

coastal planting guide 3



No. 3



Auckland
Regional Council
TE RAUHITANGA TĀIAO

Coastal Forests

This factsheet provides information on replanting coastal forest areas. Replanting coastal forests can range from restoring existing degraded remnants, or re-establishing plant cover on bare sites. Replanting these areas with appropriate species increases biodiversity, provides habitat for wildlife, assists with erosion protection and enhances the natural character and scenic values of the coast.

Coastal forest has a character all of its own and in the Auckland Region naturally includes a rich mix of species including pōhutukawa, pūriri, karaka, kohekohe, kawakawa, taraire, tawāpou, kowhai, houpara, karo and other plants adapted to living in the coastal environment. The trees and other plants that make up coastal forests are able to withstand strong winds, salt spray and storms. Their leaves often have a furry or a waxy coating to protect them from salt damage and water loss.

In the Auckland region coastal forest often occupies steep, erosion-prone sandstone slopes and cliffs above the shore. Examples of remaining coastal forest can be seen on the shores of the Manukau Harbour – such as at Wattle and Wesley Bays and parts of the North Shore. Other fine examples of coastal forest remnants can be seen on the east coast at Long Bay, Wenderholm and Tawharanui Regional Parks and on the Hauraki Gulf Islands. Lone, sprawling and twisting pōhutukawa trees are sometimes all that remains of a once more diverse coastal forest. On the West Coast there are extensive stands of coastal forest between Whatipu and Muriwai and here, the coastal vegetation is more wind sculpted than in the east. Coastal forests are found in the more sheltered gullies and ravines rather than on the wind exposed cliffs where kānuka, mānuka and flax are pressed close against the cliffs and behind them, wind-shorn pōhutukawa grow.

Coastal Forest, Mahurangi Harbour.

Did you know?

The coastal forest of northern New Zealand is unique and contains species that do not occur further south (e.g. pōhutukawa, taraire, tawapou, tawaroa, puriri) or in the rest of the world!

Planting list

A range of species, which are successful in coastal forest areas, are listed in the following table. It should be noted that there are many other native plants that would be suitable for these areas around Auckland, however this table provides a manageable number of species that should result in a functional ecosystem.

It is important that **ecologically appropriate** species are planted, and where practicable to obtain plants that have been grown from local sources (ie 'eco-sourced'), so they are able to cope with local environmental conditions. Plant in autumn for best results, so that the plants can establish well before the dry summer months.

Plants with marked with * are colonising plants suitable for planting in open situations, where existing vegetation is lacking or has been removed to clear pest plants from the site. Other species in this list are more suitable for interplanting in existing vegetation, or after the initial colonisers have become established and have begun to provide some shade and shelter.

Māori name/ Common name	Botanical Name	Life Form	Height	Comments
akepiro	<i>Olearia furfuracea</i>	small tree	7m	Exposure tolerant. Daisy-like flowers in summer.
hangehange	<i>Geniostoma rupestre</i> <i>var. ligustrifolium</i>	shrub or small tree	4m	Lowland shrub with light green foliage. Needs protection from wind when young. Useful understorey species.
houpara/ coastal fivefinger*	<i>Pseudopanax</i> <i>lessonii</i>	small tree	7m	Good colonising tree in damaged coastal areas. Glossy leathery leaves. Responds well to pruning. Very hardy.
kānuka*	<i>Kunzea ericoides</i>	tree	10m	Good colonising species. White flowers in spring-summer.
karaka*	<i>Corynocarpus</i> <i>laevigatus</i>	tree	18m	Hardy, leafy canopy tree. Produces large numbers of bright yellowish-orange fruit in summer.
karamū*	<i>Coprosma robusta</i> or <i>C. macrocarpa</i>	shrub or small tree	5m	Hardy shrub with abundant orange berries in late summer-autumn. Moderate salt tolerance. Attracts birds.
karo*	<i>Pittosporum</i> <i>crassifolium</i>	small tree	10m	Common vigorous coastal shrub or plant, grey-green foliage and dark red flowers that are scented at night. Tolerates strong wind, salt and poor soil. Flowers attract birds.
kawakawa	<i>Macropiper</i> <i>excelsum</i>	small tree	7m	Large heart shaped leaves, usually holed by chewing native moth. Orange fruits in summer attract birds. Self-seeds easily. May need shelter to establish.
kohekohe	<i>Dysoxylum</i> <i>spectabile</i>	large tree	17m	Prefers shady sites. Vulnerable to possums. Flowers and fruits attract birds.
korokio	<i>Corokia cotoneaster</i>	shrub	3m	Interlacing shrub with dark bark. Can also be used for hedging in coastal gardens.
koromiko*	<i>Hebe stricta</i> / <i>H. macrocarpa</i>	shrub	4m	Coloniser. Long white flower spikes in spring.
kōwhai	<i>Sophora</i> <i>microphylla</i>	tree	10m	Wind hardy and drought tolerant. <i>Sophora fulvida</i> should be planted on the Waitakere west coast only.
kōwharawhara/ coastal astelia	<i>Astelia banksii</i>	herb	1-2m	Plant on dry slopes. Long droopy silver-green leaves. Often found growing on pohutukawa.
māhoe	<i>Melicytus ramiflorus</i>	tree	10m	Fast growing tree. Good for damp, shady sites. Very hardy.
mākaka/NZ broom	<i>Carmichaelia australis</i>	small tree	10m	Small bush with lavender flowers.
mangeao	<i>Litsea calicularis</i>	tree	15m	May be hard to establish but grows into an attractive tree.
mānuka/tea tree*	<i>Leptospermum</i> <i>scoparium</i>	small tree	8m	Grows vigorously and tolerates most conditions. Important pioneer species. Forms well developed root system that stabilises banks. White flowers. Avoid disturbing roots when planting.

Māori name/ Common name	Botanical Name	Life form	Height	Comments
māpou*	<i>Myrsine australis</i>	small tree	7m	Slender tree with red stems. Hardy. Attracts birds.
ngaio*	<i>Myoporum laetum</i>	small tree	8m	Very wind hardy. Fleshy gland-dotted leaves. Good shelter tree. Frost tender.
nīkau	<i>Rhopalostylis sapida</i>	palm	10m	Slow growing. Red berries provide food for kereru/native pigeon.
pōhuehue/ wire vine	<i>Muehlenbeckia complexa</i>	vine	1m	Hardy, ideal for banks and other difficult sites. Grows well on a trellis forming a dense hedge. Vigorous shrubby ground cover. Dense tangled mass along rocky coast and dunes. Plant in zone immediately landward of sand binders.
pōhutukawa	<i>Metrosideros excelsa</i>	large tree	25m	Tolerates tough conditions but vulnerable to possums. Crimson flowers at Christmas attract birds.
porokaiwhiri/ pigeonwood	<i>Hedycarya arborea</i>	tree	15m	Attractive glossy, green leaves, bright orange fruit and black wood. Attracts birds.
pūriri	<i>Vitex lucens</i>	large tree	20m	Pink flowers and berries. Prefers fertile sites. Seeds distributed by kereru/native pigeon.
rangiora	<i>Brachyglottis repanda</i>	small tree	7m	Striking large leaves with grey undersides. Creamy flowers in spring.
rewarewa/ NZ honeysuckle	<i>Knightia excelsa</i>	tree	30m	Slender tapering tree with long narrow serrated leaves. Rusty red flowers in spring and summer attract tui.
taraire	<i>Beilsmeidia taraire</i>	large tree	20m	Frost tender. Large rounded glossy leaves. Big purple fruit eaten by kereru/native pigeon.
taupata*	<i>Coprosma repens</i>	shrub or small tree	2-4m	Large shrub or small tree with dark green, glossy, rounded leaves. Very hardy, excellent wind and seaspray shelter. Orange berries attract birds.
tawāpou	<i>Pouteria costata</i>	tree	15m	Hardy but frost tender. Large orange to dark crimson berries in autumn.
tī kōuka/ cabbage tree*	<i>Cordyline australis</i>	tree	17m	Erect tree with crown of narrow leaves tufted at the end of branches, white flowers in spring. Requires some protection when young. Moderate tolerance to salt and wind. Fruits attract birds.
wharangi	<i>Melicope ternata</i>	small tree	8m	Frost tender when young. Attractive shiny green foliage.
whau	<i>Entelea aborescens</i>	small tree	6m	Relatively short-lived. Fast growing tree with large leaves. Attractive white flowers.

Ancient puriri in coastal forest

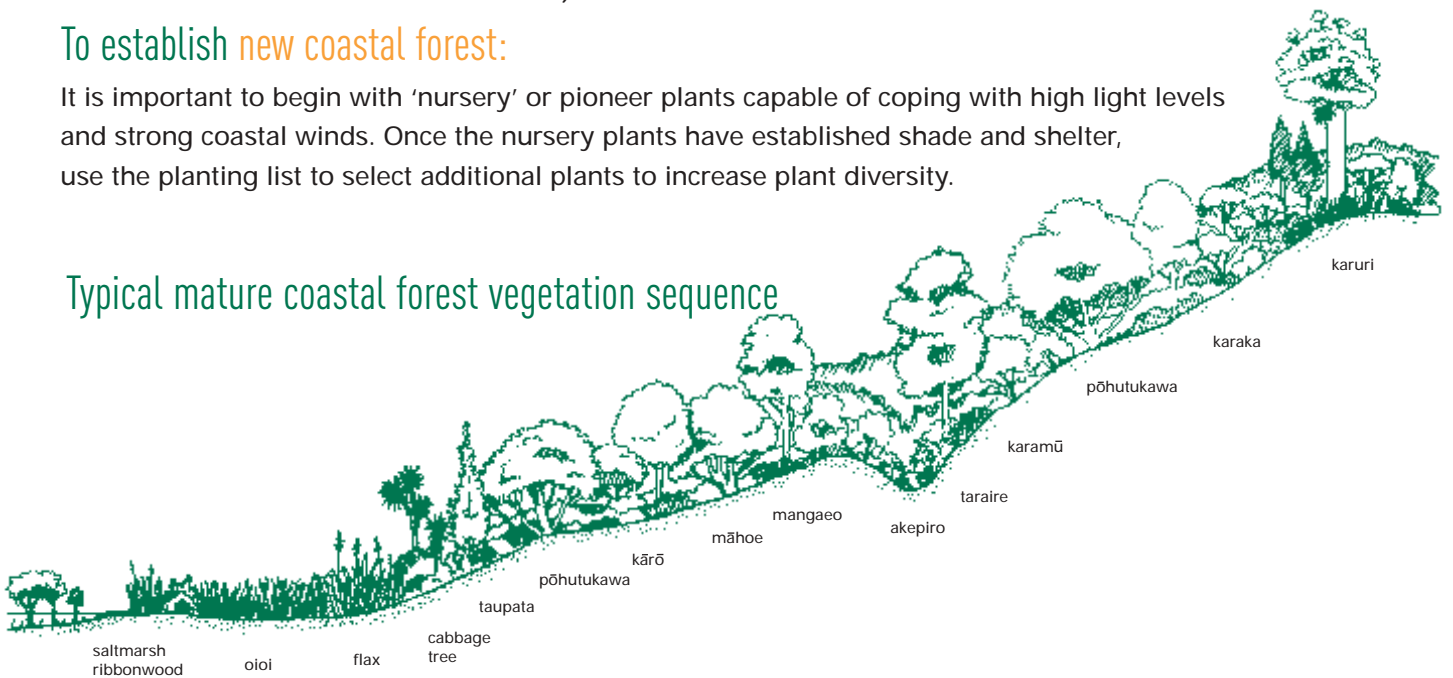
For sites with remnant coastal forest consider:

- Fencing off from stock
- Controlling weeds and pests
- Interplanting with non-pioneer trees e.g. pohutukawa, taraire, puriri (refer to Coastal Planting Guideline 1 for further information).

To establish new coastal forest:

It is important to begin with 'nursery' or pioneer plants capable of coping with high light levels and strong coastal winds. Once the nursery plants have established shade and shelter, use the planting list to select additional plants to increase plant diversity.

Typical mature coastal forest vegetation sequence



References

Auckland Regional Council, 2001. *Riparian Zone Management Guidelines*, TP148.

Auckland Regional Council Factsheet – *Good Start Planting Guide*.

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Crowe, A., 1995. *Which Coastal Plant?* Viking Publishers.

Morton, J. 1993. *A Natural History of Auckland*. Bateman in association with ARC.

Need More Information?

Many of the native plants listed in the coastal planting guidelines are on display at the Auckland Regional Botanic Gardens in Manurewa. Please feel free to visit the Gardens to familiarise yourself with these plants. For further information on coastal planting, local nurseries, pest control, funding opportunities, coastal management and ecological restoration please contact Enviroline on (09) 366 2000 or check out our website – www.arc.govt.nz

Other factsheets in this series:

- 1 Coastal Planting Guide
- 2 Dunes
- 4 Coastal cliff tops
- 5 Coastal wetlands, saltmarshes and estuaries
- 6 Coastal clay banks



Pohutukawa Flower.

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