0.1% | 0.3% |
| PNA Total | | 2,404.7 | 6,023.6 | | 70.9 | 5.5 | 31.8 | 141.7 | 1,229.4 | 342.3 | 109,728.1 | 476.6 | 3.2 | 526.7 | 25,130.5 | 25.7 | 0.2 | | 146,141.1 | 10,315.0 | 156,456.1 |
| % | 0.0% | 13.4% | 36.3% | 0.0% | 0.2% | 9.6% | 18.9% | 41.1% | 17.6% | 11.1% | 42.8% | 11.4% | 20.3% | 3.3% | 21.3% | 1.3% | 0.7% | 0.0% | 30.3% | 1.2% | 11.9% |

| Ecological District | Alpine Gravel and Rock | Broadleaved Indigenous Hardwoods | Coastal Sand and Gravel | Depleted Tussock Grassland | Estuarine Open Water | Fernland | Flaxland | Grey Scrub | Herbaceous Freshwater Vegetation | Herbaceous Saline Vegetation | Indigenous Forest | Lake and Pond | Landslide | Mangrove | Manuka and or Kanuka | River | River and Lakeshore Gravel and Rock | Seabed | Native Total | Not Native Total | Grand Total |
|--|------------------------|----------------------------------|-------------------------|----------------------------|----------------------|-------------|--------------|-------------|----------------------------------|------------------------------|-------------------|---------------|-------------|----------------|----------------------|-------------|-------------------------------------|---------------|-----------------|------------------|-----------------|
| Legal protection, but not natural values mandate, and community care groups | | | | | | | | | | | | | | | | | | | | | |
| Acutely Threatened | | | | | | | | | | | | | | | | | | | | | |
| Ahipara | | | | | | | | | | | 2.6 | | | | | | | | 2.6 | 36.6 | 39.1 |
| Aupouri | | | | | | | | | | | 0.0 | | | 0.0 | | | | | 0.0 | 1.7 | 1.7 |
| Hokianga | | | | | | | | | | 0.0 | | | | | | | | | 0.0 | 5.0 | 5.0 |
| Kaikohe | | | | | | | | | | | | | | | | | | | | 128.8 | 128.8 |
| Kerikeri | | 1.1 | | | | | | | 42.3 | 0.6 | 0.9 | | | 0.3 | 30.9 | | 1.1 | | 77.2 | 357.2 | 434.4 |
| Manaia | | 1.4 | 2.0 | | | | | | | | 1.7 | 0.6 | | | 9.3 | | | | 14.9 | 597.2 | 612.1 |
| Maungataniwha | | | | | | | | | | | 13.0 | | | | 0.0 | | | | 13.1 | 41.0 | 54.1 |
| Puketi | | | | | | | | | | | 0.3 | | | | | | | | 0.3 | 0.1 | 0.4 |
| Rodney | | | | | | | | | | | 0.0 | | | | | | | | 0.0 | | 0.0 |
| Tangihua | | 1.5 | | | | | | | | | 26.8 | | | | 0.6 | | | | 28.9 | 344.7 | 373.6 |
| Te Pahi | | | | | | | | | | | | | | | 0.2 | | | | 0.2 | 2.7 | 2.9 |
| Tokatoka | | | | | | | | | | | | | | | | 0.0 | | | 0.0 | 1.9 | 1.9 |
| Tutamoe | | 14.6 | | | | | | | | | 0.0 | | | | | | | | 14.6 | 81.4 | 96.1 |
| Waipu | | | 0.1 | | 1.4 | | | | | | | | | 0.9 | | | | | 2.5 | 14.9 | 17.4 |
| Whangarei | | | 0.0 | | 123.7 | | | | | 0.0 | 0.8 | 0.6 | | 11.4 | 0.0 | | | | 136.6 | 28.7 | 165.3 |
| Whangaroa | | | | | | | | | | | | | | | 0.3 | | | | 0.3 | 0.3 | 0.7 |
| Whangaruru | | 4.8 | 0.2 | | 0.0 | | | | 2.8 | 0.1 | 1.0 | | | 0.3 | 9.4 | | | | 18.5 | 155.6 | 174.2 |
| Acutely Threatened Total | | 23.3 | 2.3 | | 125.2 | | | | 45.1 | 0.8 | 47.1 | 1.2 | | 13.0 | 50.8 | 0.0 | 1.1 | | 309.8 | 1,797.8 | 2,107.5 |
| % | 0.0% | 0.1% | 0.0% | 0.0% | 0.3% | 0.0% | 0.0% | 0.0% | 0.6% | 0.0% | 0.0% | 0.0% | 0.0% | 0.1% | 0.0% | 0.0% | 3.4% | 0.0% | 0.1% | 0.2% | 0.2% |
| Legal protection, but not natural values mandate, and community care groups | | | | | | | | | | | | | | | | | | | | | |
| Chronically Threatened | | | | | | | | | | | | | | | | | | | | | |
| Ahipara | | | | | | | | | | | 32.9 | | | | 245.6 | | | | 278.6 | 48.3 | 326.8 |
| Aupouri | | | 0.0 | | | | | | 1.2 | | | 0.5 | | | | | | | 1.7 | 13.8 | 15.5 |
| Hokianga | | | | | | | | | | | | | | | 2.1 | | | | 2.1 | 0.0 | 2.1 |
| Kaikohe | | 25.1 | | | | | | | 3.3 | | 208.4 | 0.2 | | | 85.5 | | | | 322.4 | 3,239.0 | 3,561.4 |
| Kerikeri | | 32.2 | 2.2 | | 0.4 | | | | 15.3 | | 127.0 | 0.0 | | 2.0 | 128.8 | | | | 308.1 | 1,849.0 | 2,157.0 |
| Manaia | | 7.1 | | | | | | | 4.1 | | 0.2 | | | | 31.1 | | | | 42.5 | 241.1 | 283.6 |
| Maungataniwha | | | | | 0.1 | | | | | | | | | | | | | | 0.1 | 0.0 | 0.1 |
| Otamatea | | | | | 0.0 | | | | | | | | | | | | | | 0.0 | 3.9 | 4.0 |
| Poua | | | | | | | | | | | | | | | | | | | | 2.0 | 2.0 |
| Puketi | | | | | | | | | | | 0.2 | | | | | | | | 0.2 | 0.0 | 0.2 |
| Rodney | | | | | | | | | | | 1.0 | | | | | | | | 1.0 | 0.3 | 1.3 |
| Tangihua | | 0.9 | | | | | | | 46.5 | | 1.8 | | | | 8.6 | | | | 57.8 | 14.8 | 72.6 |
| Te Pahi | | 0.1 | 7.0 | | | | | | 5.2 | | | | | | 9.8 | | | | 22.1 | 5.3 | 27.4 |
| Tokatoka | | | | | | | | | | | | | | | | | | | | 2.2 | 2.2 |
| Waipu | | | 0.3 | | | | | | | | | | | | | | | | 0.3 | 5.4 | 5.7 |
| Whangarei | | 0.1 | 3.1 | | | | | | 17.2 | | 1.1 | 0.6 | | 0.1 | 3.5 | 0.1 | | | 25.8 | 48.1 | 73.8 |
| Whangaroa | | | | | | | | | | | | | | | | | | | | 6.7 | 6.7 |
| Whangaruru | | 1.2 | 3.5 | | 1.3 | | | | 0.0 | 4.4 | 25.7 | | | 10.0 | 48.2 | | | | 94.4 | 213.0 | 307.4 |
| Chronically Threatened Total | | 66.8 | 16.0 | | 1.9 | | | | 92.8 | 4.4 | 398.4 | 1.3 | | 12.1 | 563.2 | 0.1 | | | 1,157.1 | 5,693.0 | 6,850.0 |
| % | 0.0% | 0.4% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 1.3% | 0.1% | 0.2% | 0.0% | 0.0% | 0.1% | 0.5% | 0.0% | 0.0% | 0.0% | 0.2% | 0.7% | 0.5% |
| Some Protection Total | | 1,779.3 | 3,838.7 | | 615.3 | 0.5 | 38.1 | 26.0 | 1,051.3 | 92.8 | 8,910.1 | 158.0 | 1.5 | 1,868.6 | 18,681.5 | 1.9 | 14.6 | 2.9 | 37,081.1 | 39,505.8 | 76,586.9 |
| % | 0.0% | 9.9% | 23.2% | 0.0% | 1.5% | 0.9% | 22.6% | 7.6% | 15.0% | 3.0% | 3.5% | 3.8% | 9.1% | 11.8% | 15.8% | 0.1% | 43.7% | 100.0% | 7.7% | 4.8% | 5.8% |

| Ecological District | Alpine Gravel and Rock | Broadleaved Indigenous Hardwoods | Coastal Sand and Gravel | Depleted Tussock Grassland | Estuarine Open Water | Fernland | Flaxland | Grey Scrub | Herbaceous Freshwater Vegetation | Herbaceous Saline Vegetation | Indigenous Forest | Lake and Pond | Landslide | Mangrove | Manuka and or Kanuka | River | River and Lakeshore Gravel and Rock | Seabed | Native Total | Not Native Total | Grand Total |
|--|------------------------|----------------------------------|-------------------------|----------------------------|----------------------|--------------|--------------|--------------|----------------------------------|------------------------------|-------------------|----------------|--------------|-----------------|----------------------|----------------|-------------------------------------|-------------|------------------|------------------|--------------------|
| Not protected | | | | | | | | | | | | | | | | | | | | | |
| Acutely Threatened | | | | | | | | | | | | | | | | | | | | | |
| Ahipara | | 0.8 | 0.0 | | 0.1 | | | | | 0.3 | 14.4 | 0.2 | | 0.5 | 26.4 | | | | 42.6 | 253.3 | 295.9 |
| Aupouri | | 12.7 | | | 0.9 | | | | 243.4 | 4.0 | 40.5 | 13.9 | 0.1 | 9.3 | 99.6 | 26.8 | | | 451.3 | 9,369.0 | 9,820.3 |
| Hokianga | | 29.3 | 10.7 | | 1.1 | | | | 20.8 | 24.9 | 222.7 | 0.5 | | 26.3 | 429.3 | 10.1 | | | 775.9 | 4,470.2 | 5,246.1 |
| Kaikohe | | 92.4 | | | | | | | 91.7 | | 226.8 | 15.9 | | | 240.2 | 2.4 | | | 669.4 | 4,416.0 | 5,085.4 |
| Kerikeri | | 30.1 | | | | | | | 132.8 | | 66.8 | 9.6 | | 0.7 | 28.8 | | | | 268.9 | 2,734.4 | 3,003.2 |
| Manaia | | | | | | | | | | | | | | | 0.0 | | | | 0.0 | | 0.0 |
| Maungataniwha | | 14.3 | | | 5.5 | | | | 2.2 | 12.1 | 307.6 | 0.4 | | 11.4 | 250.4 | 10.7 | | | 614.6 | 6,881.9 | 7,496.5 |
| Otamatea | | 18.9 | | | | | | | | | 41.8 | 1.0 | | 5.9 | 0.6 | | | | 68.1 | 1,061.2 | 1,129.3 |
| Poua | | 49.8 | 5.8 | | 24.2 | 0.8 | 9.7 | 0.6 | 191.7 | 55.2 | 96.1 | 7.8 | | 27.9 | 454.4 | 38.6 | | | 962.6 | 23,166.0 | 24,128.6 |
| Puketi | | | | | | | | | | | 3.8 | | | | | | | | 3.8 | 28.5 | 32.3 |
| Rodney | | 3.5 | | | 3.7 | | | | 2.0 | 48.9 | 19.0 | 2.7 | | 29.5 | 53.1 | | | | 162.4 | 1,774.0 | 1,936.4 |
| Tangihua | | 63.3 | | | | | | | 54.5 | | 828.2 | 15.3 | | | 349.2 | 34.0 | | | 1,344.4 | 14,496.2 | 15,840.7 |
| Tokatoka | | 9.4 | | | | | | | 4.1 | | 97.5 | 4.3 | | | 14.7 | 14.1 | | | 144.1 | 3,431.9 | 3,576.0 |
| Tutamoe | | 5.0 | 0.3 | | | | | | 47.2 | | 84.0 | 0.0 | | | 47.6 | 6.5 | | | 190.5 | 1,886.3 | 2,076.8 |
| Waipu | | 1.0 | 18.1 | | 4.3 | | 0.0 | | 1.5 | 0.2 | 260.8 | 7.9 | | 8.6 | 13.9 | 24.6 | | | 340.9 | 8,030.9 | 8,371.8 |
| Whangarei | | 20.8 | 0.2 | | 0.1 | | 1.5 | | 67.7 | 2.3 | 273.9 | 37.2 | | 15.8 | 52.9 | 17.0 | | | 489.3 | 13,478.4 | 13,967.7 |
| Whangaroa | | 3.0 | 8.1 | | | | | 2.3 | 1.5 | | 14.6 | 0.3 | | 5.7 | 83.0 | | | | 121.7 | 834.3 | 956.0 |
| Whangaruru | | 5.9 | 1.2 | 1.5 | 2.4 | | | | | | 44.4 | 7.2 | | 1.2 | 18.3 | | 0.3 | | 82.2 | 1,329.3 | 1,411.5 |
| Total Acutely Threatened | | 360.2 | 44.4 | 1.5 | 42.2 | 0.8 | 11.2 | 2.9 | 861.1 | 151.1 | 2,642.8 | 124.2 | 0.1 | 142.7 | 2,162.4 | 184.8 | 0.3 | | 6,732.6 | 97,641.9 | 104,374.5 |
| % | 0.0% | 2.0% | 0.3% | 21.5% | 0.1% | 1.4% | 6.6% | 0.9% | 12.3% | 4.9% | 1.0% | 3.0% | 0.8% | 0.9% | 1.8% | 9.6% | 0.8% | 0.0% | 1.4% | 11.8% | 8.0% |
| Not protected | | | | | | | | | | | | | | | | | | | | | |
| Chronically Threatened | | | | | | | | | | | | | | | | | | | | | |
| Ahipara | | 5.1 | 20.8 | | 0.8 | 1.2 | | | 16.4 | 0.0 | 92.6 | | | | 652.1 | | | | 789.1 | 529.0 | 1,318.2 |
| Aupouri | | 99.3 | 40.1 | | 7.6 | | | | 330.2 | 21.8 | 119.9 | 32.2 | | 12.7 | 947.4 | 0.8 | | | 1,612.0 | 11,950.0 | 13,562.0 |
| Hokianga | | 11.1 | 0.7 | | 8.4 | | | | 91.6 | 120.7 | 125.6 | | | 6.4 | 163.5 | 1.7 | | | 529.7 | 1,868.0 | 2,397.8 |
| Kaikohe | | 94.5 | | | | | | | 177.4 | | 959.1 | 16.3 | | | 705.1 | 4.1 | 1.7 | | 1,958.2 | 13,430.4 | 15,388.6 |
| Kerikeri | | 82.1 | 25.3 | | 1.4 | 0.0 | | | 66.5 | 1.1 | 385.9 | 30.5 | 2.9 | 4.9 | 267.1 | 14.1 | | | 881.9 | 10,815.1 | 11,697.0 |
| Manaia | | 0.8 | 0.7 | | | | | | | | | | | | 0.1 | | | | 1.6 | 0.1 | 1.7 |
| Maungataniwha | | 20.9 | 2.8 | | 5.0 | | | 1.5 | 5.6 | 7.6 | 124.1 | 1.7 | | 2.4 | 97.4 | | | | 269.2 | 2,397.9 | 2,667.1 |
| Otamatea | | 210.1 | 16.8 | | 41.1 | | | | | 0.1 | 933.6 | 5.8 | | 41.9 | 522.4 | | | | 1,771.9 | 14,588.1 | 16,360.0 |
| Poor Knights | | | 0.4 | | | | | | | | | | | | | | | | 0.4 | | 0.4 |
| Poua | | 51.0 | 11.9 | | 3.7 | | 3.9 | 0.2 | 110.6 | 3.9 | 157.4 | 46.4 | | 17.4 | 430.4 | 3.6 | 3.0 | | 843.3 | 22,110.9 | 22,954.3 |
| Puketi | | | | | | | | | 0.2 | | 28.6 | 0.7 | | | 0.1 | 0.8 | | | 30.4 | 144.9 | 175.3 |
| Rodney | | 87.3 | 0.4 | | 7.4 | | | | 5.1 | 1.9 | 218.7 | 0.8 | | 1.3 | 54.3 | | | | 377.2 | 1,984.0 | 2,361.2 |
| Tangihua | | 102.5 | | | | | 0.0 | | 449.7 | | 521.3 | 43.5 | | | 372.4 | 20.3 | | | 1,509.7 | 9,863.0 | 11,372.7 |
| Taranga | | | 0.0 | | | | | | | | | | | | 0.0 | | | | 0.1 | | 0.1 |
| Te Pahi | | | 3.6 | | 0.6 | | | | | | | | | | 47.1 | | | | 51.2 | 3.2 | 54.4 |
| Tokatoka | | 191.7 | | | | 0.0 | 0.4 | | 274.0 | | 667.3 | 32.6 | | | 36.1 | 16.6 | | | 1,218.7 | 14,666.8 | 15,885.5 |
| Tutamoe | | 19.5 | 2.3 | | | | | | 12.4 | | 60.3 | 0.5 | | | 57.1 | 3.1 | | | 155.3 | 1,204.1 | 1,359.4 |
| Waipu | | 4.4 | 3.3 | | 0.1 | | | | 0.7 | | 273.2 | 6.1 | | | 43.6 | 18.4 | | | 349.8 | 3,432.6 | 3,782.4 |
| Whangarei | | 39.6 | 0.0 | | | | | | 190.9 | 3.6 | 1,262.6 | 47.0 | | 5.4 | 97.3 | 26.4 | | | 1,672.8 | 13,366.5 | 15,039.3 |
| Whangaroa | | 9.6 | 9.8 | | | | | | | | 2.0 | | | 0.2 | 3.9 | | | | 25.4 | 116.3 | 141.7 |
| Whangaruru | | 60.1 | 72.3 | | 26.8 | | | 1.2 | 63.5 | 47.5 | 669.3 | 28.7 | | 204.0 | 356.6 | | | | 1,530.1 | 8,243.0 | 9,773.1 |
| Chronically Threatened Total | | 1,089.8 | 211.2 | | 103.0 | 1.3 | 4.3 | 2.9 | 1,795.0 | 208.3 | 6,601.6 | 292.8 | 2.9 | 296.6 | 4,854.2 | 109.8 | 4.8 | | 15,578.2 | 130,713.8 | 146,292.0 |
| % | 0.0% | 6.1% | 1.3% | 0.0% | 0.3% | 2.2% | 2.5% | 0.8% | 25.7% | 6.8% | 2.6% | 7.0% | 17.9% | 1.9% | 4.1% | 5.7% | 14.2% | 0.0% | 3.2% | 15.8% | 11.2% |
| Not Protected Total | 0.2 | 13,788.4 | 6,713.0 | 6.8 | 39,887.5 | 51.0 | 98.4 | 176.7 | 4,715.4 | 2,638.6 | 137,787.2 | 3,549.6 | 11.2 | 13,378.5 | 74,159.4 | 1,907.3 | 18.6 | | 298,888.1 | 779,437.9 | 1,078,326.1 |
| % | 100.0% | 76.7% | 40.5% | 100.0% | 98.3% | 89.5% | 58.5% | 51.3% | 67.4% | 85.8% | 53.7% | 84.8% | 70.5% | 84.8% | 62.9% | 98.6% | 55.6% | 0.0% | 62.0% | 94.0% | 82.2% |
| Total for Entire Northland Region | 0.2 | 17,972.5 | 16,575.4 | 6.8 | 40,573.7 | 57.0 | 168.4 | 344.4 | 6,996.1 | 3,073.7 | 256,425.4 | 4,184.2 | 15.9 | 15,773.8 | 117,971.5 | 1,934.9 | 33.5 | 2.9 | 482,110.3 | 829,258.7 | 1,311,369.0 |

Table 23: Number of Queen Elizabeth II covenants in Northland Region by the main habitat type(s) (up to two) in each covenant. Data provided 8 November 2007.

| | Other Habitat | | | | | | | | | | | | | | | | Total | % of total |
|---------------------------------------|------------------|---------------------------------|---------------------------------------|----------------------|-----------------|------------------|--------------------|------------------------------|--------------------------|-------------------------------|-------------------------------|------------------------------------|--------------------------|-------------------------------|---------------------------------|--------------------|------------|------------|
| | No other habitat | Coastal salt influenced wetland | Coastal wetland (not salt influenced) | Semi-coastal wetland | Lowland wetland | Lowland flaxland | Artificial wetland | Coastal dune or sand habitat | Coastal secondary forest | Coastal scrub or shrub forest | Semi-coastal secondary forest | Semi-coastal scrub or shrub forest | Lowland secondary forest | Lowland scrub or shrub forest | Archaeological site or remnants | Geological feature | | |
| Primary Habitat | | | | | | | | | | | | | | | | | | |
| Coastal salt influenced wetland | | | | | | | | | 1 | 2 | | | | | | | 3 | 0.7% |
| Coastal wetland (not salt influenced) | | | | | | | | | | 2 | | | | | | | 2 | 0.5% |
| Semi-coastal wetland | 2 | | | | | | | | | | | | | | | | 2 | 0.5% |
| Lowland wetland | 4 | | | | | | | | | | | | | | | | 4 | 0.9% |
| Lowland flaxland | 1 | | | | | | | | | | | | | | | | 1 | 0.2% |
| Coastal dune or sand habitat | 1 | 1 | | | | | | | | | | | | | | | 2 | 0.5% |
| Coastal primary forest | 9 | 2 | | | | | | | | 1 | | | | | | | 12 | 2.7% |
| Coastal secondary forest | 21 | 1 | | | | | | 1 | | 31 | | | | | 1 | | 55 | 12.4% |
| Coastal scrub or shrub forest | 2 | | 2 | | | | | | | | | | | | | | 4 | 0.9% |
| Coastal revegetated | 1 | | | | | | | | | | | | | | | | 1 | 0.2% |
| Semi-coastal primary forest | 17 | | | | | | | | | | 2 | 1 | | | 2 | | 22 | 5.0% |
| Semi-coastal secondary forest | 22 | | | 2 | | | | | | | | 1 | | | | | 25 | 5.6% |
| Semi-coastal scrub or shrub forest | 1 | | | | | | | | | | 1 | | | | | | 2 | 0.5% |
| Lowland primary forest | 107 | | | | 6 | | | | | | | | | 1 | | 1 | 115 | 26.0% |
| Lowland secondary forest | 125 | 3 | | | 18 | 2 | 3 | | | | 2 | | | 26 | | 1 | 180 | 40.6% |
| Lowland scrub or shrub forest | 2 | | | | | | | | | | | | | | | | 2 | 0.5% |
| Lowland revegetated | 8 | | | | | | | | | | | | | | | | 8 | 1.8% |
| Geological feature | 3 | | | | | | | | | | | | | | | | 3 | 0.7% |
| Total | 326 | 7 | 2 | 2 | 24 | 2 | 3 | 1 | 1 | 38 | 3 | 2 | 0 | 27 | 3 | 2 | 443 | |
| % of Total | 73.6% | 1.6% | 0.5% | 0.5% | 5.4% | 0.5% | 0.7% | 0.2% | 0.2% | 8.6% | 0.7% | 0.5% | 0.0% | 6.1% | 0.7% | 0.5% | | |

Table 24: Area (ha) of Queen Elizabeth II covenants in Northland Region by the main habitat type(s) (up to two) in each covenant. Data provided 8 November 2007.

| | Other Habitat | | | | | | | | | | | | | | | | Total | % of total |
|---------------------------------------|-------------------|---------------------------------|---------------------------------------|----------------------|-----------------|------------------|--------------------|------------------------------|--------------------------|-------------------------------|-------------------------------|------------------------------------|--------------------------|-------------------------------|---------------------------------|--------------------|----------------|------------|
| | No other habitats | Coastal salt influenced wetland | Coastal wetland (not salt influenced) | Semi-coastal wetland | Lowland wetland | Lowland flaxland | Artificial wetland | Coastal dune or sand habitat | Coastal secondary forest | Coastal scrub or shrub forest | Semi-coastal secondary forest | Semi-coastal scrub or shrub forest | Lowland secondary forest | Lowland scrub or shrub forest | Archaeological site or remnants | Geological feature | | |
| Primary Habitat | | | | | | | | | | | | | | | | | | |
| Coastal salt influenced wetland | | | | | | | | 29.4 | 29.6 | | | | | | | | 59 | 0.9% |
| Coastal wetland (not salt influenced) | | | | | | | | | 1 | | | | | | | | 1 | 0.0% |
| Semi-coastal wetland | 71 | | | | | | | | | | | | | | | | 71 | 1.1% |
| Lowland wetland | 41.8 | | | | | | | | | | | | | | | | 41.8 | 0.6% |
| Lowland flaxland | 2 | | | | | | | | | | | | | | | | 2 | 0.0% |
| Coastal dune or sand habitat | 26.5 | 6.9 | | | | | | | | | | | | | | | 33.4 | 0.5% |
| Coastal primary forest | 178.2 | 34.9 | | | | | | | 46.7 | | | | | | | | 259.8 | 3.9% |
| Coastal secondary forest | 147.2 | 6.8 | | | | | 3.5 | | 157 | | | | | | 2.6 | | 317.1 | 4.8% |
| Coastal scrub or shrub forest | 14.7 | | 14.8 | | | | | | | | | | | | | | 29.5 | 0.4% |
| Coastal revegetated | 1.2 | | | | | | | | | | | | | | | | 1.2 | 0.0% |
| Semi-coastal primary forest | 277.9 | | | | | | | | | 80.1 | 34 | | | | 26.7 | | 418.7 | 6.4% |
| Semi-coastal secondary forest | 150.2 | | | 10.3 | | | | | | | 7.8 | | | | | | 168.3 | 2.6% |
| Semi-coastal scrub or shrub forest | 0.7 | | | | | | | | | 2.4 | | | | | | | 3.1 | 0.0% |
| Lowland primary forest | 1233.6 | | | | 54 | | | | | | | | | 242.2 | | 59.9 | 1,589.7 | 24.1% |
| Lowland secondary forest | 2582.4 | 11.1 | | | 158.7 | 7.4 | 41.4 | | | 7.7 | | | | 407.9 | | 1.7 | 3,218.3 | 48.8% |
| Lowland scrub or shrub forest | 50.3 | | | | | | | | | | | | | | | | 50.3 | 0.8% |
| Lowland revegetated | 327.1 | | | | | | | | | | | | | | | | 327.1 | 5.0% |
| Geological feature | 2.1 | | | | | | | | | | | | | | | | 2.1 | 0.0% |
| Total | 5106.9 | 59.7 | 14.8 | 10.3 | 212.7 | 7.4 | 41.4 | 3.5 | 29.4 | 242 | 82.5 | 41.8 | 0 | 650.1 | 29.3 | 61.6 | 6,593.4 | |
| % of Total | 77.5% | 0.9% | 0.2% | 0.2% | 3.2% | 0.1% | 0.6% | 0.1% | 0.4% | 3.7% | 1.3% | 0.6% | 0.0% | 9.9% | 0.4% | 0.9% | | |

9. INFORMATION GAPS AND ANOMALIES

Data used for the assessment of PNAs were incomplete. Data sets which were not yet available are summarised in Appendix 4. Some data are available 'on paper' but have not yet been converted to GIS layers and have therefore not been included in this analysis. Other data requires data-sharing agreements and rules surrounding the use of the data before they are likely to become available. Some data is yet to be created or sourced. It is beyond the scope of this project to address these issues or to create additional GIS layers.

The Department of Conservation GIS layers (Public Conservation Land, Nga Whenua Rahui and NAES), QEII, Whangarei District Council, Northland Regional Council Community Pest Control and Fish and Game Wetland layers seem reasonably complete and accurate, although in the NAES layers there is truncation of some names and misspelling within the NAES layer (so that the NAES can appear multiple times in the data).

Just under half of the Landcare Groups within the Northland Region have GIS polygons. Little information is available for the other Landcare Groups. It was also discovered, when the analysis were nearly completed, that any area looked after by more than one Landcare Group occurred multiple times in the area data. The most extreme example of this (which has been manually corrected) occurred in the Manaia Ecological District, which is nearly fully cared for by six Landcare Groups. The total area for the ED ballooned to nearly six times the actual area. There was no further time available to correct such overlaps for other Landcare Groups, hence some protected areas or the size of areas managed by organisations such as Landcare Groups may be overestimated in other EDs.

The Far North District Council possesses Significant Natural Areas funding recipients' data, but it is point data only and no GIS polygons are currently available. The GIS data accompanying Biodiversity Condition and Advice Funds is only provided as point data which is incomplete and scrappy (e.g. no grid references, grid references out at sea, no or incomplete data for some rounds, no estimates of area protected for Advice Funds) and for some multi-site projects such as the NZ Kiwi Foundation Charitable Trust only one location point is provided although multiple areas are being protected by the funds. It would be advantageous if all these data could be provided as polygons so that the real scope of the work can be assessed and overlaid with other biodiversity conservation efforts.

Another issue is that different layers have minor differences in some boundaries (i.e. boundaries which are in fact identical may be slightly misaligned in mapping space), which will have resulted in reporting inaccurate areas in some instances. In addition, multiple protection mechanisms over the same piece of land make it difficult to accurately estimate the area of land protected.

The protected areas layer provided by the Department of Conservation includes a number of protected marine areas and in some instance the boundaries of individual 'reserves' go as far as Mean High Water Springs. Other layers such as the Ecological District Boundaries and LENZ generally only include the terrestrial portions. The

Landcover Database 2 includes some estuarine vegetation types. This mismatch will have resulted in errors in calculating the areas.

The project brief requested that an analysis be undertaken to describe “the type of features that occur within protected areas (e.g. are all ecosystem types represented, what are the most threatened land environments, what features were originally rare ecosystems, to what extent do the areas contribute to preserving biodiversity at a landscape scale by retaining habitat linkages, ecological sequences etc)”. There is no consistent classification or mapping of ecosystem types, mapping of rare ecosystem types (especially since many are small areas), classification or mapping of ecological sequences, or descriptions or classifications of the types of biodiversity protected or contained within each area. It is currently only possible to approximate these characteristics by using two national classification systems; the Land Environments New Zealand (Leathwick *et al.* 2002) and Land Cover Database (Ministry for the Environment 2001). Both these classifications systems are relatively coarse classification of ecotypes because, by necessity, they deal with the entire country, do not have particularly fine resolution, and are models built on data that has errors or has been extrapolated.

Many important natural areas within Northland have been described, and often mapped to some extent, in the various Protected Natural Areas Programme reports (these areas are called Natural Areas of Ecological Significance, NAES, in this report). Transferring the attributes of these data (e.g. quality of habitat) to a GIS platform would greatly enhance the ability to describe and quantify the habitats and ecosystems protected and those that are missed. It would also allow some quantification of the quality of the sites/locations and their progression through time. This would require that the descriptions for all Natural Area of Ecological Significance (NAES) be standardised for the region. Standardising descriptions and mapping of NAES is a substantial project in its own right and beyond the scope of this project. These same standardised descriptions and ecotype mapping should then also be applied to protected areas that were not previously identified as NAES. These areas should then be assessed using the NAES criteria to determine if they meet the criteria.

When data from various sources are overlapped the lines that make up the polygons can be slightly mismatched. This mismatch can be caused by inaccurately drawn polygons, variations in geo-registration, or other errors. These mismatched polygons result in data anomalies (e.g. incorrectly designating what is contained within an area) or “sliver” polygons (very small polygons) that can in turn incorrectly inflate the number of a particular type of area. It is beyond the scope of the current project to correct these ‘errors’.

10. STANDARDS OF CARE

It is difficult to summarise what standards of care operate in each of the different types of PNAs, as these care standards vary according to which agency manages the area (e.g. DOC, QEII, local councils, Landcare Groups, etc) and what the particular values of the area and aims of the project are (e.g. kiwi protection, pest free offshore island, weed eradication project, revegetation project, riparian margin protection,

geological features, etc). Some of the mechanisms identified in this report have been developed with the sole aim of providing some level of care (e.g. Community Pest Control Areas, Landcare Groups) whilst others may have rules/guidance about what can or cannot be undertaken in the PNA (e.g. Whangarei District Council Covenants, QEII covenants, Nga Whenua Rahui Kawenata, particular types of Public Land managed by DOC).

There are no consistent standards of care and often management of PNAs can be hampered by lack of funds or other resources. Even within one category of PNA (e.g. Conservation Park) standards of care can differ quite significantly between sites. Not many agencies have specified what the minimum standards of care should be, or have the means to enforce those standards. As far as is known, there are no agreements between management agencies about the minimum standards of care required for each type of ecosystem or PNA category. The Queen Elizabeth II National Trust does have some minimum standards that are nationally applied and these are presented in Section 7.2.

This report has shown that in some instances the ecological values of a site may have little bearing on whether it is a PNA or not. For instance 75% of Whangarei District Council Covenants by area were **not** identified as a Natural Area of Ecological Significance (NAES) identified in the PNAP studies of the Whangarei District. Recreation Reserves (which are not PNAs) can in fact have significant natural values, and Scenic Reserves (which are PNAs) can sometimes be weedy road-side verges. Acceptance of new covenants (e.g. QEII, Nga Whenua Rahui Kawenata, and Whangarei District Council Covenants) and the decisions to undertake management at any particular site are often guided by some type of priority setting on a local basis or within a particular agency. However, priorities change over time, and often there are also local factors that influence these priorities. Thus priorities are often not consistent between management agencies, within management agencies, or within a national or regional framework. It would be useful if minimum standards of care could be agreed upon between all relevant management agencies and, if possible, applied nationwide, tailored to account for the values being protected and the relative significance of an area. In the meantime it should be possible to develop minimum standards of care assessment for the Northland Region.

10.1 Suggested standards of care

Each site that is protected or needs to be protected is likely to be unique in some way, hence is not possible to prescribe exact standards of care for each site in this report. However there are some general guidelines that can be applied. If sites have already been identified and ranked in a PNAP report or in the Northland Protection Strategy (Conning 2001) then their protection and care should be considered a priority. For sites that have not yet been assessed, priority sites can be identified using the recently published “Statement of National Priorities for Protecting Rare and Threatened Biodiversity on Private Land” (Ministry for the Environment 2007a). Priority should be given to those sites that fulfil more than one criterion, with perhaps less emphasis on sites that only contain one of the priorities indicated.

The following are general guidelines that could be used to help assess the standard of care required for each site.

All Sites That Are Not, or Are Only Partially, Legally Protected

- Investigate if legal protection is required. Use mechanisms such as the Conservation Act, the Reserves Act, covenanting (QEII, Nga Whenua Rahui, district council), rules in Regional or District Plan, gifting to crown or territorial authorities, and/or listing in Regional or District Plan to ensure the site is protected.
- Prevent further clearance, drainage or changes to hydrology.

Wetlands, Lakes, and Riparian Margins

- Prevent further drainage or alteration of hydrology that lowers ecological values.
- Maintain riparian vegetation.
- Exclude stock (this generally requires fencing).
- Eradicate invasive plants and fish species and control other species that may be impacting on hydrology or flora and fauna values.
- Consider restoration planting or other restoration activities (e.g. reinstatement of original hydrological regime).

Special Habitat, Plant, or Animal Species

- Prevent further vegetation clearance.
- Assess, and if necessary instigate, fencing requirements to exclude stock and/or pest species.
- Assess and/or monitor stock and/or pest species and/or human impact.
- Eradicate invasive plants, and where possible stock, mustelids, feral cats & rats.
- Consider restoration planting.
- Assess whether increasing urbanisation will pose problems and whether resource consent conditions can be imposed to prevent further degradation and if possible enhance the native system.

Inadequately Surveyed Sites

- Prevent further vegetation clearance until the site is fully assessed.
- Undertake a flora and fauna species survey.
- Assess and or monitor stock and/or pest species and/or human impact.
- Determine ecological, geological, historic etc. features present and their values.

Mammal Pest Free Offshore or Mainland Islands

- Maintain pest free status.
- Consider restoration planting (pastoral or heavily modified islands only).
- Eradicate invasive plants.
- Ensure no pest species colonise.
- For islands with kiore only; consider control of kiore in liaison with local iwi.

10.2 Queen Elizabeth II covenants

Standards of care in QEII covenants are probably more uniform than for other types of PNAs. As a rule, if stock needs to be kept out of the covenant area then the covenant will be fenced with contributions from the landowner, QEII, and often the District or Regional Council. This has meant that 84% of registered covenants are stock proof (Table 25). About 80% of these fences are in good or fair condition and are excluding stock from the covenants. Not all covenants require fencing as some are in more urban areas.

Table 25: Numbers of QEII covenants fenced in the Northland Region. Data provided 8 November 2007.

| | Approved | Registered |
|-------------------------|----------|------------|
| Total area of covenants | 1,017.7 | 7,166.8 |
| Number of covenants | 56 | 372 |
| % covenants with fences | 61.5% | 84.0% |
| Number of blocks | 73 | 504 |

The majority of covenants are also visited by QEII representatives every two years or so to check on the condition of the covenant. Average condition means that the covenantors are adhering to covenant conditions; good adherence indicates that the landowners are improving the values within the covenant; and poor means that covenant conditions have been breached and the covenant may be deteriorating. As of 8 November 2007 93.9% of covenants in Northland met or exceeded covenant conditions (Table 26). Thus standards of care appear to be met for the majority of sites.

Table 26: Adherence of QEII covenants to covenant conditions in Northland Region. Data provided 8 November 2007.

| Adherence | Number of Registered Covenants | Area of Registered Covenants | % of Registered Covenants | % Area of Registered Covenants |
|--------------|--------------------------------|------------------------------|---------------------------|--------------------------------|
| Good | 330 | 5,417.0 | 74.5 | 82.2 |
| Average | 56 | 768.3 | 12.6 | 11.7 |
| Poor | 3 | 10.0 | 0.7 | 0.2 |
| Unknown | 54 | 398.3 | 12.2 | 6.0 |
| Total | 443 | 6,593.6 | | |

11. RECOMMENDATIONS

- Funding (e.g. Community Pest Control Areas, Biodiversity Condition and Advice Funds) and covenanting should be targeted at features identified as of National Priority and at Natural Areas of Ecological Significance (NAES), where these have been identified.
- Encourage landowners to protect features identified as of National Priority, and Natural Areas of Ecological Significance (NAES), where these have been identified.

- Identify and evaluate protection options for indigenous habitats present in Acutely or Chronically Threatened LENZ categories which are not yet protected.
- Ensure Natural Areas of Ecological Significance (NAES) and other significant habitats (e.g. naturally uncommon ecosystems) are protected in their entirety at each location as far as this is possible. That is, encourage protection of entire NAES, not just parts of one whenever possible.
- Encourage the preparation of a management plan that will ensure that the identified values within PNAs are maintained, or enhanced, and not degraded over time. This plan should include measurable performance criteria where possible and follow a generic format that allows more ready comparisons between areas, districts and regions.
- Review whether the protection status of reserves for which the primary focus within the legislation is not the protection of natural features is appropriate for the protection of the identified natural values (e.g. recreation reserves and local purpose reserves).
- Ensure that GIS polygons (digital maps) for areas under all types of protection are generated and maintained by a central agency to enable more accurate reporting.
- Complete the Protected Natural Areas Programme surveys to identify Natural Area of Ecological Significance (NAES) in the ecological districts where field surveys have been undertaken but reporting is not complete, or where a survey has not yet been undertaken.

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