

Pohutukawa • Oi

exposed coastal ecosystem

KEY ♥ Nurse plant ■ Main component ❁ rare ✕ toxic to toddlers 🐟 coastal sites

For restoration, in this habitat: ●●● plant liberally ●● plant generally ● plant sparingly

Recommended planting sites

			Back Dunes	Boggy Area	Escarpment	Sharp Ridge	Steep Slope	Valley Bottom	Broad Ridge	Gentle Slope	Alluvial Flat/Tce
Medium trees											
<i>Beilschmiedia tarairi</i>	taraire	❁						●		●	
<i>Corynocarpus laevigatus</i>	karaka	✕■	●				●	●			●
<i>Kunzea ericoides</i>	kanuka	♥■	●●			●●●	●●●	●●●	●●●	●●●	●●●
<i>Metrosideros excelsa</i>	pohutukawa	♥■	●		●	●	●●	●	●●	●	●
Small trees, large shrubs											
<i>Coprosma lucida</i>	shining karamu	♥			●●	●●●	●●●		●●	●●	
<i>Coprosma macrocarpa</i>	coastal karamu	🐟♥	●●			●●	●●	●	●	●	●
<i>Coprosma robusta</i>	karamu	♥	●				●	●	●	●	●
<i>Cordyline australis</i>	ti kouka, cabbage tree	♥	●	●●		●●	●	●●	●	●	●●
<i>Dodonaea viscosa</i>	akeake	🐟	●			●	●		●		
<i>Entelea arborescens</i>	whau	🐟♥	●				●	●			●●
<i>Geniostoma rupestre</i>	hangehange	♥■	●●			●	●●	●●	●●	●●	●●
<i>Leptospermum scoparium</i>	manuka	♥■	●●	●●	●	●●●	●●●	●●●	●●●	●●●	●●●
<i>Leucopogon fasciculatus</i>	mingimingi		●		●●	●●●	●●●	●	●●	●●	●
<i>Macropiper excelsum</i>	kawakawa	♥■	●		●		●●	●	●	●●	●●●
<i>Melicope ternata</i>	wharangi	🐟	●			●	●		●	●	●
<i>Melicytus ramiflorus</i>	mahoe					●	●●●	●●	●	●●	●●●
<i>Myoporum laetum</i>	ngaio	✕	●			●	●		●	●	●
<i>Olearia furfuracea</i>	akepiro				●	●●●	●●●		●●	●●	
<i>Pittosporum crassifolium</i>	karo	🐟	●●		●	●	●	●	●	●	●
<i>Pittosporum ellipticum</i>						●	●		●	●	
<i>Pseudopanax lessonii</i>	houpara	🐟	●			●	●		●	●	●
<i>Rhopalostylis sapida</i>	nikau	■					●	●●		●	●●
<i>Sophora fulvida</i>	west coast kowhai	✕■			●●	●	●				
Shrubs and flax-like plants											
<i>Coprosma crassifolia</i>	stiff-stemmed coprosma	🐟	●●		●			●		●	●●
<i>Coprosma repens</i>	taupata	🐟♥	●●	●	●	●●				●●	
<i>Coprosma rhamnoides</i>			●			●●	●●		●●	●●	
<i>Corokia cotoneaster</i>	bluff korokio	🐟❁			●●	●					
<i>Freycinetia baueriana</i>	kiekie							●			●
<i>Hebe macrocarpa</i>	koromiko		●			●●	●		●●		
<i>Melicope simplex</i>	poataniwha		●			●	●		●		●
<i>Ozothamnus leptophylla</i>	tauhinu	🐟	●●		●	●●	●●		●		
<i>Phormium cookianum</i>	wharariki, coastal flax	♥■	●●		●●●	●●●	●		●		●
<i>Phormium tenax</i>	harakeke, flax	♥■		●●●			●●●	●●	●	●	●
<i>Rhabdothamnus solandri</i>	taurepo		●				●				
Vines and trailers											
<i>Metrosideros perforata</i>	akatea, small white rata				●●	●	●		●	●	



KEY ● fully tolerant ◐ tolerates some ✕ not tolerant
 ◆ tolerates shade during establishment ◊ needs some shade to establish

Tolerance							Planting notes, comments
Sun	Shade	Dry	Moist	Boggy	Poor clay	Harsh wind	
●	●◆	✕	●	✕	✕	◐	<i>Natural neighbours, these medium trees (except taraire) often form groves, ie. a monocultural canopy.</i>
●	●◆	◐	●	✕	✕	◐	
●	✕	●	●	✕	●	●	
●	✕	●	●	✕	●	●	
●	◐	●	●	✕	●	●	<i>The understory of these groves is often kawakawa, hange-hange, nikau and houpara.</i>
●	◐	◐	●	✕	◐	◐	
●	●	●	●	✕	●	◐	
●	◐	◐	●	●	◐	●	
●	✕	●	●	✕	✕	●	
●	◐	◐	●	✕	◐	◐	
●	●	●	●	✕	◐	◐	
●	✕	●	●	●	✕	●	
●	✕	●	●	✕	✕	●	
●	◐	●	◐	✕	◐	✕	
●	◐	◐	●	✕	✕	●	
✕	◊	✕	●	◐	✕	◐	
●	✕	●	●	✕	✕	●	
●	◐	●	●	✕	✕	◐	
●	●	●	●	✕	●	●	
●	●	●	●	✕	●	●	
●	◐	●	●	✕	●	●	
●	●	✕	●	●	✕	◐	
●	◐	●	●	✕	●	●	
●	◐	●	●	✕	●	●	
●	✕	●	◐	✕	●	●	
●	◐	●	●	✕	●	●	
●	✕	◐	●	●	◐	●	
◐	●	●	◐	✕	✕	✕	
●	◊●	◐	●	✕	✕	●	

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	Tolerance						
	Sun	Shade	Dry	Moist	Boggy	Poor clay	Harsh wind
Ferns							
<i>Adiantum aethiopicum</i> makaka, maidenhair (round-leaved)	◐	●	◐	●	✕	✕	✕
<i>Adiantum cunninghamii</i> common maidenhair	◐	●	◐	●	✕	✕	✕
<i>Adiantum hispidulum</i> rosy maidenhair	●	◐	●	●	✕	✕	✕
<i>Asplenium appendiculatum</i> spp <i>maritimum</i>	◐	●	●	●	✕	✕	✕
<i>Asplenium flabellifolium</i> necklace fern	●	✕	●	●	✕	●	●
<i>Asplenium northlandicum</i> leather-leaf asplenium	●	●	◐	●	●	✕	✕
<i>Blechnum blechnoides</i> coastal blechnum	●	●	◐	●	✕	✕	✕
<i>Blechnum membranaceum</i>	✕	●	✕	●	✕	✕	✕
<i>Blechnum novae-zealandiae</i> kiokio ♥	◐	●	✕	●	◐	●	◐
<i>Doodia australis</i> pukupuku	●	●	●	●	✕	✕	●
<i>Hypolepis dicksonioides</i> giant hypolepis	●	◐	◐	●	✕	✕	✕
<i>Lindsaea linearis</i>	●	◐	●	●	✕	✕	◐
<i>Pellaea falcata</i>	●	◐	●	◐	✕	✕	●
<i>Polystichum neozelandicum</i> tutoke, shield fern	◐	✕	◐	●	✕	✕	◐
<i>Polystichum wawranum</i> tutoke, shield fern	◐	✕	◐	●	✕	✕	◐
<i>Pteridium esculentum</i> bracken	●	◐	●	●	✕	◐	●
<i>Pteris comans</i> NZ coastal brake	◐	◐	◐	●	✕	✕	✕
<i>Pteris macilentata</i>	✕	●	✕	●	✕	✕	✕
Low ground plants etc							
<i>Astelia banksii</i> coastal astelia	●	◐	●	◐	✕	✕	●
<i>Calystegia soldanella</i> nihinihi, shore bindweed	●	✕	✕◐	●	✕	✕	✕
<i>Celmisia major</i> var. <i>major</i> Waitakere rock daisy	●	✕	●	●	✕	✕	●
<i>Centella uniflora</i> marsh pennywort	●	◐	●	●	✕	●	●
<i>Coprosma acerosa</i> sand coprosma	●	✕	●	●	✕	✕	●
<i>Cordylone pumilio</i> ti rauriki, dwarf cabbage tree	●	◐	●	●	✕	●	◐
<i>Cotula coronopifolia</i> bachelor's buttons	●	✕	✕	●	●	✕	●
<i>Dianella nigra</i> turutu, NZ blueberry	●	●	●	●	✕	●	◐
<i>Dichondra repens</i> mercury bay weed	●	◐	●	●	✕	✕	●
<i>Disphyma australe</i> horokaka, NZ iceplant	●	✕	●	✕	✕	✕	●
<i>Hebe bishopiana</i> Huia hebe	●	✕	◐	●	✕	✕	●
<i>Hebe obtusata</i> west coast cliff hebe	●	✕	●	●	✕	✕	●
<i>Leucopogon fraseri</i> patotara	●	✕	●	●	✕	✕	●
<i>Muehlenbeckia complexa</i> pohuehue	●	✕	●	●	●	✕	●
<i>Nertera depressa</i> nertera	●	●	✕	●	◐	✕	◐
<i>Peperomia urvilleana</i>	◐	●	●	●	✕	✕	◐
<i>Samolus repens</i> shore pimpernel	●	✕	✕	●	◐	✕	●
<i>Scandia rosifolia</i> coastal angelica	●	✕	◐	●	✕	✕	●
<i>Selliera radicans</i> remuremu	●	✕	◐	●	◐	✕	●
<i>Tetragonia implexicoma</i> NZ spinach	●	◐	◐	●	✕	✕	●

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For restoration, in this habitat: ●●● plant liberally ●● plant generally ● plant sparingly

Recommended planting sites

		Gully Head	Boggy Area	Rock-land	Sharp Ridge	Steep Slope	Valley Bottom	Broad Ridge	Gentle Slope	Alluvial Flat/Tce
Tall trees										
<i>Agathis australis</i>	kauri				●●	●		●●	●	
<i>Dacrycarpus dacrydioides</i>	kahikatea	●	●●				●		●	●●
<i>Dacrydium cupressinum</i>	rimu				●	●		●	●	
<i>Metrosideros excelsa</i>	pohutukawa	●		●	●	●				
<i>Phyllocladus trichomanoides</i>	tanekaha				●	●				
<i>Prumnopitys ferruginea</i>	miro	●			●	●		●		
Medium trees										
<i>Beilschmiedia tarairi</i>	taraire	●●				●	●		●	
<i>Beilschmiedia tawa</i>	tawa	●				●		●	●	
<i>Corynocarpus laevigatus</i>	karaka ✘	●				●●			●	●●
<i>Dysoxylum spectabile</i>	kohekohe	●				●			●	
<i>Elaeocarpus dentatus</i>	hinau				●	●		●	●	
<i>Hedycarya arborea</i>	porokaiwhiri, pigeonwood	●●				●	●			
<i>Knightsia excelsa</i>	rewarewa	●			●	●●		●	●	
<i>Kunzea ericoides</i>	kanuka ♥	●●		●●	●●●	●●●	●●●	●●●	●●●	●●
<i>Laurelia novae-zelandiae</i>	pukatea		●							
<i>Litsea calicaris</i>	mangeao				●	●		●		
<i>Nestegis lanceolata</i>	white maire	●				●		●	●	
<i>Vitex lucens</i>	puriri	●				●	●	●	●	●
Small trees/large shrubs										
<i>Brachyglottis repanda</i>	rangiora ♥✘	●			●●	●●	●	●●	●●	
<i>Carmichaelia australis</i>	NZ broom				●	●		●		
<i>Carpodetus serratus</i>	putawetaweta		●●				●			●●●
<i>Coprosma arborea</i>	mamangi ♥	●●					●	●●	●●●	
<i>Coprosma lucida</i>	shining karamu ♥			●●●	●●●	●●		●●	●●	
<i>Coprosma robusta</i>	karamu ♥	●●●			●●●	●●●	●●●	●●●	●●●	●●
<i>Cordyline australis</i>	ti kouka, cabbage tree	●●	●●●		●	●●	●●●	●●	●●●	●●
<i>Cordyline banksii</i>	forest cabbage tree	●●			●●	●●		●●	●●	
<i>Cyathea dealbata</i>	ponga, silver tree fern	●●●			●●	●●●	●●●	●●●	●●●	●●
<i>Cyathea medullaris</i>	mamaku, black tree fern	●●				●●●	●●		●●	●●
<i>Dodonaea viscosa</i>	akeake				●●	●		●		
<i>Geniostoma rupestre</i>	hangehange ♥	●●●			●●	●●●	●●●	●●●	●●●	●●●
<i>Griselinia lucida</i>	puka 🗨			●						
<i>Leptospermum scoparium</i>	manuka	●●●	●●●		●●●	●●●	●●●	●●●	●●●	●●●
<i>Leucopogon fasciculatus</i>	mingimingi ♥	●●●		●	●●●	●●●		●●●	●●	
<i>Macropiper excelsum</i>	kawakawa ♥	●●				●●●	●●●	●	●●	●●●
<i>Meliccytus macrophyllus</i>	large leaved mahoe	●●			●●	●●		●●	●●	
<i>Meliccytus ramiflorus</i>	mahoe	●●		●	●	●●	●●	●●	●●	●●●
<i>Myoporum laetum</i>	ngaio 🐟									



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Tolerance								Comments
Sun	Shade	Dry	Moist	Boggy	Poor clay	Harsh wind		
●	◆	◐	●	✕	●	◐		
●	◆	✕	●	●	✕	✕		
●	◊	✕	●	◐	◐	✕		
●	✕	●	●	●	◐	◐		
●	◐	●	●	✕	●	◐		
●	◊●	◐	●	✕	✕	◐		
●	◊●	✕	●	✕	✕	◐	Natural neighbours: karaka, kohekohe, kanuka and pohutukawa can form groves, ie. a monocultural canopy.	
●	◊●	◐	●	✕	✕	◐	Karaka and kohekohe are often the dominant components of the coastal forest. The main understory is hangehange,	
●	◊◐	◐	●	✕	◐	✕	kawakawa, mahoe and gahnia.	
●	◐	✕	●	✕	◐	✕		
●	◐	◐	●	✕	◐	◐		
●	✕	●	●	✕	●	●		
●	◊	✕	◐	●	●	◐		
●	◊	●	●	✕	●	◐		
●	◐	◐	●	✕	◐	✕		
●	◐	◐	●	✕	✕	✕		
●	◐	◐	●	✕	●	◐		
●	◊◐	✕	●	◐	◐	◐		
●	◊◐	✕	●	◐	◐	✕		
●	◊	◐	●	✕	✕	✕		
●	◐	●	●	✕	●	●		
●	◐	◐	●	●	◐	◐		
●	◐	●	●	✕	◐	◐		
●	●	◐	●	✕	●	✕		
●	◊	✕	●	✕	◐	◐		
●	●	●	●	✕	◐	◐		
●	◐	●	●	✕	◐	◐	Puka is naturally epiphytic when growing in the wild.	
●	✕	●	●	●	●	●		
●	◐	●	●	✕	●	◐		
◐	●	✕	●	✕	✕	◐		
●	●	◐	●	✕	◐	✕		
●	●	◐	●	✕	◐	◐		
●	✕	●	●	✕	◐	●		

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Recommended planting sites

			Gully Head	Boggy Area	Rock-land	Sharp Ridge	Steep Slope	Valley Bottom	Broad Ridge	Gentle Slope	Alluvial Flat/Tce
Small trees/large shrubs											
<i>Myrsine australis</i>	mapou, red matipo	♥	●●			●●●	●●●		●●	●●	
<i>Olearia furfuracea</i>	akepiro	♥				●●●	●●		●●●	●●	
<i>Pittosporum ellipticum</i>						●			●	●	
<i>Pseudopanax arboreus</i>	whauwhaupaku five finger		●●						●●	●●	
<i>Pseudopanax crassifolius</i>	horoeka, lancewood					●			●●	●●	
<i>Pseudopanax lessonii</i>	houpara					●	●●		●	●●	●●●
<i>Rhopalostylis sapida</i>	nikau		●●	●●				●●		●●	●●●
<i>Sophora fulvida</i>	west coast kowhai	✘			●●●	●●●	●●				
<i>Toronia toru</i>	toru					●●			●●	●	
Shrubs and flax like plants											
<i>Coprosma crassifolia</i>	stiff stemmed mingimingi					●●	●			●	●●
<i>Coprosma rhamnoides</i>			●●			●●●	●●		●●●	●●●	●●
<i>Corokia cotoneaster</i>	bluff korokio					●					
<i>Dracophyllum sinclairii</i>	spiderwood					●●			●		
<i>Freycinetia banksii</i>	kiekie			●●			●	●●			●
<i>Gaultheria antipoda</i>	bush snowberry					●●	●●				
<i>Hebe macrocarpa</i>	koromiko					●●			●●		
<i>Hebe stricta</i>	koromiko					●●			●●		
<i>Leucopogon fraseri</i>	patotara					●●●	●●		●●●	●●	
<i>Lophomyrtus obcordata</i>	rohutu					●			●	●	●
<i>Melicope simplex</i>	poataniwha					●	●		●	●	●
<i>Ozothamnus leptophylla</i>	tauhinu					●●	●●		●		
<i>Phormium cookianum</i>	wharariki, mountain flax	♥		●●●	●●						
<i>Phormium tenax</i>	harakeke, flax	♥		●●●			●●●	●●●	●●	●●	●●
<i>Pomaderris kumeraho</i>	kumerahou					●●			●●	●●	
<i>Pomaderris phyllicifolia</i>	tauhinu					●●●			●●		
<i>Rhabdothamnus solandri</i>	taurepo		●		●●						
Vines and trailers											
<i>Metrosideros carminea</i>	akakura, carmine rata	❁	●		●		●			●	
<i>Metrosideros perforata</i>	akatea, small white rata				●		●			●	
<i>Parsonsia capsularis</i>	kaiwhiria, native jasmine	❁						●		●	●
<i>Parsonsia heterophylla</i>	kaiku, native jasmine							●		●	●
Ferns											
<i>Adiantum cunninghamii</i>	common maidenhair							●		●	●
<i>Adiantum hispidulum</i>	rosy maidenhair							●		●	●
<i>Asplenium flaccidum</i>	makawe, hanging spleenwort							●		●	●
<i>Asplenium lamprophyllum</i>	glossy asplenium							●		●	●
<i>Asplenium oblongifolium</i>	huruhuruwhenua shining spleenwort							●		●	●



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Tolerance								Comments
Sun	Shade	Dry	Moist	Boggy	Poor clay	Harsh wind		
●	◊	●	●	✕	◐	✕		
●	✕	●	●	✕	●	●		
●	◐	◐	●	✕	◐	●		
●	◐	✕	●	✕	✕	✕		
●	◆	◐	●	✕	◐	✕		
●	◐	◐	●	✕	✕	●		
●	◊	✕	●	◐	✕	◐		
●	◐	●	●	✕	✕	●	<i>Sophora fulvida</i> grows on rock outcrops and bluffs, west of Scenic Drive, including the west coast and Manukau Harbour, from Whatipu to Cornwallis	
●	◐	●	●	✕	●	◐		
●	◐	●	●	✕	✕	◐		
●	◐	●	●	✕	●	●		
●	◐	●	●	✕	●	✕		
●	◐	✕	●	●	✕	◐		
●	◐	●	●	✕	●	●		
●	◐	●	●	✕	●	◐		
●	◐	◐	●	✕	●	●	<i>Hebe macrocarpa</i> and <i>Hebe stricta</i> do not occur naturally together. Plant one or the other.	
●	◐	◐	●	✕	✕	✕		
●	✕	●	◐	✕	●	●		
●	◐	●	●	✕	●	●		
●	✕	◐	●	●	◐	●		
●	✕	●	◐	✕	●	◐		
●	◐	●	◐	✕	●	●		
◐	●	●	●	✕	✕	✕		
●	●	◐	●	✕	✕	✕		
●	◊	◐	●	✕	✕	●		
●	◆	✕	●	✕	✕	◐		
●	◆	✕	●	✕	✕	✕		
◐	◐	◐	●	✕	✕	✕		
●	◐	●	●	✕	✕	✕		
✕	●	✕	●	✕	✕	✕		
✕	●	✕	●	✕	✕	✕		
✕	●	✕	●	✕	✕	✕		

Manukau • Kahu

stormy coastal hills ecosystem

KEY ● fully tolerant ◐ tolerates some ✕ not tolerant ☞ epiphyte
 ◆ tolerates shade during establishment ◇ needs some shade to establish

			Tolerance						
			Sun	Shade	Dry	Moist	Boggy	Poor clay	Harsh wind
Ferns									
<i>Blechnum chambersii</i>	rereti		✕	●	✕	●	✕	✕	✕
<i>Blechnum discolor</i>	crown fern		◐	●	✕	●	✕	●	✕
<i>Blechnum filiforme</i>	thread fern		✕	●	✕	●	✕	✕	✕
<i>Blechnum fraseri</i>	hard fern		◐	●	✕	●	✕	✕	✕
<i>Blechnum fulvatile</i>			✕	●	✕	●	◐	●	✕
<i>Blechnum membranaceum</i>			✕	●	✕	●	✕	✕	✕
<i>Blechnum novae-zelandiae</i>	kiokio	♥	◐	●	✕	●	◐	●	◐
<i>Doodia australis</i>	pukupuku		✕	●	✕	●	✕	●	●
<i>Hymenophyllum spp.</i>	filmy ferns		✕	●	✕	●		✕	✕
<i>Lastreopsis glabella</i>			✕	●	✕	●	✕	✕	✕
<i>Lastreopsis hispida</i>	hairy legs		✕	●	✕	●	✕	✕	✕
<i>Lastreopsis microsora</i>			✕	●	✕	●	✕	✕	✕
<i>Lastropsis velutina</i>	velvet fern		✕	●	✕	●	✕	✕	✕
<i>Lindsaea linearis</i>			●	◐	●	●	●	●	◐
<i>Lindsaea trichomanoides</i>			◐	●	◐	●	✕	●	✕
<i>Lygodium articulatum</i>	mangemange			●	✕	◐	✕	✕	✕
<i>Pellaea rotundifolia</i>	tarawera, button fern		●	●	◐	●	✕	✕	✕
<i>Phymatosorus pustulatum</i>	kowaowao, maratata		◐	●	◐	●	✕	✕	◐
<i>Phymatosorus scandens</i>	moki, fragrant fern		✕	●	✕	●	✕	✕	✕
<i>Polystichum neozelandicum</i>	tutoke, shield fern		◐	✕	◐	●	✕	✕	◐
<i>Polystichum wawranum</i>	tutoke, shield fern		◐	✕	◐	●	✕	✕	◐
<i>Pteridium esculentum</i>	bracken		✕	◐	✕	●	✕	◐	●
<i>Pteris macilentata</i>			✕	●	✕	●	✕	✕	✕
<i>Pteris tremula</i>	tuawera, trembling brake		✕	●	✕	●	✕	✕	✕
Low ground plants etc									
<i>Arthropodium cirratum</i>	rengarenga, rock lily		●	●	●	●	✕	✕	●
<i>Astelia banksii</i>	coastal astelia	☞	●	◐	●	◐	✕	✕	●
<i>Astelia solandri</i>	kowharawhara, perching lily	☞	●	●	●	●	✕	✕	●
<i>Astelia trinervia</i>	kauri grass		◐	●	◐	●	✕	✕	●
<i>Centella uniflora</i>	marsh pennywort		●	◐	●	●	✕	●	●
<i>Cordyline pumilio</i>	ti rauriki, dwarf cabbage tree		●	◐	●	●	✕	●	◐
<i>Collospermum hastatum</i>	kahakaha	☞	●	●	◐	●	✕	✕	◐
<i>Dianella nigra</i>	turutu, NZ blueberry		●	●	●	●	✕	●	◐
<i>Hebe bishopiana</i>	Huia hebe		●	●	◐	●	✕	✕	●
<i>Libertia grandiflora</i>	large flowered iris		◐	●	●	●	✕	◐	✕
<i>Libertia ixioides</i>	mikoikoi, NZ iris		◐	●	●	●	✕	◐	✕
<i>Lycopodium deuterodensum</i>	tree clubmoss		◐	●	◐	●	✕	●	✕
<i>Nertera dichondrifolia</i>	northern nertera		●	◐	◐	●	✕	✕	✕
<i>Peperomia urvilleana</i>		☞	◐	●	●	●	✕	✕	◐
<i>Pimelea prostrata</i>	prostrate daphne		●	✕	●	●	✕	✕	●



KEY ● fully tolerant ◐ tolerates some ✕ not tolerant ☁ epiphyte
 ◆ tolerates shade during establishment ◊ needs some shade to establish

		Tolerance						
		Sun	Shade	Dry	Moist	Boggy	Poor clay	Harsh wind
Grasses, Sedges, Rushes								
<i>Cortaderia fulvida</i>	toetoe	●	✕	●	●	●	●	●
<i>Cortaderia splendens</i>	coastal toetoe	●	✕	●	●	✕	●	●
<i>Cyperus ustulatus</i>	upoko tangata, giant umbrella sedge	●	✕	✕	●	●	✕	✕
<i>Gahnia lacera</i>	bamboo cutty grass	◐	◐	●	●	✕	●	◐
<i>Gahnia setifolia</i>	cutty grass	●	◐	●	●	✕	●	●
<i>Gahnia xanthocarpa</i>	toikiwi, cutty grass	◐	●	✕	●	●	●	●
<i>Juncus pallidus</i>	giant rush	●	✕	◐	●	●	●	●
<i>Machaerina sinclairii</i>	tuhara, pepepe	●	◐	◐	●	✕	◐	✕
<i>Microlaena avenacea</i>	forest rice grass	◐	◐	◐	●	✕	✕	◐
<i>Microlaena stipoides</i>	meadow rice grass	◐	◐	◐	●	✕	✕	◐

Planting notes, comments

Coastal astelia, kowharawhara, kahakaha and wharanui are all epiphytes

Kauri grass only grows in association with kauri trees

Kowhai • Kotare

harbour coastline ecosystem

KEY ♥ Nurse plant ■ Main component ♣ rare ✕ toxic to toddlers 🐟 coastal sites only 🗨 epiphyte
For restoration, in this habitat: ●●● plant liberally ●● plant generally ● plant sparingly

Recommended planting sites

			Gully Head	Boggy Area	Coastal Escarpment	Sharp Ridge	Steep Slope	Valley Bottom	Broad Ridge	Gentle Slope	Alluvial Flat/Tce
Tall trees											
<i>Agathis australis</i>	kauri	■				●			●	●	
<i>Dacrycarpus dacrydioides</i>	kahikatea	■	●	●				●			●●
<i>Metrosideros excelsa</i>	pohutukawa	🐟	●				●		●	●	
<i>Phyllocladus trichomanoides</i>	tanekaha					●●	●		●	●	
<i>Podocarpus totara</i>	lowland totara								●	●	●
<i>Prumnopitys ferruginea</i>	miro		●						●	●	
<i>Prumnopitys taxifolia</i>	matai									●	●
Medium trees											
<i>Alectryon excelsus</i>	titoki		●				●	●		●	●
<i>Beilschmiedia tarairi</i>	tarairi [local]		●●					●		●	
<i>Beilschmiedia tawa</i>	tawa		●				●●			●	
<i>Corynocarpus laevigatus</i>	karaka	✕■	●				●●			●	●
<i>Dysoxylum spectabile</i>	kohekohe	■	●●				●●	●		●	
<i>Elaeocarpus dentatus</i>	hinau						●		●		
<i>Knightia excelsa</i>	rewarewa		●			●	●		●	●	
<i>Kunzea ericoides</i>	kanuka	♥■			●	●●●	●	●	●●●	●●●	●●●
<i>Laurelia novae-zelandiae</i>	pukatea			●●							●●
<i>Litsea calicaris</i>	mangeao					●	●		●		
<i>Metrosideros excelsa</i>	pohutukawa	♥■			●	●	●				●
<i>Nestegis lanceolata</i>	white maire						●		●	●	●
<i>Pittosporum eugenioides</i>	tarata, lemonwood								●	●	●
<i>Pittosporum tenuifolium</i>	kohuhu							●	●	●	
<i>Pouteria costata</i>	tawapou	🐟					●		●	●	●
<i>Sophora chathamica</i>	kowhai	✕■				●●	●●		●	●	●
<i>Sophora microphylla</i>	kowhai	✕■				●●	●●	●		●	●
<i>Vitex lucens</i>	puriri	■	●				●	●	●	●	●
Small trees/large shrubs											
<i>Alseuosmia macrophylla</i>	toropapa		●				●		●	●	
<i>Aristotelia serrata</i>	makomako, wineberry		●					●			
<i>Avicennia marina</i>	manawa, mangrove [estuary]										
<i>Brachyglottis repanda</i>	rangiora	✕♥■	●				●●	●		●●	
<i>Carmichaelia australis</i>	NZ broom					●	●		●		
<i>Coprosma arborea</i>	mamangi	♥■					●			●●	
<i>Coprosma lucida</i>	shining karamu	♥■			●	●●●	●●		●●●	●●	●●
<i>Coprosma macrocarpa</i>	coastal karamu		●			●	●		●●	●●	●●
<i>Coprosma robusta</i>	karamu	♥	●			●	●	●●●	●●●	●●●	●●●
<i>Coriaria arborea</i>	tutu	✕♥	●		●		●	●●			●
<i>Cordyline australis</i>	ti kouka, cabbage tree	■		●●●				●●			●●
<i>Cordyline banksii</i>	ti ngahere, forest cabbage tree						●	●	●	●	



Key: ● fully tolerant ◐ tolerates some ✕ not tolerant

◈ tolerates shade during establishment ◊ needs some shade to establish ○ shade needed at base

Tolerance								Comments
Sun	Shade	Dry	Moist	Boggy	Poor clay	Harsh wind		
○	◈	◐	●	✕	●	◐		
●	◈◐	✕	●	●	✕	✕		
●	✕	●	●	✕	◐	◐		
●	◐	●	●	✕	●	◐		
●	◐	●	●	✕	◐	◐		
○	◊●	◐	●	✕	✕	◐		
●	◈◐	◐	●	✕	✕	◐		
●	◊●	✕	●	✕	✕	✕		
●	◊●	✕	●	✕	✕	◐		
○	◊●	✕	●	✕	✕	✕		
●	◊◐	◐	●	✕	◐	✕		
●	◐	◐	●	✕	◐	◐		
●	◐	●	●	✕	●	●		
○	◊	✕	◐	●	✕	✕		
●	◊	●	●	✕	●	◐		
●	✕	●	●	✕	●	●		
○	◐	◐	●	✕	◐	✕		
●	◐	◐	●	✕	◐	●		
●	◐	◐	●	✕	◐	◐	<i>Kowhai distribution:</i>	
●	◐	●	●	✕	✕	●	<i>Sophora chathamica is found mostly on forest margins and lowland sites. Plant east of Scenic Drive and Cornwallis.</i>	
●	◈✕	◐	●	✕	✕	◐	<i>Sophora microphylla has a wide habitat range and occurs throughout Waitakere on terraces and hillslopes.</i>	
●	◈✕	●	●	✕	✕	◐		
◐	●	✕	●	✕	✕	✕		
○	●	✕	●	✕	✕	✕		
●	◊●	✕	●	●	✕	✕	<i>Requires estuarine conditions</i>	
●	◐	◐	●	✕	●	◐		
●	◊◐	✕	●	◐	◐	✕		
●	◊	◐	●	✕	✕	✕		
●	◐	●	●	✕	●	●		
●	◐	◐	●	✕	◐	◐		
●	◈✕	●	●	✕	●	◐		
●	◐	●	●	✕	◐	◐		
●	◐	◐	●	●	◐	●		
●	◐	●	●	✕	◐	◐		

Kowhai • Kotare

harbour coastline ecosystem

KEY ♥ Nurse plant ■ Main component ❁ rare ✕ toxic to toddlers 🐟 coastal sites only 🍄 epiphyte
For restoration, in this habitat: ●●● plant liberally ●● plant generally ● plant sparingly

Recommended planting sites

Small trees/large shrubs continued			Gully Head	Boggy Area	Escarpment	Sharp Ridge	Steep Slope	Valley Bottom	Broad Ridge	Gentle Slope	Alluvial Flat/Tce
<i>Cyathea dealbata</i>	ponga, silver tree fern	■	●●				●●	●	●●	●●●	●●
<i>Cyathea medullaris</i>	mamaku, black tree fern		●●●				●●●	●●		●	●
<i>Cyathodes juniperina</i>	prickly mingimingi					●			●		
<i>Dicksonia squarrosa</i>	wheki										●
<i>Dodonaea viscosa</i>	akeake					●	●				
<i>Entelea arborescens</i>	whau 🐟		●					●			
<i>Geniostoma rupestre</i>	hangehange	♥■	●●●		●	●	●●●	●●●	●●●	●●●	●●●
<i>Griselinia lucida</i>	puka				●●	●					
<i>Hedycarya arborea</i>	pigeonwood		●●				●	●	●	●	●●
<i>Hoheria populnea</i>	houhere, lacebark	♥■	●●				●●	●●		●	
<i>Leptospermum scoparium</i>	manuka	♥■	●●	●●		●●●	●●	●●●	●●●	●●●	●●●
<i>Leucopogon fasciculatus</i>	mingimingi					●●●	●	●	●●●	●●●	●
<i>Macropiper excelsum</i>	kawakawa	♥■	●●●				●●	●	●	●●	●●
<i>Melicope ternata</i>	wharangi 🐟❁		●				●		●	●	
<i>Melicytus macrophyllus</i>	large leaved mahoe		●			●			●	●	
<i>Melicytus micranthus</i>	manakura									●	●
<i>Melicytus ramiflorus</i>	mahoe	♥■	●●●				●●	●	●	●●	●
<i>Mida salicifolia</i>	maire taiki							●		●	●
<i>Myoporum laetum</i>	ngaio 🐟✕					●	●				
<i>Myrsine australis</i>	mapou, red matipo	■				●●	●●	●	●●	●●●	●●
<i>Olearia furfuracea</i>	akepiro	♥■				●●	●●		●●●	●●	
<i>Olearia rani</i>	heketara		●●				●●	●			
<i>Olearia solandri</i>	coastal tree daisy 🐟♥			●							●
<i>Pittosporum crassifolium</i>	karo										●
<i>Pseudopanax arboreus</i>	whauwhaupaku, fivefinger		●				●	●	●	●●	
<i>Pseudopanax crassifolius</i>	horoeaka, lancewood		●			●	●		●●	●●	
<i>Pseudopanax lessonii</i>	houpara 🐟		●			●	●		●●	●●	
<i>Schefflera digitata</i>	pate		●●				●	●●		●	●
<i>Sophora fulvida</i>	west coast kowhai 🐟✕■				●●●	●●					
<i>Streblus heterophyllus</i>	turepo		●					●		●	●●
<i>Rhopalostylis sapida</i>	nikau	■	●●	●●			●●	●●		●●	●●
<i>Toronia toru</i>	toru					●●			●●	●	
Shrub & flax-like plants											
<i>Brachyglottis kirkii</i> var. <i>angustior</i>	kohurangi, Kirk's daisy					●	●		●	●	
<i>Coprosma propinqua</i>	mingimingi			●							
<i>Coprosma rhamnoides</i>				●●●	●●	●●		●●●	●●	●●	
<i>Coprosma spathulata</i>					●●	●		●●●	●●	●●	●●
<i>Corokia buddleoides</i>	korokio					●				●	
<i>Corokia cotoneaster</i>	bluff korokio			●	●						
<i>Dracophyllum sinclairii</i>	spiderwood					●●			●●	●	
<i>Freycinetia banksii</i>	kiekie		●●	●●				●●			



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◈ tolerates shade during establishment ◊ needs some shade to establish ○ shade needed at base

Tolerance							Comments
Sun	Shade	Dry	Moist	Boggy	Poor clay	Harsh wind	
○	◊◐	●	●	✕	●	✕	
○	◊◐	✕	●	✕	◐	◐	
●	●	●	●	✕	●	✕	
○	◊◐	✕	●	✕	✕	✕	
●	✕	●	●	✕	●	●	
●	◐	●	●	✕	✕	✕	
●	●	◐	●	✕	◐	◐	
●	◐	●	●	✕	◐	◐	
●	◐	●	●	✕	◐	✕	
●	◈◐	●	●	✕	◐	✕	
●	✕	●	●	◐	●	●	
●	◐	●	●	✕	◐	◐	
○	●	●	●	✕	◐	◐	
●	◐	●	●	✕	◐	◐	
●	◐	●	●	✕	◐	✕	
◐	◐	●	●	✕	◐	✕	
●	◐	●	●	✕	◐	✕	
◐	◐	●	●	✕	◐	✕	
●	◐	●	●	✕	●	●	
●	◈◐	●	●	✕	●	●	
●	◐	●	●	✕	◐	●	
●	◐	●	●	✕	◐	◐	
●	✕	✕	●	✕	●	●	
●	◐	●	●	✕	◐	●	
●	◐	✕	●	✕	◐	✕	
●	◐	●	●	✕	◐	✕	
●	◐	●	●	✕	◐	●	
○	◈◐	✕	●	✕	◐	✕	<i>Kowhai distribution:</i>
●	◐	●	●	✕	◐	●	<i>Sophora fulvida grows on rock outcrops and bluffs west of Scenic Drive, including the West Coast and Manukau Harbour, from Whatipu to Cornwallis.</i>
○	◐	✕	●	✕	◐	✕	
○	◐	✕	●	✕	◐	◐	
●	◐	●	●	✕	◐	◐	
◐	●	✕	●	✕	✕	✕	
●	✕	✕	●	●	◐	◐	
●	●	●	●	✕	●	●	
◐	●	●	●	✕	●	✕	
◐	●	●	●	✕	●	✕	
●	◐	●	●	✕	●	●	
●	●	●	●	✕	●	✕	
○	◊●	✕	●	●	✕	◐	

Kowhai • Kotare

harbour coastline ecosystem

KEY ♥ Nurse plant ■ Main component ❁ rare ✘ toxic to toddlers 🐟 coastal sites only 🗨 epiphyte
 For restoration, in this habitat: ●●● plant liberally ●● plant generally ● plant sparingly

Recommended planting sites

			Gully Head	Boggy Area	Rock-land	Sharp Ridge	Steep Slope	Valley Bottom	Broad Ridge	Gentle Slope	Alluvial Flat/Tce
Shrub & flax-like plants continued						●					
<i>Gaultheria antipoda</i>	bush snowberry					●					
<i>Hebe macrocarpa</i>	koromiko				●●	●			●		
<i>Hebe stricta</i>	koromiko	♥			●				●	●	
<i>Leionema nudum</i>	mairehau				●				●		
<i>Melicope simplex</i>	poataniwha				●				●	●	●
<i>Phormium cookianum</i>	wharariki, mountain flax	♥■		●●	●●	●●					
<i>Phormium tenax</i>	harakeke, flax	♥■	●●●					●			●
<i>Pimelea longifolia</i>	taranga, long-leaved pimelia				●				●		
<i>Pittosporum cornifolium</i>	tawhirikaro	🗨		●	●	●					
<i>Plagianthus divaricatus</i>	marsh ribbonwood	🐟					●			●	
<i>Pomaderris kumeraho</i>	kumerahou				●	●			●●	●	
<i>Pomaderris phyllicifolia</i>	tauhinu			●	●●				●●		
<i>Rhabdothamus solandri</i>	taurepo			●		●					
<i>Typha orientalis</i>	raupo		●								
Vines and trailers				●				●			●
<i>Clematis forsteri</i>	puataua, scented clematis				●						
<i>Clematis paniculata</i>	puawananga, bush clematis		●				●	●	●	●●	
<i>Metrosideros carminea</i>	akakura, carmine rata	❁		●		●				●	
<i>Metrosideros fulgens</i>	rata vine		●			●	●			●●	
<i>Metrosideros perforata</i>	akatea, small white rata		●	●●		●				●●	
<i>Parsonsia heterophylla</i>	kaiku, NZ jasmine					●				●●	●●
<i>Passiflora tetrandra</i>	kohia, NZ passion vine	🐟	●					●		●	●●
<i>Ripogonum scandens</i>	kareao, supplejack		●●	●			●●	●●		●	●
<i>Rubus australis</i>	bush lawyer						●	●	●	●	
<i>Rubus cissoides</i>	tataramoa, bush lawyer		●				●●	●	●	●●	●●
Ferns					●		●		●	●	
<i>Cunninghamia</i>	common maidenhair			●							
<i>Adiantum fulvum</i>	downy maidenhair									●	●
<i>Adiantum hispidulum</i>	rosy maidenhair			●		●					
<i>Adiantum viridescens</i>						●				●	
<i>Asplenium flabellifolium</i>	necklace fern			●		●					
<i>Asplenium flaccidum</i>	makawe, hanging splenwort	🗨				●	●		●	●	●
<i>Asplenium lamprophyllum</i>	glossy asplenium						●		●		



KEY: ● fully tolerant ◐ tolerates some ✕ not tolerant

◈ tolerates shade during development ◊ needs some shade to establish ○ shade needed at base

Tolerance								Comments
Sun	Shade	Dry	Moist	Boggy	Poor clay	Harsh wind		
●	◐	●	●	✕	●	●		
●	◐	●	●	✕	●	◐		
●	◐	●	●	✕	●	●		
●	●	●	●	✕	●	✕		
●	◐	●	●	✕	●	●		
●	◐	●	●	✕	●	●		
●	✕	◐	●	●	◐	●		
●	◐	●	◐	✕	◐	✕		
◐	◐	●	●	✕	✕	✕		
●	✕	✕	●	●	✕	●	Natural neighbours: plant marsh ribbonwood in the salt marsh zone, between mangroves and land shrubs, such as oioi and mingimingi (Coprosma propinqua)	
●	✕	●	●	✕	●	◐		
●	✕	●	✕	✕	●	●		
◐	●	●	●	✕	✕	✕		
●	✕	✕	✕	●	✕	✕		
●	✕	◐	●	●	◐	✕		
●	◊	●	●	✕	✕	✕		
●	◊	✕	●	✕	✕	✕		
●	●	◐	●	✕	✕	✕		
●	◊	✕	●	✕	✕	✕		
●	◊●	◐	●	●	✕	◐		
●	◊	✕	●	✕	✕	✕		
●	◐	✕	●	✕	✕	✕		
●	◊	✕	●	◐	✕	✕		
●	◐	◐	●	✕	✕	✕		
◐	●	◐	◐	✕	✕	◐		
✕	●	✕	●	✕	✕	✕		
●	◐	●	●	✕	✕	✕		
✕	◐	●	●	✕	✕	✕		
●	◐	●	●	✕	✕	✕		
✕	●	✕	●	✕	◐	✕		
✕	●	✕	●	✕	◐	✕		

Kowhai • Kotare

harbour coastline ecosystem

Key: ● fully tolerant ◐ tolerates some ✕ not tolerant ☞ epiphyte
 ◆ tolerates shade during establishment ⬠ needs some shade to establish

		Tolerance						
		Sun	Shade	Dry	Moist	Boggy	Poor clay	Harsh wind
Ferns continued								
<i>Asplenium oblongifolium</i>	huruhuruwhenua, shining spleenwort	✕	●	✕	●	✕	✕	✕
<i>Asplenium northlandicum</i>	leatherleaf asplenium	●	●	●	●	✕	✕	✕
<i>Asplenium appendiculatum</i> ssp. <i>maritimum</i>		◐	●	◐	●	●	✕	✕
<i>Azolla filiculoides</i>	floating fern			✕		●	✕	✕
<i>Blechnum chambersii</i>	rereti	✕	●	✕	●	✕	✕	✕
<i>Blechnum discolor</i>	piupiu, crown fern	◐	●	✕	●	✕	●	✕
<i>Blechnum filiforme</i>	thread fern	✕	●	✕	●	✕	✕	✕
<i>Blechnum fraseri</i>	hard fern	◐	●	✕	●	✕	✕	✕
<i>Blechnum membranaceum</i>		✕	●	✕	●	✕	✕	✕
<i>Blechnum novae-zealandiae</i>	kiokio ♡	◐	●	✕	●	◐	●	◐
<i>Doodia australis</i>	pukupuku	●	●	●	●	✕	●	●
<i>Doodia mollis</i>	mokimoki	◐	●	●	●	✕	✕	✕
<i>Gleichenia microphylla</i>	waewaekaka	●	✕	◐	●	✕	●	◐
<i>Grammitis pseudociliata</i>		●	●	✕	●	✕	✕	✕
<i>Hymenophyllum</i> spp.	filmy ferns	✕	●	✕	●		✕	✕
<i>Lastreopsis glabella</i>		✕	●	✕	●	✕	✕	✕
<i>Lastreopsis hispida</i>	hairy legs	✕	●	✕	●	✕	✕	✕
<i>Lastreopsis microsora</i>		✕	●	✕	●	✕	✕	✕
<i>Lastreopsis velutina</i>	velvet fern	✕	●	✕	●	✕	✕	✕
<i>Lindsaea linearis</i>		●	◐	●	●	✕	✕	◐
<i>Lindsaea trichomanoides</i>		◐	●	◐	●	✕	●	✕
<i>Lygodium articulatum</i>	mangemange	◐	●	◐	●	✕	●	✕
<i>Paesia scaberula</i>	matata, ring fern	●	◐	◐	●	✕	◐	◐
<i>Pellaea rotundifolia</i>	tawawera, button fern	●	●	◐	●	✕	✕	✕
<i>Phymatosorus scandens</i>	moki, fragrant fern	✕	●	✕	●	✕	✕	✕
<i>Polystichum neozelandicum</i>	tutoke, shield fern	◐	✕	◐	●	✕	✕	◐
<i>Polystichum wawranum</i>	tutoke, shield fern	◐	✕	◐	●	✕	✕	◐
<i>Pteridium esculentum</i>	bracken	●	◐	●	●	✕	◐	●
<i>Pteris macilenta</i>	sweet fern	✕	●	✕	●	✕	✕	✕
<i>Pteris tremula</i>	turawera, trembling brake	✕	●	✕	●	✕	✕	✕
<i>Pyrrosia eleagnifolia</i>	leatherleaf fern ☞	◐	●	◐	●	✕	✕	◐
Low ground plants								
<i>Apium prostratum</i>	sea celery	●	✕	●	●	✕	✕	●
<i>Astelia banksii</i>	coastal astelia ☞	●	◐	●	◐	✕	✕	●
<i>Astelia solandri</i>	kowharawhara, perching lily ☞	●	●	●	●	✕	✕	●
<i>Astelia trinervia</i>	kauri grass	◐	●	◐	●	✕	✕	✕
<i>Calystegia soldanella</i>	nihinihi, shore bindweed	●	✕	◐	●	✕	✕	◐
<i>Celmisia major</i> var. <i>major</i>	Waitakere rock daisy	●	✕	●	✕	✕	✕	●
<i>Centella uniflora</i>	marsh pennywort	●	◐	●	●	✕	●	●
<i>Collospermum hastatum</i>	kahakaha ☞	●	●	◐	●	✕	✕	◐

KEY: ● fully tolerant ◐ tolerates some ✕ not tolerant

◆ tolerates shade during establishment ◊ needs some shade to establish ○ shade needed at base

		Tolerance						
		Sun	Shade	Dry	Moist	Boggy	Poor clay	Harsh wind
Low ground plants continued								
<i>Cordyline pumilio</i>	ti raurika, dwarf cabbage tree	●	◐	●	●	✕	●	◐
<i>Cotula coronopifolia</i>	bachelor's buttons	●	✕	✕	●	●	✕	●
<i>Dianella nigra</i>	turuturu, NZ blueberry	◐	●	●	●	✕	●	◐
<i>Dichondra repens</i>	Mercury Bay weed	●	◐	●	●	✕	✕	●
<i>Elatostema rugosum</i>	parataniwha	✕	●	✕	●	●	●	✕
<i>Hebe bishopiana</i>	Huia hebe ◆	●	✕	◐	●	✕	✕	●
<i>Hebe obtusata</i>	west coast cliff hebe	●	✕	●	●	✕	✕	●
<i>Leucopogon fraseri</i>	patotara	●	✕	●	●	✕	●	●
<i>Libertia grandiflora</i>	large flowered iris	●	◐	●	●	✕	◐	✕
<i>Libertia ixioides</i>	mikoikoi, NZ iris	●	◐	●	●	✕	◐	✕
<i>Lycopodium cernuum</i>	creeping clubmoss	●	◐	✕	◐	◐	●	●
<i>Lycopodium deuterodensum</i>	tree clubmoss	◐	●	◐	●	✕	●	✕
<i>Muehlenbeckia complexa</i>	pohuehue	●	✕	●	●	✕	✕	●
<i>Myosotis petiolata</i> var. <i>pansa</i>	Waitakere forget-me-not ◆	◐	◐	✕	●	✕	✕	●
<i>Nertera depressa</i>	nertera	●	●	✕	●	◐	✕	◐
<i>Nertera dichondrifolia</i>	northern nertera	●	◐	◐	●	✕	✕	✕
<i>Peperomia urvilleana</i>		◐	●	●	●	✕	✕	◐
<i>Pimelea prostrata</i>	strathmore weed	●	◐	●	●	✕	✕	●
<i>Samolus repens</i>	shore pimpernel	●	✕	✕	●	◐	✕	●
<i>Scandia rosifolia</i>	coastal angelica	●	✕	◐	●	✕	✕	●
<i>Selliera radicans</i>	remuremu	●	✕	◐	●	◐	✕	●
Grasses, Sedges, Rushes								
<i>Apodasmia similis</i>	oiioi, jointed rush	●	◐	◐	●	●	✕	●
<i>Carex flagellifera</i>		●	●	●	●	✕	◐	◐
<i>Carex lambertiana</i>		◐	●	◐	●	✕	◐	✕
<i>Carex ochrosaccus</i>		◐	●	◐	●	✕	◐	✕
<i>Carex solandri</i>	Solander's sedge	◐	●	◐	●	◐	◐	◐
<i>Carex virgata</i>		●	●	◐	●	●	◐	◐
<i>Cortaderia fulvida</i>	toetoe	●	✕	●	●	●	●	●
<i>Cortaderia splendens</i>	coastal toetoe	●	✕	●	●	✕	●	●
<i>Cyperus ustulatus</i>	giant umbrella sedge	●	✕	✕	●	●	✕	✕
<i>Gahnia lacera</i>	bamboo cutty grass	◐	◐	●	●	✕	●	◐
<i>Gahnia setifolia</i>	cutty grass	●	◐	●	●	✕	●	●
<i>Gahnia xanthocarpa</i>	toikiwi, cutty grass	◐	●	✕	●	●	●	●
<i>Juncus kraussii</i> ssp. <i>australiensis</i>	wiwi, sea rush	●	✕	✕	●	●	◐	●
<i>Juncus pallidus</i>	giant rush	●	✕	◐	●	●	●	●
<i>Machaerina sinclairii</i>	tuhara, pepepe	●	◐	◐	●	✕	◐	✕
<i>Microlaena avenacea</i>	bush rice grass	◐	◐	◐	●	✕	✕	◐
<i>Microlaena polynoda</i>	bamboo rice grass	◐	◐	●	●	✕	✕	✕
<i>Microlaena stipoides</i>	meadow rice grass	◐	◐	◐	●	✕	✕	◐
<i>Oplismenus imbecillis</i>	slender panic grass	◐	◐	◐	●	✕	✕	✕
<i>Poa anceps</i>	plumed tussock	●	◐	●	●	✕	✕	●

Puriri • Kereru

warm lowlands ecosystem

KEY ♥ Nurse plant ■ Main component ❁ rare ✘ toxic to toddlers 🌊 coastal sites only 🍄 epiphyte
For restoration, in this habitat: ●●● plant liberally ●● plant generally ● plant sparingly

Recommended planting sites

			Gully Head	Boggy Area	Rock-land	Sharp Ridge	Steep Slope	Valley Bottom	Broad Ridge	Gentle Slope	Alluvial Flat/Tce
Tall trees											
<i>Agathis australis</i>	kauri	■				●●	●	●	●●	●	●
<i>Dacrycarpus dacrydioides</i>	kahikatea	♥■	●	●●				●			●
<i>Dacrydium cupressinum</i>	rimu	■				●	●		●	●●	●
<i>Metrosideros robusta</i>	northern rata	■	●			●	●	●	●	●●	●
<i>Phyllocladus trichomanoides</i>	tanekaha	♥■				●●	●		●	●	
<i>Podocarpus totara</i>	lowland totara	🌊♥						●	●	●	●
<i>Prumnopitys ferruginea</i>	miro		●			●	●		●	●	
<i>Prumnopitys taxifolia</i>	matai										●
Medium trees											
<i>Alectryon excelsus</i>	titoki		●				●	●		●	●●
<i>Beilschmiedia tarairi</i>	taraire		●							●	●
<i>Beilschmiedia tawa</i>	tawa		●				●●	●		●	●
<i>Corynocarpus laevigatus</i>	karaka	✘■	●				●	●		●	●
<i>Dysoxylum spectabile</i>	kohekohe	■	●●				●●	●		●	●
<i>Elaeocarpus dentatus</i>	hinau					●	●		●	●	
<i>Knightia excelsa</i>	rewarewa	♥■	●			●	●●		●●	●●	●●
<i>Kunzea ericoides</i>	kanuka	♥■	●●			●●●	●●●	●●	●●●	●●●	●●●
<i>Laurelia novaezelandiae</i>	pukatea			●●							●●
<i>Libocedrus plumosa</i>	kawaka					●			●	●	
<i>Litsea calicaris</i>	mangeao					●			●	●	
<i>Nestegis cunninghamii</i>	black maire					●	●		●	●	●
<i>Nestegis lanceolata</i>	white maire					●	●		●	●	
<i>Pittosporum eugenioides</i>	tarata, lemonwood	♥■							●●	●	●●
<i>Pittosporum tenuifolium</i>	kohuhu	♥■						●	●●	●	●●
<i>Sophora microphylla</i>	kowhai	✘■				●●	●	●			
<i>Syzygium maire</i>	maire tawake			●●							●
<i>Vitex lucens</i>	puriri	■	●●			●	●		●●	●	●
Small trees/large shrubs											
<i>Aristolelia serrata</i>	makomako, wineberry	♥	●●				●	●●			●
<i>Brachyglottis repanda</i>	rangiora	✘♥■	●			●	●●●		●●	●●●	●
<i>Carmichaelia australis</i>	NZ broom				●			●			
<i>Carpodetus serratus</i>	putaputaweta	♥	●	●				●			●●
<i>Coprosma arborea</i>	mamangi	■	●				●		●	●●	●
<i>Coprosma areolata</i>	thin leaved coprosma	♥					●			●●	●●
<i>Coprosma grandifolia</i>	kanono	♥■	●●	●			●●	●		●●	●●
<i>Coprosma lucida</i>	shining karamu	♥■			●●	●●●	●●		●●	●	●
<i>Coprosma propinqua</i>	mingimingi			●				●			
<i>Coprosma robusta</i>	karamu	♥■	●●			●	●	●●	●●	●●●	●●●



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Tolerance								Comments
Sun	Shade	Dry	Moist	Boggy	Poor clay	Harsh wind		
○	◈	◐	●	✕	●	◐		
●	◐	✕	●	●	✕	✕		
●	◊	✕	●	◐	◐	✕		
●	✕	●	●	●	◐	◐		
●	◐	●	●	✕	●	◐		
●	◐	●	●	✕	◐	◐		
○	◊●	◐	●	✕	✕	◐		
●	◈	◐	●	✕	✕	◐		
●	◊●	✕	●	✕	✕	◐		
○	◊●	✕	●	✕	✕	◐		
●	◊●	◐	●	✕	✕	◐		
○	◊●	✕	●	✕	✕	✕		
○	◊◐	◐	●	✕	◐	✕		
○	◐	◐	●	✕	◐	●		
●	◐	●	●	✕	●	●		
○	◊	✕	◐	●	✕	✕		
○	◊	◐	●	✕	◐	✕		
○	◊	●	●	✕	●	◐		
●	●	●	●	✕	●	●		
○	◐	◐	●	✕	◐	✕		
●	◐	◐	●	✕	◐	◐		
●	◐	◐	●	✕	◐	◐		
●	✕	◐	●	✕	✕	◐	Plant east of Scenic Drive	
○	◐	✕	◐	●	✕	✕		
●	◐	◐	●	✕	✕	✕		
◐	●	✕	●	✕	✕	✕		
●	◐	◐	●	✕	●	◐		
●	◊◐	✕	●	◐	◐	✕		
○	◊◐	✕	●	◐	◐	✕		
●	◊	◐	●	✕	✕	✕		
●	◐	◐	●	◐	◐	◐		
◐	●	✕	●	◐	✕	◐		
●	◐	●	●	✕	●	●		
●	✕	✕	●	●	◐	◐		
●	◐	●	●	✕	●	◐		

Puriri • Kereru

warm lowlands ecosystem

KEY ♥ Nurse plant ■ Main component ❁ rare ✕ toxic to toddlers 🐟 coastal sites only 🗨 epiphyte
For restoration, in this habitat: ●●● plant liberally ●● plant generally ● plant sparingly

Recommended planting sites

Small trees/large shrubs continued			Gully Head	Boggy Area	Rock-land	Sharp Ridge	Steep Slope	Valley Bottom	Broad Ridge	Gentle Slope	Alluvial Flat/Tce
<i>Coriaria arborea</i>	tutu	♥✕	●				●	●			●
<i>Cordyline australis</i>	ti kouka, cabbage tree	♥■	●	●●●				●●			●●
<i>Cordyline banksii</i>	ti ngahere, forest cabbage tree		●			●●		●	●●	●	
<i>Cyathea dealbata</i>	ponga, silver tree fern	■	●					●	●	●	●
<i>Cyathea medullaris</i>	mamaku, black tree fern	■	●				●	●	●	●	●
<i>Cyathodes juniperina</i>	prickly mingimingi					●●			●●	●	
<i>Dicksonia squarrosa</i>	wheki	■	●●	●			●	●●			●●
<i>Dodonaea viscosa</i>	akeake (local)					●	●			●	
<i>Fuchsia excorticata</i>	kotukutuku, tree fuchsia		●●				●	●			●
<i>Geniostoma rupestre</i>	hangehange	♥■	●●●			●	●●●	●●	●●	●●●	●●●
<i>Griselinia lucida</i>	puka	🗨			●●	●					
<i>Hedycarya arborea</i>	porokaiwhiri, pigeonwood	♥■	●●●	●			●●●	●●		●●	●●
<i>Hoheria populnea</i>	houhere, lacebark	♥■	●●	●			●●●	●●		●●	●
<i>Leptospermum scoparium</i>	manuka	♥■	●	●●●	●	●●●	●●●	●●●	●●●	●●●	●●●
<i>Leucopogon fasciculatus</i>	mingimingi	■				●●●	●●	●	●●●	●●	●
<i>Macropiper excelsum</i>	kawakawa	■	●●	●			●●	●		●	
<i>Meliccytus macrophyllus</i>	large leaved mahoe	♥■									
<i>Meliccytus micranthus</i>	manakura		●			●●	●●		●●	●●	●
<i>Meliccytus ramiflorus</i>	mahoe	♥■	●●●			●	●●●	●●	●	●●	●●●
<i>Mida salicifolia</i>	maire taiki		●					●	●	●	●
<i>Myrsine australis</i>	mapou, red matipo	■				●●	●	●	●●●	●●●	●
<i>Olearia furfuracea</i>	akepiro	♥■				●●	●		●●●	●●	●
<i>Olearia rani</i>	heketara	♥■	●			●●	●●●		●●	●●	
<i>Pennantia corymbosa</i>	kaikomako (local)			●				●●		●	●●
<i>Pittosporum ellipticum</i>		🐟				●	●		●	●	
<i>Pseudopanax arboreus</i>	whauwhaupaku, five finger	♥■				●	●●		●●	●●	●●●
<i>Pseudopanax crassifolius</i>	horoeaka, lancewood					●	●		●	●●	●●
<i>Schefflera digitata</i>	pate	♥■	●●●	●			●●	●●		●	●
<i>Solanum aviculare</i>	poroporo	♥■	●				●	●		●	●
<i>Streblus heterophyllus</i>	turepo							●●		●	●●
<i>Rhopalostylis sapida</i>	nikau	■	●●●	●●			●●	●●		●●	●
<i>Toronia toru</i>	toru					●●	●		●		
Shrubs & flax-like plants											
<i>Alseuosmia macrophylla</i>	toropapa		●●			●●			●●	●●	
<i>Brachyglottis kirkii</i> var. <i>angustior</i>	Kirk's daisy					●	●●	●		●●	●
<i>Coprosma crassifolia</i>	stiff stemmed coprosma, kohurangi (Te Henga)	🐟					●●		●●	●●	
<i>Coprosma rhamnoides</i>		♥				●●●	●●		●●●	●●	●
<i>Coprosma spathulata</i>						●●	●		●●	●	
<i>Coprosma tenuicaulis</i>	swamp coprosma			●●●				●			
<i>Corokia buddleioides</i>	korokio					●			●		
<i>Dracophyllum sinclairii</i>	spiderwood					●			●	●	●



KEY: ● fully tolerant ◐ tolerates some ✕ not tolerant

◈ tolerates shade during establishment ◊ needs some shade to establish ○ shade needed at base

Tolerance							Comments
Sun	Shade	Dry	Moist	Boggy	Poor clay	Harsh wind	
●	◐	●	●	✕	◐	◐	
●	◐	◐	●	●	◐	●	
●	◐	●	●	✕	◐	◐	
●	●	◐	●	✕	●	✕	
○	◊	✕	●	✕	◐	◐	
●	●	●	●	✕	●	✕	
○	◊	✕	●	✕	✕	✕	
●	✕	●	●	✕	●	●	
○	●	✕	●	✕	✕	✕	
●	●	●	●	✕	◐	◐	
●	◐	●	●	✕	◐	◐	
●	●	✕	●	◐	◐	✕	
●	●	✕	●	✕	✕	✕	
●	✕	●	●	●	●	●	
●	◐	●	●	✕	●	◐	
◐	●	✕	●	✕	✕	◐	
●	●	◐	●	✕	◐	✕	
	●	●	●	✕	✕	✕	
●	●	✕	●	✕	✕	✕	
◐	●	✕	●	✕	✕	✕	
●	◈	●	●	✕	◐	●	
●	✕	●	●	✕	●	●	
●	●	◐	●	✕	◐	◐	
○	◐	✕	●	✕	✕	✕	
●	◐	◐	●	✕	◐	●	
●	◐	✕	●	✕	✕	✕	
●	◊	◐	●	✕	◐	✕	
●	◊	✕	●	✕	✕	✕	
●	◐	✕	●	✕	✕	✕	
●	●	●	●	✕	✕	✕	
○	◈	✕	●	●	✕	◐	
●	◐	●	●	✕	●	◐	
◐	●	✕	●	✕	✕	✕	
◐	●	●	◐	✕	◐	✕	
●	◐	●	●	✕	✕	◐	
●	●	●	●	✕	●	●	
◐	●	●	●	✕	●	✕	
●	◐	✕	●	●	✕	✕	
◐	●	●	●	✕	●	✕	
●	●	●	●	✕	●	✕	

Puriri • Kereru

warm lowlands ecosystem

KEY ♥ Nurse plant ■ Main component ❀ rare ✘ toxic to toddlers 🐟 coastal sites only 🗨 epiphyte
For restoration, in this habitat: ●●● plant liberally ●● plant generally ● plant sparingly

Recommended planting sites

			Gully Head	Boggy Area	Rock-land	Sharp Ridge	Steep Slope	Valley Bottom	Broad Ridge	Gentle Slope	Alluvial Flat/Tce
Shrubs & flax-like plants cont.											
<i>Freycinetia banksii</i>	kiekie	■	●●●	●●			●●	●●	●	●	●
<i>Gaultheria antipoda</i>	bush snowberry			●	●			●			
<i>Hebe macrocarpa</i>	koromiko			●				●		●	
<i>Hebe stricta</i>	koromiko	♥		●				●		●	
<i>Lophomyrtus bullata</i>	ramarama		●				●	●		●	
<i>Leionema nudum</i>	mairehau			●				●			
<i>Melicope simplex</i>	poataniwha			●	●			●	●		
<i>Phormium cookianum</i>	wharariki, mountain flax	■		●●	●●	●					
<i>Phormium tenax</i>	harakeke, flax	♥■	●●●				●				
<i>Pimelea longifolia</i>	taranga	🐟			●			●			
<i>Pittosporum cornifolium</i>	tawhirikaro			●	●	●					
<i>Pomaderris kumeraho</i>	kumerahou	♥				●●			●●	●●	●
<i>Pomaderris ericifolia</i>	tauhinu	♥					●●			●●	●●
<i>Pseudopanax anomalous</i>	shrub pseudopanax						●		●	●	
<i>Rhabdothamnus solandri</i>	taurepo			●			●●				
<i>Typha orientalis</i>	raupo										
Vines and trailers											
<i>Calystegia tuguriorum</i>	powhiwhi, convolvulus			●●				●			●
<i>Clematis forsteri</i>	puataua, scented clematis	🐟			●	●	●				
<i>Clematis paniculata</i>	puawananga, bush clematis		●				●●	●●	●	●●	●●
<i>Metrosideros carminea</i>	akakura, carmine rata	❀		●		●					
<i>Metrosideros diffusa</i>	white climbing rata		●		●●		●			●	
<i>Metrosideros fulgens</i>	rata vine	■	●		●		●		●	●	●
<i>Metrosideros perforata</i>	akatea, small white rata	■			●●	●	●●		●	●●	●
<i>Ripogonum scandens</i>	supplejack, kareao	■	●●●	●●			●●	●●		●	●
<i>Parsonsia heterophylla</i>	kaiku, NZ jasmine						●	●		●	●●
<i>Passiflora tetrandra</i>	kohia, NZ passion vine	🐟	●					●		●	●●
<i>Rubus australis</i>	bush lawyer					●			●	●	●
<i>Rubus cissoides</i>	tataramoa, bush lawyer										
Ferns											
<i>Adiantum cunninghamii</i>	common maidenhair							●		●	●
<i>Adiantum fulvum</i>	downy maidenhair										●
<i>Adiantum hispidulum</i>	rosy maidenhair							●		●	●
<i>Adiantum viridescens</i>											●
<i>Anarthropteris lanceolata</i>											●
<i>Asplenium bulbiferum</i>	manamana, hen & chicken fern										●



KEY: ● fully tolerant ◐ tolerates some ✕ not tolerant

◈ tolerates shade during establishment ◊ needs some shade to establish ○ shade needed at base

Tolerance								Comments
Sun	Shade	Dry	Moist	Boggy	Poor clay	Harsh wind		
○	●	✕	●	●	✕	◐		
●	◐	●	●	✕	●	●		
●	◐	●	●	✕	●	◐		
●	◐	●	●	✕	●	●		
◐	●	✕	●	◐	✕	✕		
◐	◐	●	●	✕	◐	✕		
●	◐	●	●	✕	●	●		
●	◐	◐	●	✕	◐	●		
●	✕	◐	●	●	◐	●		
●	◐	●	◐	✕	●	✕		
◐	◐	●	●	✕	✕	✕		
●	✕	●	●	✕	●	◐		
●	✕	●	●	✕	●	●		
●	◐	✕	●	✕	◐	◐		
◐	●	●	●	✕	✕	✕		
●	✕	✕	✕	●	✕	✕		
●	✕	◐	●	●	◐	✕		
○	◊	●	●	✕	✕	✕		
○	◊	✕	●	✕	✕	✕		
●	●	◐	●	✕	✕	◐		
●	◊	✕	●	✕	✕	✕		
●	◊	✕	●	✕	✕	◐		
●	◊●	◐	●	✕	✕	●		
○	◊	✕	●	◐	✕	✕		
○	◊	✕	●	✕	✕	✕		
◐	◐	✕	●	✕	✕	✕		
●	◐	◐	●	✕	✕	✕		
●	◐	◐	●	✕	✕	✕		
◐	●	◐	●	✕	✕	◐		
✕	●	✕	●	✕	✕	✕		
●	◐	●	●	✕	✕	✕		
●	◐	●	●	✕	✕	✕		
✕	●	◐	●	✕	✕	✕		
◐	●	✕	●	✕	✕	✕		

Puriri • Kereru

warm lowlands ecosystem

KEY: ♥ Nurse plant ● fully tolerant ◐ tolerates some ✕ not tolerant ☞ epiphyte
 ✦ tolerates shade during establishment ⚡ needs some shade to establish

Ferns continued	Tolerance						
	Sun	Shade	Dry	Moist	Boggy	Poor clay	Harsh wind
<i>Asplenium flaccidum</i> makawe, hanging spleenwort ☞	✕	●	✕	●	✕	✕	✕
<i>Asplenium hookerianum</i>	✕	●	✕	●	✕	✕	✕
<i>Asplenium lamprophyllum</i> glossy asplenium	✕	●	✕	●	✕	✕	✕
<i>Asplenium oblongifolium</i> huruhuruwhenua shining spleenwort	✕	●	✕	●	✕	✕	✕
<i>Asplenium polyodon</i> sickle spleenwort ☞	✕	●	●	✕	✕	✕	✕
<i>Blechnum chambersii</i> rereiti	✕	●	✕	●	✕	✕	✕
<i>Blechnum discolor</i> crown fern	◐	●	✕	●	✕	●	✕
<i>Blechnum filiforme</i> thread fern	✕	●	✕	●	✕	✕	✕
<i>Blechnum fraseri</i> hard fern	◐	●	✕	●	✕	✕	✕
<i>Blechnum membranaceum</i>	✕	●	✕	●	✕	✕	✕
<i>Blechnum minus</i> swamp kiokio	◐	●	✕	●	✕	✕	✕
<i>Blechnum novae-zelandiae</i> kiokio ♥	◐	●	✕	●	◐	●	◐
<i>Deparia petersenii</i>	◐	●	✕	●	✕	✕	✕
<i>Diplazium australe</i>	✕	●	✕	●	✕	✕	✕
<i>Doodia australis</i> pukupuku	●	●	●	●	✕	●	●
<i>Gleichenia dicarpa</i> tangle fern	●	✕	✕	●	●	✕	✕
<i>Gleichenia microphylla</i> waewaekaka	●	✕	✕	●	✕	●	✕
<i>Lastreopsis glabella</i>	✕	●	✕	●	✕	✕	✕
<i>Lastreopsis hispida</i> hairy legs	✕	●	✕	●	✕	✕	✕
<i>Lastreopsis microsora</i>	✕	●	✕	●	✕	✕	✕
<i>Lastreopsis velutina</i> velvet fern	✕	●	✕	●	✕	✕	✕
<i>Leptopteris hymenophylloides</i> heruheru, crepe fern	✕	●	✕	●	✕	✕	✕
<i>Lindsaea linearis</i>	●	◐	✕	●	✕	✕	◐
<i>Lindsaea trichomanoides</i>	◐	●	●	●	✕	●	✕
<i>Lygodium articulatum</i> mangemange	◐	●	✕	◐	✕	✕	✕
<i>Marattia salicina</i> para, king fern ✦	◐	●	✕	●	✕	✕	✕
<i>Paesia scaberula</i> matata, ring fern	●	◐	◐	●	✕	◐	◐
<i>Pellaea rotundifolia</i> tarawera, button fern	●	●	◐	●	✕	✕	✕
<i>Phymatosorus pustulatum</i> kowaowao, hounds tongue	✕	●	◐	●	✕	✕	✕
<i>Phymatosorus scandens</i> moki, fragrant fern	◐	●	◐	●	✕	✕	◐
<i>Pteridium esculentum</i> bracken	●	◐	●	●	✕	◐	●
<i>Pteris macilenta</i>	✕	●	✕	●	✕	✕	✕
<i>Pteris tremula</i> turawera, trembling brake	✕	●	✕	●	✕	✕	✕
<i>Pyrosia eleagnifolia</i> leatherleaf fern	◐	●	◐	●	✕	✕	◐
<i>Sticherus cunninghamii</i> umbrella fern	◐	●	◐	●	✕	✕	✕
<i>Trichomanes reniforme</i> raurenga, kidney fern	✕	●	✕	●	✕	✕	✕



KEY: ● fully tolerant ◐ tolerates some ✕ not tolerant ☞ epiphyte
 ◆ tolerates shade during establishment ⬤ needs some shade to establish

			Tolerance						
			Sun	Shade	Dry	Moist	Boggy	Poor clay	Harsh wind
Low ground plants									
<i>Arthropodium cirratum</i>	rengarenga, rock lily		●	●	●	●	✕	✕	●
<i>Astelia banksii</i>	coastal astelia	☞	●	●	●	◐	✕	✕	●
<i>Astelia solandri</i>	kowharahara, perching lily	☞	●	●	●	●	✕	✕	●
<i>Astelia trinervia</i>	kauri grass		◐	●	◐	●	✕	✕	✕
<i>Collospermum hastatum</i>	kahakaha	☞	●	●	◐	●	✕	✕	◐
<i>Cordyline pumilio</i>	ti rauriki, dwarf cabbage tree		●	◐	●	●	✕	●	◐
<i>Dianella nigra</i>	turutu, NZ blueberry		◐	●	●	●	✕	●	◐
<i>Elatostema rugosum</i>	parataniwha		✕	●	✕	●	●	●	✕
<i>Libertia grandiflora</i>	large flowered iris		●	◐	●	●	✕	◐	●
<i>Libertia ixioides</i>	mikoikoi, NZ iris		●	◐	●	●	✕	◐	✕
<i>Lycopodium cernuum</i>	creeping clubmoss		●	◐	✕	◐	◐	●	●
<i>Lycopodium deuterodensum</i>	tree clubmoss		◐	●	◐	●	✕	●	✕
<i>Nertera depressa</i>	nertera		●	●	✕	●	◐	✕	◐
<i>Nertera dichondrifolia</i>	northern nertera		●	◐	◐	●	✕	✕	✕
<i>Peperomia urvilleana</i>		☞	◐	●	●	●	✕	✕	◐
<i>Pratia angulata</i>	panakenake		●	◐	✕	●	◐	✕	✕
Grasses, Sedges, Rushes									
<i>Apodasmia similis</i>	oioi, jointed rush		●	◐	◐	●	●	✕	●
<i>Carex lambertiana</i>			◐	●	◐	●	✕	◐	✕
<i>Carex lessoniana</i>			◐	●	✕	●	●	✕	✕
<i>Carex maorica</i>			◐	●	✕	●	●	✕	✕
<i>Carex ochrosaccus</i>			◐	●	◐	●	✕	◐	✕
<i>Carex virgata</i>			●	●	◐	●	●	◐	◐
<i>Cortaderia fulvida</i>	toetoe		●	✕	●	●	●	●	●
<i>Cortaderia splendens</i>	coastal toetoe		●	✕	●	●	✕	●	●
<i>Cyperus ustulatus</i>	giant umbrella sedge		●	✕	✕	●	●	✕	✕
<i>Gahnia lacera</i>	bamboo cutty grass		◐	◐	●	●	✕	●	◐
<i>Gahnia setifolia</i>	cutty grass		●	◐	●	●	✕	●	●
<i>Gahnia xanthocarpa</i>	toikiwi, cutty grass		◐	●	✕	●	●	●	●
<i>Juncus kraussii ssp.australiensis</i>	wiwi, sea rush		●	✕	✕	●	●	◐	●
<i>Juncus pallidus</i>	giant rush		●	✕	◐	●	●	●	●
<i>Machaerina sinclairii</i>	tuhara, pepepe		●	◐	◐	●	✕	◐	✕
<i>Microlaena avenacea</i>	bush rice grass		◐	◐	◐	●	✕	✕	◐
<i>Microlaena polynoda</i>	bamboo rice grass		◐	◐	●	●	✕	✕	✕
<i>Microlaena stipoides</i>	meadow rice grass		◐	◐	◐	●	✕	✕	◐
<i>Oplismenus imbecillis</i>	slender panic grass		◐	◐	◐	●	✕	✕	✕
<i>Poa anceps</i>	plumed tussock		●	◐	●	●	✕	✕	●

Glossary of Terms

alluvial soil and silt by streams which has been deposited during floods, usually very fertile and free draining

biodiversity a combination of: diversity of species, genetic diversity within populations and diversity of ecosystems

canopy the tall layer of trees in a forest, made up of species like tawa, karaka, kohekohe, taraire, puriri

divaricating plants (mainly shrubs) with tangled branches, generally small leaved

eco-site planting plants in the location where they would occur naturally

eco-source to use plants grown from seeds collected locally from a range of the naturally occurring vegetation in that place

ecology the interaction between living organisms, and between them and the physical environment. This includes all kinds of organisms from algae and fungi to plants, insects, lizards, birds and mammals. The processes that are included in these interactions are the basis for the potential of natural areas to be self-maintaining, and for the benefits (ecosystem services) on which we rely in gardening (composting, formation of topsoil including fertility and friability, availability of water etc) and in our wider lives (cleaning of water and air, detoxification of wastes, regulation of climate, etc)

ecosystem a biological system comprising a community of living organisms and its associated non-living environment, interacting as an ecological unit eg. wetland, dune system, forest, grasslands

ecosystem services fundamental life-support services provided by ecosystem functioning without which human civilisations would cease to thrive; Includes purification of air and water, detoxification and decomposition of wastes, regulation of climate, regeneration of soil fertility, and production and maintenance of biodiversity

ecotone the boundary between ecosystems, where one merges into the other

emergents the tallest trees in a forest which stick out above the canopy, eg. kauri, rimu

endemic occurs only in a particular country or region. For example, kiwi are endemic to New Zealand, Australian harrier is native as it also occurs in other Pacific countries

epiphyte a plant which sits on another plant but doesn't harm its growth eg. 'widow maker' plants which sit in the tops of large kauri and rimu

exotic an introduced species; a plant which does not naturally occur in the area or country

friable easily crumbled

gully a low point in the area where a channel has been cut by water (usually quite moist)

gully heads the top of gully (not as moist as a gully)

habitat a place where a plant naturally grows

indigenous native to an area or country

invasive a plant which spreads easily through native bush and kills the plants in it

knoll a small hill or mound

juvenile form many native plants look different when they are young compared to when they are adults, eg. lancewood

local not widespread, but occurring in a few places

microsite a small area with specific conditions which only a few plants are suitable for (eg. a damp bit by the stormwater drain)

naturalised a plant which is not native to an area, but has spread and established in the wild there

non-invasive a plant (usually exotic/introduced) which will not spread into native bush or other natural areas

nurse species the first species planted or sown (eg. manuka or kanuka), or existing vegetation such as gorse or brush wattle which creates good conditions for other species to be able to grow

pioneer a colonising species, plants which naturally establish on an open site and are able to withstand changes in temperature and moisture

ridge a long narrow hill top, usually quite dry and wind exposed

scarp a steep slope

secondary vegetation the plants which grow up underneath the nurse, or pioneering species

spur a small side ridge sticking out from the main ridge

understory shrubby and ground cover plant layers of the forest

wetland these are permanently or seasonally wet areas that have plants and animals which are suited to wet conditions

Contacts and Reading List



Useful Books and Resources

Native Forest Restoration: A Practical Guide for Landowners by Tim Porteous, Queen Elizabeth the Second National Trust, 1993

The Native Garden by Isobel Gabites & Rob Lucas, Random House, 1998

The Gardener's Encyclopaedia of New Zealand Native Plants by Yvonne Cave & Valda Paddison, Random House, 1999

Which Native Forest Plant? and Which Native Fern? by Andrew Crowe, Viking, 1994

The Cultivation of New Zealand Native Grasses by Lawrie Metcalf, Random House, 1998

Weedbusting: A guide to recognising and controlling invasive weeds. Weedbusters. (www.weedbusters.org.nz)

A Dictionary of Maori Plant Names by James Beever, Auckland Botanical Society, 1991

Auckland Regional Council

Contact Enviroline ph (09) 366 2000 for copies of

Pests Plants of the Auckland Region – various flyers on pest plants and animals to help with identification and control methods.

Plant Me Instead – plants to use in place of common weeds

Coastal Planting Guide – a series of six brochures on coastal planting

Waitakere City Council (WCC)

For any of the publications below contact the Call Centre ph (09) 839 0400 (www.waitakere.govt.nz)

Riparian Restoration Guidelines by Rachel Ebbitt – specific stream planting information

Slip Sliding Away – dealing with erosion problems on streams

The Whau: our streams, our river, our backyards, 2002 – a booklet on the Whau River produced by the community group Friends of the Whau (see contact details) in partnership with WCC; contains lots of information about streamside ecosystems and planting

Carex in Auckland: A field guide by Chris McKain, WCC, 2004

The Waitakere Gardening Guide – for urban gardens

Amenity Planting Guidelines – for landscape designs and subdivisions; includes a list of high risk plants

Planting Guidelines for Reserve Boundaries – for properties bordering a park or reserve

Planting Guidelines for Stormwater Detention Ponds

Toetoe Information Sheet – why toetoe makes a great nurse crop

Eco-Sourcing Code of Practice (draft)

Eco-sourcing flyer – a short explanation and guide

Invasive or Environmental Weeds of Waitakere – a full list of over 250 plants considered weeds in Waitakere

Weed Fact Sheets on the worst weeds in Waitakere with specific detail on how to eradicate them

The Green Network – an overview of the Green Network vision

Green Network Community Assistance Programme – a summary of the assistance available from Council, or a specific flyer on the assistance you require

WCC also runs seminars, produces templates and fact sheets to guide the running of community projects. If you would like support for your Green Network project on public or private land, phone (09) 839 0400.

Community projects which enhance the Green Network

These are some of the many community groups active in Waitakere. For more information contact the Call Centre: ph (09) 839 0400 (www.waitakere.govt.nz)

Keep Waitakere Beautiful (www.ecomatters.org.nz) works on beautification projects including Operation Spring Clean, Trees for Babies, Clean Stream Waitakere and War on Weeds

Landcare groups do vital weed control and restoration work eg. pingao planting at Te Henga (Bethells) and Piha, and ginger clearing at Karekare

The Friends of the Whau (www.friendsofthewhau.org.nz) are rehabilitating, restoring and monitoring the Whau River

Ark in the Park (arkinthePark@paradise.net.nz) are creating an open sanctuary for native birds at the heart of the Waitakere Ranges

Weedfree Waitakere Trust (www.ecomatters.org.nz) provides weed control services and advice to protect and restore native bush on both public and private land.