

working with wetlands



in Hawke's Bay and the East Coast



so you want to create or restore a wetland?

then you already know that wetlands are very special places.

what is a wetland?

A wetland is just that – wet land. In general terms, any land that is permanently or frequently wet and supports a natural ecosystem of plants and animals adapted to wetland living is called a wetland. Damp land without wetland plants, such as temporary ponds, low-lying land with patches of rushes, or temporary watercourses, are wetlands, that can be good places to restore or convert into a permanent wetland.

Wetlands are some of New Zealand's most diverse habitats. They're home to an amazing range of plants and animals, many of which are not found anywhere else in the world. They are also some of our most rare and at risk ecosystems.



Protecting and restoring wetland habitats can benefit us in many ways...

- Recreation
- Wildlife habitat
- Water absorption during wet periods and flood control
- Sediment collection
- Aesthetics
- Reduced stock loss
- Hunting
- Nutrient filtering
- Water release during dry periods
- Stabilise banks
- Maori cultural resources

Conservation and restoration projects make a big difference. It's not difficult to create the right conditions for our intriguing wetland wildlife.

There are groups and individuals throughout the East Coast and Hawke's Bay already repairing our neglected wetlands. You may like to join an established group or start your own project.

This guide is brought to you by Hawke's Bay Regional Council, Fish & Game New Zealand, the Department of Conservation and Gisborne District Council. We are committed to wetland restoration in our regions. If you need help with your project, we are happy to provide free advice.

(See page 15 for contact details.)



Department of Conservation
Te Papa Atawhai



Cover photos: Main - Te Karamu enhancement, bottom left - spoonbill and shag, bottom right - Te Wherowhero Lagoon community group



working with wetlands

historical perspective

Wetlands were once a dominant feature of the New Zealand landscape, one that has largely disappeared from Hawke's Bay. Swamps once contained large areas of flax, raupo, toetoe and cabbage trees, and kahikatea swamps were also widespread. These places were regarded by Maori as taonga, of great significance.

Some of the historical uses are still relevant to today and can be an important aspect when restoring wetlands. Some of the ancient values are even more important today for good farming, good water management, and providing secure habitats for eels, birds, fish and insects.

Most early inhabited sites were close to wetlands, rivers and lakes. The resources these waterways contained were a source of mana to the local people, who were not only able to meet their own local needs but could provide for their manuhiri (visitors) giving a hapu (local tribe) mana (standing). Wetlands were therefore treated with care.

Wetlands were a major source of food for Maori and early European settlers alike - tuna (eels), koura (freshwater crayfish), various whitebait species, kakahi (freshwater mussels), berries from various trees (especially kahikatea), and many species of birds. Later settlers introduced other species for food - ducks, swans, trout.

Materials for building and weaving (furnishings, shelter and clothing) came from harekeke (flax), cabbage trees, kuta (*Eleocharis sphacelata*), raupo, toetoe, and the special mud (paru) used for dyeing. Many of the plants also had medicinal uses. For example, harakeke has many medicinal uses,

both for people and for farm animals, as well as providing material for weaving.

Wetlands contained many wahi tapu (sites of cultural significance), including urupa (burial places) and fortified areas for times of need. When carrying out work on an established wetland, seek advice on any points of historical significance that may need protecting or enhancing.

The wetlands that early settlers were so eager to drain and fill in to provide for pastoral farming are in fact a key element in the sustainability of much of our natural environment: the decline in the whitebait catch is directly the result of the loss of wetlands; the same is true for tuna, koura and kakahi which were once important foods. Restoring wetlands will assist in restoring some of this biodiversity and provides for the long term health of these areas.

In Hawke's Bay, ten wetlands of regional significance are being progressively enhanced by Hawke's Bay Regional Council, including Pekapeka and Tukituki estuary. Hawke's Bay Fish and Game has worked with the Council to enhance the Horseshoe wetland at Waitangi, and these organisations and the Department of Conservation also assist landowners with the development of wetlands on private land.

On the East Coast, many landowners are enhancing farm dams, and wetlands under restoration include Oranga wetland at Nicks Head Station, Wherowhero lagoon and Tarau Valley wetland. Funding from QEII National Trust and the Biodiversity Fund support these projects.



Flax swamp 1900s



Raranga or Maori weaving by Mihi Snowden

Swamp



types of wetland

Seepage



Swamps

Swamps are formed by groundwater seepage or surface run-off, for example from streams, and are usually permanently wet. Typical vegetation includes harakeke (flax), cabbage trees, raupo, sedges and rushes, scrub and forest.

Seepage

A sloping area with a steady flow of groundwater and/or surface water, but with less volume than a stream or spring. Low plants, like mosses, cushion plants or sedges are typical.

Estuarine

Habitats in tidal zones, such as salt marshes and mudflats, with herbfields, rushlands, scrublands and mangroves.

Estuarine



Other

Marshes, ephemeral wetlands, fens, mires and bogs are some of the other types of wetland found in the East Coast and Hawke's Bay.

Visit DOC website to help identify wetland types.

Lacustrine



Ephemeral Wetland - Lake Poukawa margin



step by step wetland enhancement

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ongoing planning

step 1

getting started

Before you start, find out what regulations may apply for creating a wetland. You can get advice on whether you need a resource consent from Hawke's Bay Regional Council or Gisborne District Council.

For information on planting, habitats and water flow, ask the Department of Conservation, Fish & Game New Zealand or the Councils. Hawke's Bay Regional Council, Fish & Game and QEII National Trust also have funding assistance available.



Installing a Weir

step 2

information gathering

Take a good look at your wetland and how it sits in the landscape around it. Draw a baseline sketch taking into consideration:

- What is there now?
- What was there originally?
- What do you want it to look like?
- Will it affect your neighbours upstream/downstream?
- Do you need resource consent?

Maintaining water levels is of utmost importance.

- How does water flow into, around and out of the wetland?
- Is the original main source of water adequate or will you need to do some work to bring water back in? This could be as simple as blocking your farm drain.
- Technical advice on water budgets and water control structures can be useful.
- It is normal for water levels in a wetland to fluctuate. Trying to fix the level may increase weed invasion and change plant assemblages over time. You should maintain natural fluctuations wherever possible.

Mark water levels at different times of the year with a depth marker (a wooden post is ideal). Use stakes to mark the edges of the winter and summer water levels. This will help you decide if the water levels need restoring, how wildlife might use it and what to plant where.

An effective method of controlling water levels in a wetland is the use of a weir. These can be simple in design with removal boards to regulate water level.



step 3

defining your goals

Your concept plan and the end result will depend on your goals, so have a clear end point in mind. You can achieve more than one goal (for instance, a habitat designed for waterfowl could also attract native birds) but have a primary goal to work towards.

What do you want to achieve?

Wildlife habitat

You need some open water with an irregular shoreline and dense surrounding aquatic emergent vegetation. Water depth will determine what bird species the wetland will attract. Buffering plants are important to provide shelter and privacy for birds. You might like to set up nesting or roosting islands and a hide for bird watching. The bigger and more diverse your wetland and those in the surrounding area, the more varied your birdlife will be. A dryland bush area next to your wetland will greatly enhance diversity.

Most natural wetlands in New Zealand are primarily waterlogged soil, rather than areas of open water.

Creating open-water ponds can diversify a habitat but is not necessarily wetland restoration. Restoration can be as simple as fencing a wetland and managing weeds. If you want to create open water, choose areas that have been historically cleared of natural vegetation, drained or taken over by weeds, rather than wetlands that have not been disturbed.

Gamebird hunting

Design an open water pond with easy flight lines for waterfowl, particularly ducks, and provide good, safe shooting zones. Fish & Game New Zealand can provide you with advice.

Improving water quality

For nutrient filtering, a long, narrow wetland is ideal. If your wetland is short and wide you may need to work out a way of slowing the water down so it can be retained for as long as possible. A shallow wetland with lots of vegetation will be more effective than open water.



Australasian bittern



North Island fernbird



Kotuku

Freshwater fish habitat

Wetlands with connections to rivers and streams offer excellent opportunities to develop habitat for freshwater fish. You will need to ensure that passage is open all the way to the ocean first. Creating open water areas that can be effectively shaded is crucial and provide valuable rearing and spawning habitat for whitebait and eel species. You could also incorporate some logs and large stumps to provide habitat. Ask agency staff for directions if you would like to visit an example.

Restoration of degraded wetlands

You are most likely to be working with an existing wetland. If you would like simply to restore a wetland closer to its original state, you would be doing less construction work and more weed control, while ensuring water regimes are fully functioning. Your strategies for weed control would be more about maintaining the native plant cover you have and encouraging those plants to spread. Your plantings would not need to be as substantial, as you would be more likely to be supplementing or adding buffers to what you already have. Restoring degraded wetlands can sometimes be quite complex, but can also be as simple as knocking out a few willows and building a fence.



step 4

drawing a concept plan

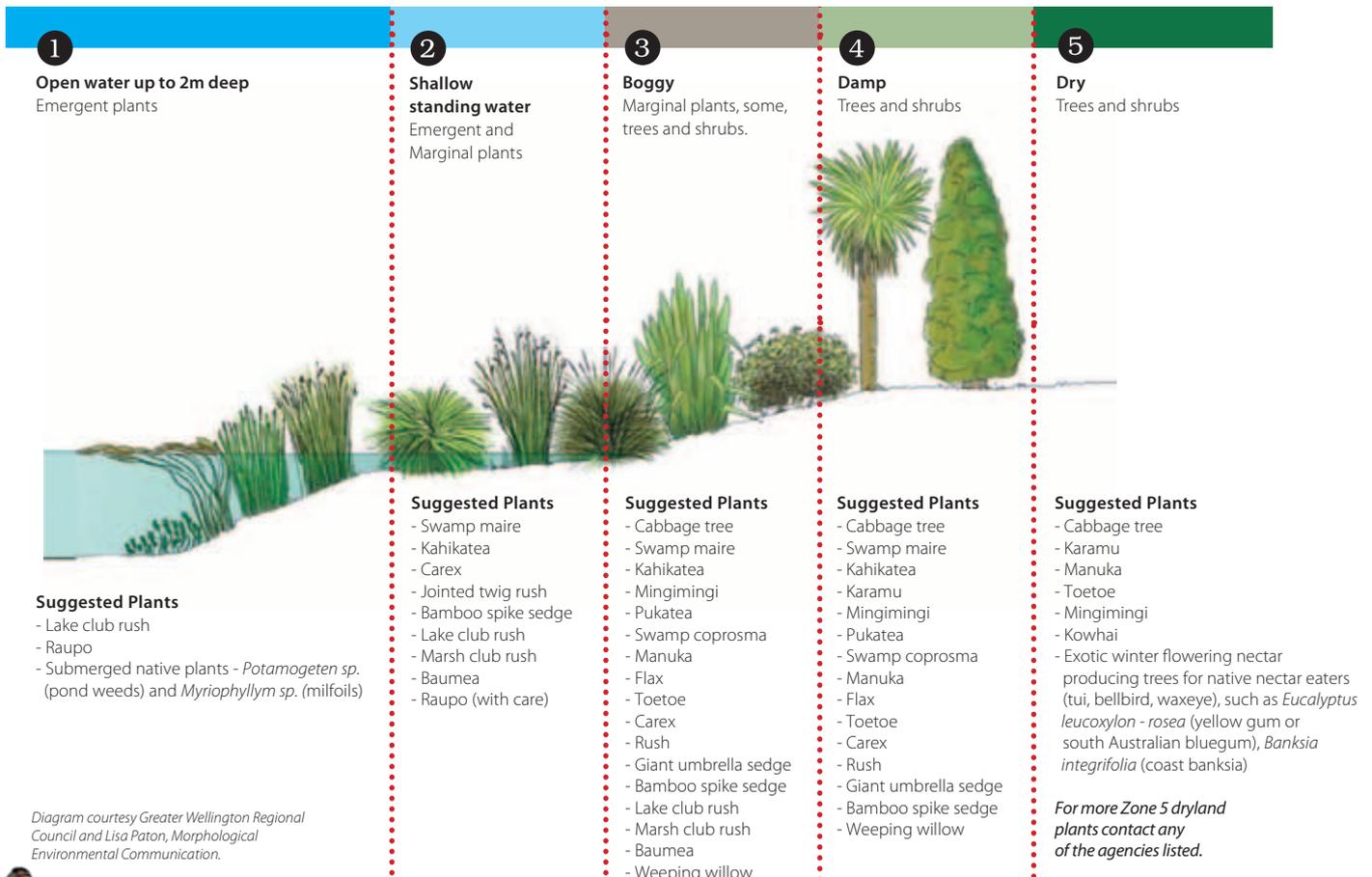
Plan according to the setting you have so that when it comes to fence, excavate and plant you know exactly where everything should go.

You may be able to work with your neighbours to restore a larger area or to extend riparian areas for streams feeding into the wetland.

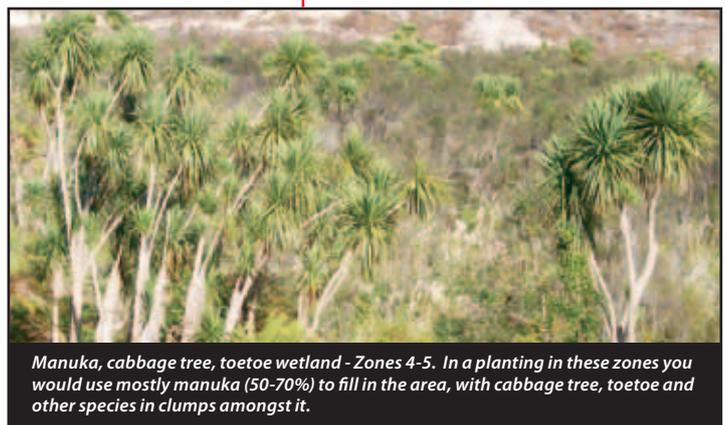
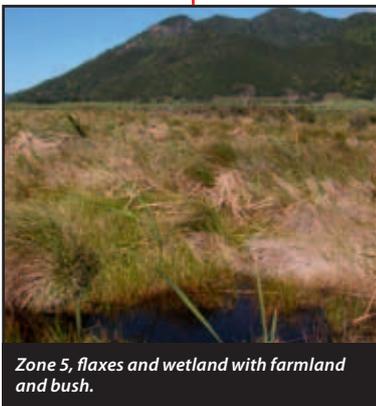
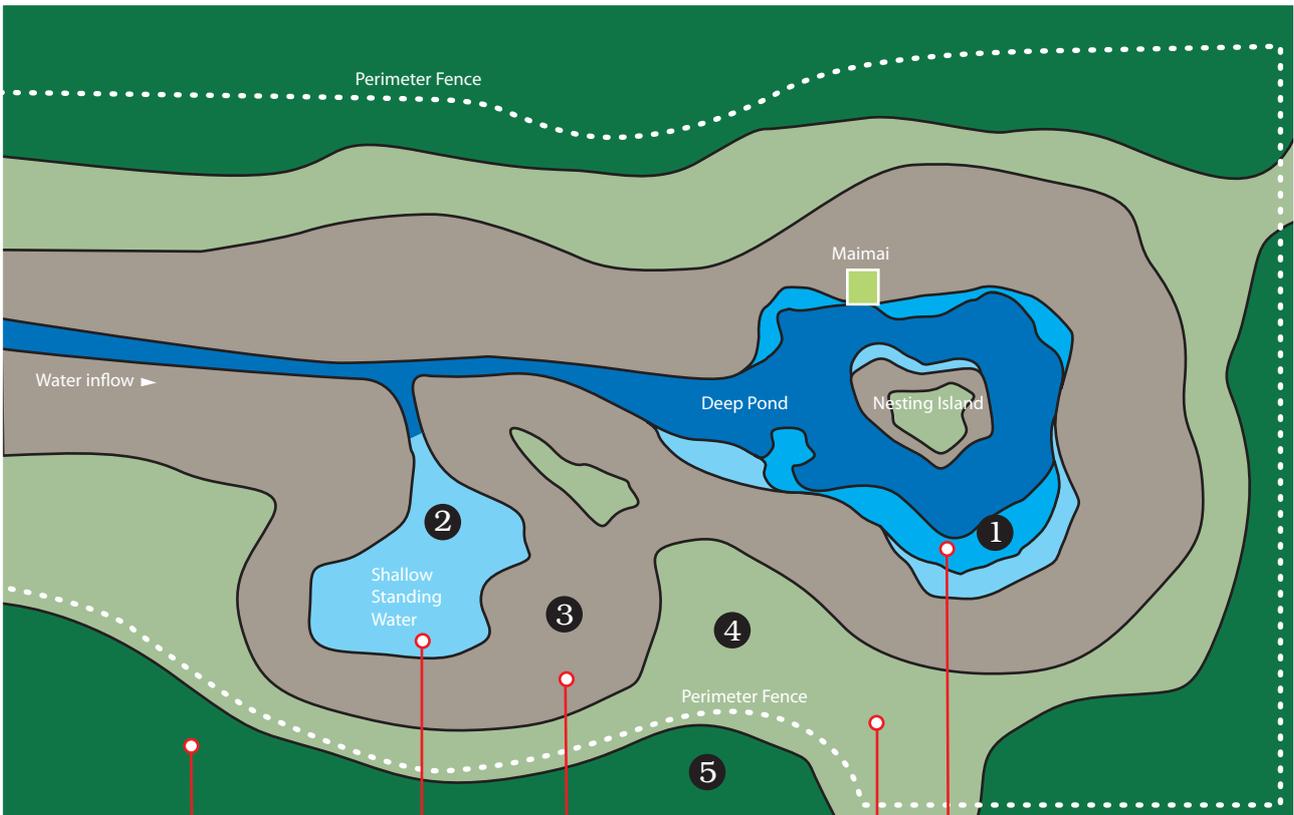
Take into account:

- Wetland layout
- Existing features
- Restoration area and sections
- Water inflows and outflows
- Planting zones
- Plant mixes
- Islands for roosting (with no or short vegetation for wading birds)
- Nesting islands (with taller vegetation for water fowl)
- Some shallow non-vegetated margins for water fowl to access the shore
- Location of bunds, ponds, maimai, hides and viewing platforms

Planting zones



Here's how your concept plan could look... (refer to color key at the top of "planting zones")



step 5

develop your wetland

If you are not doing any earthworks or building water control structures, you will go straight to the next step.

- Complete the concept plan and have a design of the final wetland shape and contours, including water depth.
- Carefully consider water inlet and outlet.
- Discuss your design with an expert or agency representative and use a reputable contractor.
- Make sure you have any required resource consents in place before you start any construction works.
- If you are using earthmoving machinery, check that it is not carrying weeds. If it arrives with big clumps of mud and obvious weed fragments, clean it with a high pressure hose before it enters your wetland area.
- This is a good time to build your fences and mulch any large areas of treated weeds like blackberry, as a first step in planting preparation.

step 6

what plants, where, and how many

Prepare a planting plan

- Try to replicate an existing natural wetland in the area.
- There is value in planting exotics as well as natives. While some people may want a purely native wetland, there are some exotic species that provide better shade/shelter or valuable food sources for native birds.
- If you want to attract native birds, consider the fruiting time of plants you select so you can provide a better year-round food supply.
- Identify different zones so that you know which plant species to use where (see page 13 for plant lists).
- Keep things simple to start with. You can inter-plant and add more specialised plants later.
- Plant a small section at a time, rather than spreading plants too thinly. This helps establish a cover faster, which reduces maintenance.
- Clearly mark off the zone that you will be starting on first.
- Pace out the area and use the tables below to work out how many of each plant you will need.



Wetland created by dam.

(step 6 continued)

Plant spacings

sedges and rushes	0.5m
shrubs	1m
small trees	1.5-2m
large trees	3m

Spacing	Plants per m ²
0.5m	4
1.0m	1
1.5m	0.44
2.0m	0.25
3.0m	0.11

Source: Natural Environments

step 7

where to get your plants

- Use native plants that have been grown from locally sourced seed.
- Buy from a reputable wholesale native plant nursery, close to your location. Local nurseries often source seed from the local area. This is important – ask them!
- At the very least get native plants grown from seed collected in your local area.
- Draw your concept plan, then place your order with the nursery. You may need to adjust your plan for the year depending on plant availability.
- If you are involved in a large project, consider entering into a contract with a specialist nursery.
- Some agencies may provide you with free plants to get you started.
- Do NOT remove plants from the wild.

step 8

preparing your site for planting

Weed control

- Identify all weed infestations on your map.
- Take into account weeds outside your wetland that will re-infest it, for example large grey willow nearby or crack willow upstream, and pampas on the dry areas around the wetland.
- Prioritise where to start - talk to a Hawke's Bay Regional Council or Gisborne District Council plant pest officers or the Department of Conservation, for help with a weed control strategy and advice on the best methods.
- You may need to start weed control a year or so ahead of planting if you have heavy infestations.
- Follow up at least three months before planting.
- Spray the grass in your planting area one month before planting.

HOT TIP *This initial control will not be your last! Weeds require persistent effort over time. If you do not control your weeds properly you will lose all the good work that you have done.*

Fencing

- Fence your wetland *before* you plant to protect it from stock damage.
- If you can, include a buffer strip around the wetland and/or any riparian zones upstream.

Animal pest control

- Pests like rabbits, hares and possums can destroy your plantings. Talk to a animal pest officer at Hawke's Bay Regional Council or Gisborne District Council or the Department of Conservation for advice.
- It is important that animal pest control be done before plants go in the ground.
- Pukekos will also pull out small plants. Properly planted PB 2 grade plants should fix this. (Pukekos are a protected game bird and cannot be killed without permission from Fish & Game New Zealand except by a licensed game bird hunter during the season.)



A good reason for animal pest control

step 9

planting

- Soak plants well and make sure they do not sit in the sun for too long.
- Lay the plants out where they need to be before you start.
- If you're planting as a group, lay the plants out according to the plan, and/or provide everyone with a copy.
- In wet areas, around the water's edge and in shallow water, plant in summer when water levels are low and the water is warm. Otherwise, plant hardy frost-tolerant species in autumn and frost-sensitive species in spring.
- In warmer coastal areas with fewer frosts, planting can be done over winter.
- Plants that need shelter or shade can be planted one or two years later, once cover has developed.
- Plant in groups or clumps, rather than alternating species.
- Avoid scattering too sparsely, or creating straight lines or rows.
- Plant in line with natural features, such as gullies and ridges, not across them.
- Make sure plants are planted in the correct moisture zone.

HOT TIP *Buy bamboo stakes and dip the tops in paint to mark your plants. A flush of weeds can make your plants hard to find.*

Make sure you plant correctly to maximise survival.



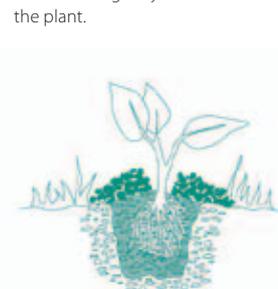
Clear all weeds from your planting site. Dig a hole deeper and larger than the root ball of your plant.



Remove planter bag. Place the plant in the hole and fill the hole with soil to the height shown above. Press gently around the plant.



Water well because a good soak will help the plant to get established.



Put mulch, compost and/or bark chips around the plant, not touching the stem.

step 10

maintenance and monitoring

Maintenance is the key to survival of your plants and success of your project.

- Keep working on weed control. Plantings will need to be cleared of or 'released' from competing weed growth at least three times in the first year, after which every spring and autumn may be sufficient. Keep a close eye on your site as you may need to do it more often.
- You will have less maintenance to do after about three years when the plant canopy closes, but you will need to continue with regular weed control until then.
- If you are using herbicide be careful not to spray your plants. Using a selective herbicide may be an option.
- A spray cone on the nozzle will reduce spray drift. Don't spray when it's windy!
- Mulch can help control weeds but you need to remain vigilant as they may still come through.
- Grass can provide some shelter and help hold moisture in the soil, but you will need to clear an area around each plant until their tops are above the surrounding vegetation.
- Remove weeds entirely.
- Check for new weeds, both in and near to your wetland.
- Control new infestations before they become well established.
- Keep your fences in good order.
- Monitor your planting for signs of pest animals. If you see signs of presence or browsing step up your control.

HOT TIP Photos are a good way of monitoring plant survival rates, pest and weed control, and success of the project generally.



Spray cone on nozzle to avoid spray drift. Blue dye is used to show where you've sprayed



Plant & Animal Pests

Pest control work is likely to be required regularly to maintain wetlands in an optimum condition for wildlife. Because of their shallow water nature and nutrient-rich status, wetlands infill with sediments and are colonised by terrestrial plants. Raupo and certain species of willow (e.g. crack and pussy willow) can quickly invade open water areas and reduce the available habitat for waterbirds. Introduced predators (ferrets, stoats, possums and feral cats) also need to be controlled as they all pose a severe danger to birdlife, particularly during the breeding season.

Plant Pests

- Crack willow (*Salix fragilis*) and pussy willow (*Salix cinerea*)
- Raupo (although some is beneficial to certain waterbirds if spread is controlled)
- Floating pond weeds (*Lemna minor* and *Azolla rubra*)
- Oxygen weeds (*Lagarosiphon major*, *Egeria densa*, *Elodea canadensis*, and *Hydrilla verticillata*)
- Water hyacinth (*Eichornia crassipes*)
- Hornwort (*Ceratophyllum demersum*)
- Phragmites (*Phragmites spp.*)
- Pampas (*Cortaderia spp.*)
- Blackberry and gorse

Control methods: Water level manipulation, herbicides, cutting and burning, biological controls.

Animal Pests

- Rats
- Cats
- Koi carp
- Hedgehogs
- Mustelids
- Possum
- Mosquito Fish (*Gambusia affinis*)

Control methods: Management of habitats will reduce the effect - low profile islands will prevent rat burrowing, plenty of overhead gives escape cover for broods (weeping willow, *Carrex secta* and other native rush species), and well-fenced areas of dense cover on adjacent dry lands provides for ground-nesting bird species. Traps, poison bait stations, and predator fencing.

Contact your local Department of Conservation office, Hawke's Bay Regional Council or Gisborne District Council for more detailed information on controlling animal and plant pests.

plant guide

The native plants listed here are a good base for any wetland restoration project and are tolerant to a range of conditions. For more information on what would suit your land, talk to your land management officer or at your local nursery or specialist native plant supplier.

plant guide key

	Attracts birds
F = fruit	S = seeds
N = nectar	
FSNW	W = wildlife shelter/nesting
10m	Approx max height
	Full sun

	Partial sun
	Full shade
	Drainage - good
	Drainage - moderate

	Drainage - poor
	Wind sensitive
	Frost sensitive

When to Plant: Means at what stage in the project. Early are the pioneer species that can go in first on bare site. Mid and late species require some shelter from other plants as they can be frost tender or generally grow in moderate to heavy shade.

Enrichment planting: to add diversity to your planting

Plant Name	Visual Description Planting Proportions	When to Plant	Restoration Aim	Zone	Light	Drainage	Wind/Frost	Animal Browse
Cabbage tree Ti kouka <i>Cordyline australis</i> <small>DOC</small>		Tree Moderate numbers in groups	Early-late (late in areas with heavy frosts)	 FSN 10m	3 4 5	 		
Swamp maire Maire tawake <i>Syzygium maire</i> <small>Peter de Lange</small>		Tree Few - enrichment planting	Early-late (late in areas with heavy frosts)	 F 15m	2 3 4		  	Possums (young and mature trees)
Kahikatea <i>Dacrycarpus dacrydioides</i> <small>DOC</small>		Tree Concentrate plantings to create stands. Few to moderate numbers	Early	 FS 30m	2 3 4	 		
Pukatea <i>Laurelia novae-zelandiae</i> <small>Jeremy Rolfe</small>		Tree Plant a few - enrichment planting	Late	25m	3 4	  	  	
Karamu <i>Coprosma robusta</i> <small>Jeremy Rolfe</small>		Shrub Moderate numbers in appropriate zone	Early	 FS 2-4m	4 5	  		Rabbits, hares, cattle. But not possums
Mingimingi <i>Coprosma propinqua</i> <small>Jeremy Rolfe</small>		Shrub Few	Mid	 F 3m	3 4	  		
Swamp coprosma <i>Coprosma tenuicaulis</i> <small>Jeremy Rolfe</small>		Shrub Few	Early	 F 3m	3 4	  	 	
Manuka <i>Leptospermum scoparium</i> <small>John Smith-Dodsworth</small>		Tree Many in appropriate zones. These would make up the bulk of most plantings.	Early	4m	3 4 5			
Flax Harakeke <i>Phormium tenax</i> <small>Peter de Lange</small>		Moderate numbers - plant in groups away from species that will shade them later.	Early	 N 2m	2 3 4	  		
Toetoe* <i>Cortaderia fulvida</i> <small>Scion</small>		Grass Especially in inland districts. Few	Early	2m	3 4 5	  		Rabbits, young plants
Toetoe* <i>Cortaderia toetoe</i> <small>Scion</small>		Grass More coastal. Few	Early	2m	3 4 5	  		Rabbits, young plants

***Important note:** Similar to invasive pampas grass which should **not** be planted. Pampas has bushy erect flower heads late January - mid April and dead leaves curl at the base; versus toetoe which droops, flowers in October - January and has a white waxy substance at the base of the leaves.

plant guide key

Attracts birds
F = fruit **S** = seeds **N** = nectar
FSNW **W** = wildlife shelter/nesting

10m Approx max height

Full sun

Partial sun

Full shade

Drainage - good

Drainage - moderate

Drainage - poor

Wind sensitive

Frost sensitive

When to Plant: Means at what stage in the project. Early are the pioneer species that can go in first on bare site. Mid and late species require some shelter from other plants as they can be frost tender or generally grow in moderate to heavy shade.

Enrichment planting: to add diversity to your planting

Plant Name	Visual Description Planting Proportions	When to Plant	Restoration Aim	Planting Conditions					Animal Browse
				Zone	Light	Drainage	Wind/Frost		
Carex Pukio <i>Carex secta</i> John Smith-Dodsworth	Sedge Many in appropriate zones. These would make up the bulk of the plantings in wetter areas	Early	W 2m	2, 3, 4					
Carex <i>Carex virgata</i> John Smith-Dodsworth	Sedge Many in appropriate zones. These would make up the bulk of the plantings in wetter areas	Early	W 1m	3, 4					
Carex <i>Carex geminata</i> John Smith-Dodsworth	Sedge Few	Early	W 1m	3, 4					
Jointed twig rush <i>Baumea articulata</i> John Smith-Dodsworth	Sedge Few - enrichment planting; limited by zone	Early	W 1.8m	2					
Rush <i>Baumea tenax</i> Jeremy Wolfe	Sedge Few - enrichment planting	Early	W 0.5m	3, 4					
Giant umbrella sedge <i>Cyperus ustulatus</i> John Smith-Dodsworth	Sedge Some die-back in winter. Few - enrichment planting	Early	W 0.8m	3, 4					
Bamboo spike sedge <i>Eleocharis sphacelata</i> John Smith-Dodsworth	Sedge Few - enrichment planting; limited by zone	Early	W 1.2m	1, 2					
Lake club rush <i>Schoenoplectus tabernaemontani</i> John Barkla	Sedge Propagate by subdivision. Few - enrichment planting; limited by zone	Early	W 2m	2, 3					
Marsh club rush <i>Bolboschoenus fluviatilus</i> John Smith-Dodsworth	Upright sedge Stems die back over winter. Propagate by subdivision. Few - enrichment planting	Early	W 1.5m	2, 3					
Baumea <i>Baumea rubiginosa</i> John Smith-Dodsworth	Sedge Few - enrichment planting	Early	W 1m	2, 3					
Raupo <i>Typha orientalis</i> John Smith-Dodsworth	Herb Dies off in winter. Should not be introduced into predominantly shallow water areas	Early	W 2m	1, 2					

introduced wetland plants

15

Many introduced, non-native plants can add value to a wetland environment. This could be through their aesthetic qualities, functionality or their ability to provide food and habitat for wildlife, including native birdlife. Some of these have the added advantage of being easy to establish and fast growing.

- Non invasive weeping willows help to shade and cool waterways while providing cover for waterfowl
- Tree Lucerne is a quick-to-establish food source for native birds. It provides cover for ground nesters and also serves as a nurse crop for slower growing plant species
- Pollen and nectar rich flowering annuals such as buckwheat and phacelia encourage insect diversity
- Nectar producers such as coastal banksia and eucalyptus provide good food for native birds
- Flowering cherries and crab-apples provide a feeding opportunity during the winter when food can be scarce
- Swamp cypress and deciduous hardwoods can provide stunning autumn colours
- A fast growing shelter belt may be necessary if wave-lap erosion is a problem. Similarly, soil conservation trees (e.g. willows and poplars) may be necessary where there is a problem with slope or bank stability

Note - Some introduced plants, particularly fruiting trees such as *prunus spp*, are dispersed by birds. You should consider this when planting, especially if you live near areas set aside for conservation.

For advice on introduced plants contact Fish & Game.



Tui in banksia.

help and advice

freely available from...

Agency	Type of advice	Contact details
Hawke's Bay Regional Council (In HB contact your local district/city council for advice on policies, rules and any incentives available.)	<ul style="list-style-type: none">• Wetland design and planting advice• Plant and animal pests• Resource consent - including farm dams• Funding assistance• Legal protection• Publications	0800 108 838 (Hawke's Bay residents only) 06 835 9200 www.hbrc.govt.nz
Fish & Game New Zealand, Hawke's Bay Region	<ul style="list-style-type: none">• Wetland design and funding• Gamebird habitat• Animal and plant pests• Planting advice, publications• Legal protection/covenants	0800 242 342 (0800 2HBFGC) www.fishandgame.org.nz
Gisborne District Council	<ul style="list-style-type: none">• As above, except funding assistance• Vegetation clearance	0800 653 800 (East Coast residents only) 06 867 2049 www.gdc.govt.nz
Department of Conservation	<ul style="list-style-type: none">• Wetland design• Native wildlife and plants• Animal and plant pests• Legal protection• Publications	East Coast Area Office 06 869 0460 Hawke's Bay Area Office 06 834 3111 www.doc.govt.nz
QEII National Trust (Ask for your local representative contacts)	<ul style="list-style-type: none">• Covenants• Possible funding assistance	National phone 0508 732 878 East Coast Representative (Malcolm Piper) 06 867 0255 mpiper@clearnet.net.nz www.nationaltrust.org.nz

Other useful websites

- www.weedbusters.org.nz - for weed identification and control
- www.nzpcn.org.nz - (The New Zealand Plant Conservation Network) for information on native plants and weeds
- www.bush.org.nz - (The New Zealand Ecological Restoration Network) for general restoration information
- www.landcare.org.nz - (NZ Landcare Trust) "Sustainable land management through community involvement"



working with wetlands

in Hawke's Bay and the East Coast



Department of Conservation
Te Papa Atawhai



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