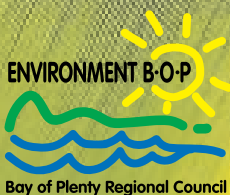


Natural Heritage Areas

A guide to their care
and protection





Prepared by Environment B-O-P in partnership with:



Department of Conservation
Tē Papa Atawhai



Western Bay of Plenty
District Council



Opotiki District Council



KAWERAU DISTRICT



KA WHAKATANE KŪ I MAU



Tauranga City



ROTORUA
DISTRICT
COUNCIL



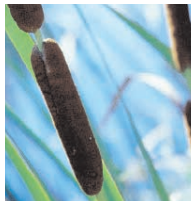
Contents

What is a natural heritage area?	3
Our relationship with natural heritage areas	4
The state of our biodiversity	4
Why should we protect our natural heritage areas?	5
How to CARE for your natural heritage areas	6
Plant pests	6
Animal pests	8
Grazing stock	10
Subdivision and development	11
Fragmentation	12
Clearance	13
Taking and using water	14
Waste disposal	15
How to PROTECT your natural heritage area	16
Enhancing your investment	18
Getting help to PROTECT and ENHANCE your natural heritage area	19
Environmental plans and advice	21
Who does what?	22
Glossary of terms	24
Further reading	25

About this Booklet

THIS booklet has been written for landowners, managers and anyone interested in natural heritage in the Bay of Plenty region. It aims to help you understand:

- What a natural heritage area is
- Threats to these areas
- How to look after them
- What agencies have heritage responsibilities
- Cultural values and issues
- Where to go for information



Natural heritage areas are part of our past. Living with them in the present and ensuring they will be there in the future is a challenge we all share.



Rakau Rangatira
Tu teitei i te wao.
Ki te kore koutou
Ma wai e mihi te ra?

Chiefly trees
Standing tall in the forest.
Without you
Who will greet the sun?

What is a **Natural Heritage Area**?

NATURAL heritage areas include our native forests, wetlands, rivers, dunes, scrub and estuaries, and the plants and animals that live in them.

The first people to come to the Bay of Plenty about 1000 years ago found forests and wetlands covering most of the land. Healthy forests supported plant communities and species such as kokako, kiwi, weta, gecko, skinks and bats. Huge coastal and freshwater wetlands were breeding and feeding areas for birds like bittern, fernbird and banded rail, and fish like whitebait and eel.

The areas that remain today are remnants of these unique ecosystems. Some well-known examples are Te Urewera, the Rotorua Lakes and the Tauranga and Ohiwa Harbours, but there are also many areas of native forest, scrub and wetland on private land. Even small areas are important for the survival of plants and animals.

Our **relationship** with Natural Heritage Areas

PEOPLE value natural heritage areas differently.

They may be important spiritually, culturally, historically and economically.

For many people, natural heritage areas help define our identity as New Zealanders, our lifestyles, our history, our ancestry, our clean green image, and our national icons like the kiwi, silver fern and koru. Natural heritage areas are central to the culture of tangata whenua and are important for food gathering, medicines and cultural practices like carving and weaving.



SADDLEBACK

The state of our **biodiversity**

OVER the years, a lot of information about natural areas has been collected by landowners and agencies such as the Department of Conservation, district councils and Environment B·O·P. This helps to build a picture of what we have lost, and what we have left.

Less than five per cent of the Bay of Plenty's wetlands remain, and nationally 90 per cent of wetlands have disappeared.

Birds once common in the region, such as kokako, kiwi, and tieke (saddleback) are now threatened with extinction. Nearly one-third of New Zealand's native land and freshwater birds are already lost forever, including the huia, the haast eagle (the world's largest) and moa.

Nearly 50 per cent of the Bay of Plenty is still in native forest, but very little lowland forest remains.

About two-thirds of the Bay of Plenty's forests are publicly-owned reserves. There are also hundreds of private covenants protecting natural areas in the region.



NATIVE SKINK

Why should we **protect** Natural Heritage Areas?

Natural heritage areas are a living link with what New Zealand was like before the arrival of people. There are many benefits to be gained from protecting these areas for the future, including:-



MAKETU SUNSET



NATIVE ORCHID

- Ongoing survival of plants and animals
(Biodiversity)
- Cultural and community relationships
- Less flooding
(Vegetation reduces water run-off)
- Soil protection
(Ten times more soil is lost from pasture than from forest)
- Scenery and landscapes
- Recreation areas
- Business opportunities
(E.g. home-stays and eco-tours)
- Health (Medicines)
- National identity
(Enhancing our clean, green image)
- Improved water quality
(Clearer streams and water catchments)
- Scientific knowledge

How to **care** for your Natural Heritage Areas

WHILE many New Zealanders are working hard to protect natural heritage areas, there are still many threats. These include:

- Plant and animal pests
- Grazing stock
- Subdivision and development
- Fragmentation
- Clearance
- Taking and using water
- Waste disposal
- Fire

Plant Pests

MANY plant pests have adapted well to New Zealand conditions, and have invaded native scrub, forests and wetlands, competing with native plants. Some plant pests causing damage in natural heritage areas in the Bay of Plenty are:

- Wild ginger
- Old man's beard
- Wandering willie
- Lantana
- Moth plant
- Pampas
- Jasmine
- Woolly nightshade
- Wilding pines
- Japanese honeysuckle

Often, plant pests are ornamentals which have escaped from gardens. A large number of species are now banned from propagation and sale because they threaten natural heritage areas, agriculture and/or human health.



WILD GINGER



JASMINE



PAMPAS GRASS

Call Environment B·O·P -
0800 ENV BOP (0800 368 267) -
for free advice, and copies of
Plant Pest Fact Sheets.

Problems

Plant pests can destroy natural heritage areas by:

- Forming dense mats, smothering seedlings and preventing germination of native species.
- Climbing as vines and eventually strangling or smothering trees.
- Rapidly multiplying, and competing with native species.
- Smothering waterways. (This can affect native fish life.)
- Reducing natural habitat and food sources of native species.

Solutions

- Remove plant pests before they begin to spread.
- Never dump garden waste in natural heritage areas or on roadsides; plants can spread via seeds, rhizomes or stem portions.
- Plant the edge of natural heritage areas with fast-growing native species: this keeps light levels low and closes up open areas, making it harder for plant pests to colonise.
- Choose non-native plants carefully when planting near natural heritage areas. (Check the "Good Plant Guide" and Environment B·O·P's Plant Pest list before you buy.)
- Pick from a variety of methods including grubbing, spraying, stump treating, ringbarking and biological control.

Animal Pests

ANIMAL pests have thrived in New Zealand because their natural predators were not introduced with them. They have spread throughout the country, with devastating effects.

A good example is the possum, which is destroying native forests all over the country. Possums eat the leaves, fruit, flowers and seeds of native plants, and especially enjoy totara, rata, pohutukawa, kohekohe, five finger, fuchsia, kanuka, native mistletoe, ferns, kamahi and mahoe. They target different food at different times of the year, and completely wipe out some plants.

Possums also eat native insects, bird eggs and chicks. They carry and spread Bovine Tb - a serious disease for cattle and deer farming.

Other animal pests causing ongoing damage to natural heritage areas are

- Feral goats
- Rabbits
- Wallabies
- Feral cats
- Mustelids (ferrets, stoats, weasels)
- Rats
- Wasps (German, common)
- Magpies and rooks
- Feral deer
- Koi carp, catfish, rudd, perch
- Feral pigs



NATIVE MISTLETOE

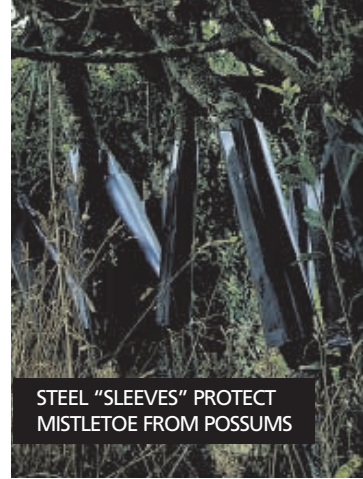


POSSUM

Problems

Animal pests:

- Compete with native birds and insects for food. (e.g Wasps destroy some insect species and feed on honey dew - a favoured food of a variety of native birds.)
- Browse on new seedlings, destroy seeds, and prevent forest from regenerating.
- Feed differently from native animals. (e.g Possums, goats, wallabies and rats gnaw at native fruit, destroying the seeds. They also eat buds and flowers so fruit and seed cannot develop.)
- Are predators by nature. (Stoats, ferrets, rats, cats, dogs and possums will eat lizards, frogs, native insects, birds and birds' eggs.)
- Change natural fish habitat.



STEEL "SLEEVES" PROTECT MISTLETOE FROM POSSUMS

Solutions

- Trapping with specialist traps. (Timms traps are humane and possum - specific when set and baited properly.)
- Use of bait stations. (Bait stations and specialist traps reduce the risk to native animals, pets and children.)
- Careful use of poisons.
- Shooting. (This is only permitted in rural areas.)
- Keep domestic cats fed and inside at night, and put a bell on them.
- Neuter all cats. Dispose of unwanted cats/kittens humanely - releasing them into the wild can cause havoc with other wildlife.
- Keep dogs away from natural heritage areas, or keep them on a lead or muzzle them.
- Don't keep ferrets as pets. (Very good at escaping, they prey on other creatures in the wild.)



BAIT STATION

Call Environment B·O·P - **0800 ENV BOP (0800 368 267)** - for free advice and copies of Animal Pest Fact Sheets.
The Department of Conservation also has a helpful video and brochure titled "Your Pet is a Predator".

Grazing Stock

STREAM and lake margins, wetlands, native forest and other natural heritage areas are not suitable for grazing animals... they can cause extensive damage!

Over-stocking of grassland and grazing on steep hillsides can also create problems, such as erosion and siltation of waterways.

Problems

Stock in natural heritage areas:

- Damage bark and tree roots, weakening the tree.
- Damage seedlings and undergrowth, by grazing and trampling.
- Compact the ground, preventing plant growth and increasing stormwater run-off.
- Contaminate waterways with sediments and nutrients, which can kill plants and animals.
- Introduce weeds and fungal diseases.
- Cause erosion of stream banks.

Solutions

- Keep stock away from natural heritage areas, with strong fences.
- Provide stock with an alternative water supply and fence off streams, lakes and wetland areas.
- Trees planted for firewood or timber can be used for stock shelter, and single trees provide shade in open paddocks.
- Do not overstock grazing areas. Keep heavy stock off steeper land.
- Provide buffer zones between water bodies and pastoral land, to protect sensitive waters' edge areas from damage by livestock.

Call Environment B·O·P -
0800 ENV BOP (0800 368 267)
- for free advice and copies of Soil
Conservation Fact Sheets. Grants
may be available for fencing and
replanting.



Subdivision and Development

SUBDIVISION of land means more people, more houses (and more pets!). This puts pressure on our natural heritage areas.

Problems

- Silt from the construction of house sites, driveways and roads can wash into streams, wetlands and the sea, smothering plants and animals, damaging shellfish beds and fish spawning areas, and encouraging the spread of plants such as mangroves.
- Natural movement of native fish may be stopped by culverts, weirs, and outlets from dams, artificial ponds and wetlands, and the loss of riparian vegetation.
- Native plants and animals can be threatened by an increase in people, houses and pets.

Solutions

- Maintain vegetation on stream, lake and coastal edges.
- Minimise earthworks and set up ways to control silt and water run-off.
- Use bridges where possible for stream crossings, rather than pipes and culverts, to avoid disturbing the natural habitat.
- Keep residential development well away from wildlife habitats.



SUBDIVISION AND DEVELOPMENT CAN AFFECT NATURAL HERITAGE AREAS



BUSH REMNANT

Fragmentation

FRAGMENTATION is the cutting-up of natural heritage areas into small separate pieces by clearing tracks, house sites, or by clearing land for pasture.

Problems

- Cutting-up natural heritage areas makes it difficult for plants to spread, and for animals to find new food sources.
- As areas get smaller, they support fewer plants and animals.
- Edge effects. (Light, temperature, wind and humidity levels change at the edges of vegetation, affecting the habitat. If the area is small these edge effects can extend throughout.)
- Plant pests can invade the edges of small areas.

Solutions

- Avoid clearing vegetation from natural areas - live around them, not through them.
- Try to link natural areas together - use plants to create corridors and linkages.
- Locate houses and buildings on land that has already been cleared, and well away from water bodies.
- Keep tracks, paths, accessways and driveways as narrow as possible, if they must pass through a natural heritage area.
- Plant the boundaries of natural areas with native species to maintain shade and humidity, to help stop trees from blowing over and to help keep plant pests at bay.

Clearance

CLEARING natural areas for buildings, paths, accessways, firewood or pasture can destroy the habitat of native animals, birds, plants and insects.

Problems

Clearance can lead to:

- Loss of habitats.
- Loss of species, due to loss of habitats.
- Invasion by plant pests.
- Increased stormwater run-off and erosion.
- A combination of the above - eventually causing the ecosystem to die.



PAST CLEARANCE OF NATIVE FOREST

Solutions

- Avoid clearing new pathways, tidying-up around trees or clearing undergrowth.
- Avoid activities at the edges of natural heritage areas - root damage could kill trees.
- Look at alternative uses for natural areas, and get advice about land management (e.g. soil and water conservation).
- Don't use native timber for firewood - look for alternatives.

Taking and using water

IT MAY not always be obvious, but wetlands and streams are rich habitats, containing fish, insects, plants and animals. They are vital for the migration and breeding of fish. For a long time wetlands were often thought of as wastelands. Consequently many of them have been lost.

Problems

- Drainage of wetlands lowers the water table, changing what can live there.
- Diverting or straightening streams, and removing vegetation, reduces wildlife habitat, and can cause flooding and erosion.
- Piping waterways and creating artificial drains and weirs can impede fish migration.
- Reclamation of the coast, lakes and rivers (e.g retaining walls) destroys habitat.
- Taking too much water from streams can affect the plants and animals that live in them.

Solutions

- Where there are culverts or pipes make sure that native fish can migrate upstream - a fish pass is a good solution.
- Plant the edges of wetlands and streams in native plants.
- Recognise wetlands as attractive landscape features that can add value to your property.
- Avoid excessive draining of land fringing important wetlands.



Waste disposal

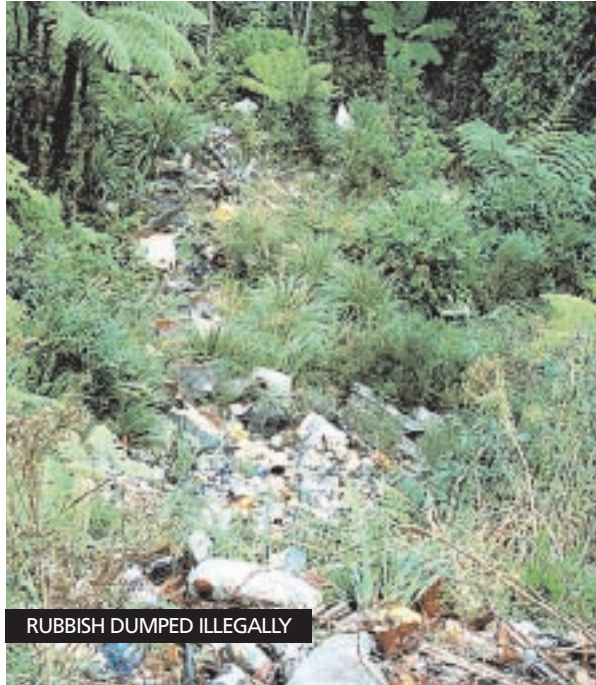
SADLY, some people use natural heritage areas as rubbish tips - out of sight is out of mind! They are also used to dispose of wastes such as farm effluent.

Problems

- Car bodies, animal carcasses, wastes, leftover chemicals and house litter are often dumped. They not only look bad - they pollute our water and soil.
- Dumped garden waste can lead to weeds spreading into natural heritage areas. Excess use of fertiliser and the careless disposal of farm waste can contaminate soil and waterways.

Solutions

- Dispose of your rubbish at the local transfer station or landfill.
- Don't bury rubbish containing pollutants that could leach into waterways or contaminate the soil.



Contact Environment B-O-P - **0800 ENV BOP (0800 368 267)** - or your local council for advice about waste disposal.

Fire

UNCONTROLLED fire is an ever-present threat to natural areas. Always be on the alert for fire!

How to **protect** your Natural Heritage Area

ONCE a natural heritage area is protected from stock and pests, it has a good chance of maintaining itself over time. It can also be enhanced or legally protected. There are many options.

Legal protection

Legal protection is a way to protect your natural heritage area for future generations. There are several ways you can do this:

Covenants

These agreements or covenants can be used to legally protect natural heritage areas:-

Queen Elizabeth the Second National Trust (QEII National Trust) - Open Space Covenant.

The trust generally contributes to costs for survey and legal fees. It may contribute to fencing. The covenant is registered on the land title.

QEII National Trust - Komiti Whenua Toitu - Kawenata Maori Covenant

Similar to QEII National Trust Open Space Covenant (above) but specific to Maori land. Provisions are unique to each case.

Minister of Conservation - Nga Whenua Rahui Kawenata

Designed for the protection of Maori land,



Case Study

Covenant used to protect kanuka

Belinda Whitham loves the area of native kanuka which is part of her property near Awakeri.

It all started in 1996 when Barney Gray wanted to subdivide his 11-hectare property so that he could offer four small lifestyle lots for sale.

At the same time he wanted to ensure the kanuka forest on his property was protected.

Through discussions with Whakatane District Council staff he found he could achieve both by covenanting the kanuka.

The kanuka spanned the proposed lots, but was fenced as a single area with access provided for the new lot owners. This area had previously been grazed, and vegetation on the forest floor was virtually non-existent. After four years of being stock-free the covenanted area contains a healthy under-storey of young kanuka, rewarewa, mangeao, pseudopanax, coprosma and ferns sprouting under the kanuka canopy.

these covenants vary depending on landowner needs. Contribution to cost of covenanting and some financial support.

Department of Conservation - Conservation Covenant Under Reserve Act or Conservation Act

This is an agreement between DoC and the landowner. Some costs may be met by DoC. The agreement is registered on the land title.

Department of Conservation Management Agreement - Conservation Act

This is a legal contract between DoC and the landowner. Some costs may be met by DoC. The contract is not binding on future landowners.

Environment B·O·P - Land Improvement Agreement

An agreement registered on a title, usually under a Farm Plan for soil and water conservation purposes or an environmental plan. Grants are provided for fencing and re-vegetation.

District Council - Conservation Covenant

Fencing and pest control is usually required and secured through a bond. Costs normally lie with the landowner. The covenant is registered on the land title.

Fish and Game New Zealand

Can enter into covenants, give advice and assist landowners in applications for funding for enhancing wetlands and streams for game birds.

NZ Historic Places Trust - Heritage Covenant

This covenant is specific to sites of special historic nature. The Trust contributes to costs for survey and legal fees.

Reserves, Gifts and Bequests

You can gift or bequest land for a reserve to most of the organisations listed in the covenants, or to environmental groups such as Forest and Bird and the NZ Native Forest Restoration Trust. You can also gift land to your local council, with their agreement, as a reserve. Donation money received by these agencies can be used to protect other special sites.





RESTORATION PLANTING

Enhancing your investment

PLANTING the edges of natural areas helps to shelter and shade the interior, keeping it healthy. Planting can also enlarge an area, increasing its chance of survival.

Re-planting between natural areas can create corridors between streams, bush and wetlands. This helps native plants and animals colonise new areas and gives birds access to food at different times of the year. Wetlands can also be enhanced through raising water levels by filling drains, and letting them overflow.

It is best to choose plants that are already present in similar natural areas nearby. Using nurse species such as kanuka and manuka can help other plants to regenerate.

Eco-sourcing, which is using seeds from local plants, is ideal as some species

vary from place to place and are usually best adapted to their local environment.

Careful planning will help achieve the best results. Questions to think about are:

- What you want to achieve - do you want to attract birds, stop erosion, or extend a natural heritage area?
- What species best suit the site?
- When and how should you plant?
- How much maintenance will plants need - mulching, fertiliser, watering?

Environment B-O-P and the Department of Conservation can advise you about restoration on your property.

Get a copy of "Native Forest Restoration - A Practical Guide for Landowners", published by QEII National Trust, from your local library.

Getting help to **protect** and **enhance** your Natural Heritage Area

Funding assistance

YOU can apply to a number of agencies for funding assistance to protect a natural heritage area on your property. Environment B·O·P and some district councils may offer funding for fencing or help with pest control.

The Nature Heritage Fund, the QEII National Trust and, for Maori land, Nga Whenua Rahui, may also provide funding. Contact details for these organisations are listed on page 23 of this booklet. Environment B·O·P or your district council will also be able to point you in the right direction.

Working with others

WHEN a natural heritage area covers more than one property or affects a community, a group approach can work well. Care groups and community groups are about people joining forces to help protect an area.

The Bay of Plenty has several community groups, involving farmers, foresters, local Maori, businesses, schools and other interested people. By pooling resources, these groups tackle difficult local problems, and can receive sponsorship and grants.

For more information about Care groups, contact Environment B·O·P, your district council or the NZ Landcare Trust.



Case Study

Locals band together to enhance Ngongotaha Stream

In mid-1997 a group from the Ngongotaha community came together to see how they could enhance their local environment.

Several streams - Waiteti, Ngongotaha and the Awahou - were identified as concerns. The group decided to build-up a good reserve of native seedlings before tackling weeds along the streams. In early 1999, eight young people, identified by a community employment group, joined the project and began the clean-up.

So far nearly 1000 seedlings have been planted on the Ngongotaha Stream, fishing areas and pathways have been prepared, and hectares of blackberry have been cleared. The community hopes to continue the project with the support of the Rotorua District Council and Environment B.O.P.

Self-help programmes

SELF-HELP control by landowners and occupiers is vitally important for all animal pest control and for enhancement of natural heritage areas. Environment B.O.P provides advice and information on animal pest control and will help set up and maintain self-help possum control schemes. This type of programme has worked well in our region by getting landowners working together to reduce pest numbers.

Subdivision and transferable development rights

SUBDIVISION can be used to help protect natural areas through the consent process. To encourage landowners to protect natural heritage areas some district councils offer transferable development rights or protection lots.

This method allows a landowner to gain additional subdivision rights if the natural heritage area is legally protected (generally by a covenant with the district council). Some councils will waive reserve contributions where a natural heritage area is covenanted.



KOKAKO AND CHICKS



Case Study

Pest control allows kokako to breed

THE Kaharoa Kokako Trust was formed in 1997 by a small group of local residents, to try and ensure the survival and long-term protection of kokako in the Kaharoa conservation area - a reserve of 976 hectares, 12 kilometres north of Lake Rotorua.

Past experience had shown that breeding success increased dramatically during seasons of pest control. The trust developed a possum and rat baiting programme for one-third of the total area. Results improved from no breeding successes in 1997 to 50 per cent success in the 10 pairs surveyed in 1999. Even better results are expected in the next survey.

The programme is being pulsed so that one-third of the reserve is baited at any one time. This is a manageable area for the volunteers, it makes optimum use of time and money, it reduces the amount of toxin being used in any given area, and kokako numbers should be sustained in non-baited areas.

Environmental plans and advice

ENVIRONMENT B·O·P works with landowners to develop environmental plans for specific properties.

An environmental plan identifies the best land management techniques for the individual situation, and can include fencing and replanting of areas in native species.

Environment B·O·P can provide free advice on land management, and in some cases funding assistance will be available for fencing and planting. The Department of Conservation and some district councils provide advice and financial assistance for environmental plans.

Good land management will help to protect natural heritage areas.



Case Study

Environmental plan ensures future of native forest

Hans and Jan Pendergrast of Oropi have developed and implemented an environmental plan for their property, with the financial assistance of Environment B.O.P and QEII National Trust.

They have retired steep land and native forest from grazing, and carried out pest control.

A QEII National Trust covenant has been used to protect the native forest. The management goals of the Pendergrasts are to be conscientious stewards of their farm and to:

- Pass the land on in good health to the next generation;
- Develop the property without detrimentally affecting the surrounding protected native forest;
- Maintain the productive pastoral and exotic timber base of the farm.



Who does what?

Agencies and their responsibilities

MANY of the remaining areas of native bush and wetlands in our region are on private land, so landowners or occupants undertake day-to-day management. However, a number of agencies are also involved in protection of natural areas in the Bay of Plenty.

If you need more information or advice, any of the following organisations will be happy to help:

Environment B·O·P

- Gives advice about plant and animal pests and land management
- Helps with some pest control work.
- Inspects and monitors plant and animal pests.
- Develops environmental and farm plans.
- Provides funding for approved protection projects.
- Provides information on natural areas.
- Processes consents and gives advice on discharges, diversion of water, earthworks and vegetation clearance.

Call the Environment B·O·P free phone - 0800 ENV BOP (0800 368 267).

District Councils

- Give advice about heritage protection options.
- May provide funding or rates relief for protection of natural areas.
- Manage recycling and rubbish disposal.
- Process consents for subdivision, vegetation clearance and housing developments etc.
- Ensure dog control.
- Provide information on natural areas.

Policies vary from district to district, so call your local District Council to find out how they can help you.

<i>Western Bay of Plenty District Council</i>	07 571 8008
<i>Tauranga District Council</i>	07 577 7000
<i>Rotorua District Council</i>	07 348 4199
<i>Taupo District Council</i>	07 377 9899
<i>Whakatane District Council</i>	07 307 9800
<i>Kawerau District Council</i>	07 323 8779
<i>Opotiki District Council</i>	07 315 6167



Department of Conservation

- Manages threatened species.
- Provides information on natural values and helps with species identification.
- Carries out the Protected Natural Areas Programme.
- Manages public conservation land.
- Gives advice on protection of natural areas and help to covenant or reserve areas.

<i>Bay of Plenty Conservancy Office</i>	07 349 7400
<i>Rotorua Area Office</i>	07 348 3610
<i>Tauranga Area Office</i>	07 578 7677
<i>Rangitaiki Area Office</i>	07 366 1080



FOREST LANDSCAPE

QEII National Trust: Provides covenants for natural areas and can assist with funding. Phone Wellington 04 472 6626, or Tauranga 025 5770 330.

Forest and Bird: Provides local conservation and protection advice, and co-ordinates community protection projects. Phone Wellington 04 385 7374, for local contact numbers.

NZ Landcare Trust: Assists with and gives advice about Landcare groups. Phone Christchurch (03) 349 2630 for local contact numbers.

Fish & Game New Zealand: Gives advice and carries out management, protection and enhancement of wetlands and streams. Phone Rotorua 07 357 5501.

Nga Whenua Rahui: Assists with protection of natural areas on Maori land. Phone Wellington 04 471 3107.

Nature Heritage Fund: Provides funding for protection of natural areas. Phone Department of Conservation, Wellington 04 471 0726.

NZ Native Forest Restoration Trust: Purchase and restoration of natural heritage areas. Phone Auckland 09 636 7564.



Glossary of terms

Bait station - Container for laying poison bait.

Biodiversity - Variety of life on earth.

Buffer area - An area established around a natural site to separate it from surrounding activities.

Covenants - Binding agreements or contracts usually registered on the land title.

Culvert - A drain or covered channel that crosses under a road or track.

Eco-sourcing - Use of native seeds or cuttings from local sources.

Natural corridors and networks - An area of native plants, or a water body between natural heritage areas.

Propagation - Creation of young plants from cuttings or seeds.

Regeneration - Regrowth of plants in a disturbed natural area.

Scrub - Regenerating native forest, usually consisting of manuka and kanuka.

Siltation - Infilling of a water body with silt.

Tangata whenua - In relation to a particular area means the iwi, or hapu, that holds customary authority over an area.

Wetland - Includes permanently or intermittently wet areas, shallow water, and land water margins that support a natural ecosystem of plants and animals that are adapted to wet conditions. (Source: RMA 1991.)



Further reading/information

Environment B·O·P - *"Sustainable Options"* Fact Sheets

Environment B·O·P - *"The Good Plant Guide"* (1996)

Department of Conservation - Fact Sheets

Department of Conservation, Hamilton - *"Trees for Tomorrow"* (1993). A practical guide to the planting, care and protection of native trees on the farm.

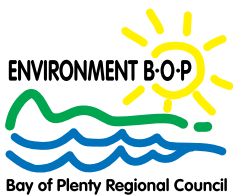
Department of Conservation, Wellington - *"Voluntary protection of nature on private property: Your Land, Your Choices."* (1998).

QE11 Trust, Wellington - *"Native Forest Restoration: A Practical Guide for Landowners."* (Tim Porteous, 1993).

Acknowledgements/references

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