

**SOME INDIGENOUS VASCULAR PLANTS IN S.N.A. SITE NO 15,
HAYWARDS QUARRY BUSH, VICINITY WINSTONES /FIRTH'S QUARRY,
HEBDEN CRESCENT, LOWER HUTT, COMPILED ON 27-6-97 BY B.J.
MITCALFE AND J. C. HORNE.**

BOTANICAL NAME NAME	MAORI NAME	COMMON
MONOCOT TREES		
Rhopalostylis sapida	nikau	nikau
DICOT TREES AND SHRUBS		
Alectryon excelsus	titoki	titoki
Aristotelia serrata	makomako	wineberry
Beilschmiedia tawa	tawa	tawa
Brachyglottis repanda	rangiora	rangiora
Carpodetus serratus	putaputaweetaa	marbleleaf
Cassinia leptophylla	tauhinu	tauhinu
Coprosma areolata		
Coprosma grandifolia	kanono	kanono
Coprosma lucida	karamu	karamu
Coprosma robusta	karamu	karamu
Coprosma rhamnoides		
Corynocarpus laevigatus	karaka	karaka
Elaeocarpus dentatus	hinau	hinau
Geniostoma rupestre var. ligustrifolium	hangehange	hangehange
Griselinia littoralis	papauma	broadleaf
Hebe stricta	koromiko	koromiko
Hedycarya arborea	porokaiwhiri	pigeonwood
Knightia excelsa	rewarewa	rewarewa
Kunzea ericoides	kanuka	manuka
Leucopogon fasciculatus	mingimingi	mingimingi
Lophomyrtus bullata	ramarama	ramarama
Macropiper excelsum	kawakawa	kawakawa
Melicytus ramiflorus	mahoe	mahoe
Metrosideros robusta	raataa	rata
Myrsine australis	mapou	mapou
Olearia rani	heketara	heketara
Pittosporum tenuifolium	kohuhu	kohuhu
Pseudopanax crassifolius	horoeka	lancewood
Schefflera digitata	patee	seven finger
Solanum laciniatum	poroporo	poroporo
Weinmannia racemosa	kamahi	kamahi
MONOCOT LIANES		
Freycinetia banksii ssp. baueriana		
Ripogonum scandens	kareao	kareao

DICOT LIANES

Clematis paniculata	puawananga	
Metrosideros perforata	aka	rata vine
Metrosideros fulgens	aka kura	rata vine
Parsonsia heterophylla	kaiwhiria	
Rubus cissoides	tataraamo	bush lawyer

LYCOPODS

Lycopodium volubile	waewaekoukou	club moss
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FERNS

Asplenium bulbiferum	mouku	hen & chicken
Asplenium flaccidum	makawe a Raukatauri	hanging spleenwort
Asplenium hookerianum		
Asplenium oblongifolium	huruhuru whenua	shining spleenwort
Asplenium polyodon	petako	sickle fern
Blechnum chambersii	nini	
Blechnum discolor	piupiu	crown fern
Blechnum filiforme	paanako	thread fern
Blechnum sp. ("lowland")	kiokio	kiokio
Cyathea dealbata	ponga	silver fern
Cyathea medullaris	mamaku	mamaku
Dicksonia squarrosa	wheki	wheki
Hymenophyllum demissum	mauku	filmy fern
Hypolepis ambigua		
Hypolepis rufobarbata		
Lastreopsis hispida		
Histiopteris incisa	maata	water fern
Paesia scaberula	matata	ring fern
Pellaea rotundifolia	tarawera	
Phymatosorus pustulatus	kowaowao	hound's
tongue		
Phymatosorus scandens	mokimoki	climbing hound's tongue
Pneumatopteris pennigera	paakau	gully fern
Polystichum richardii	pikopiko	shield fern
Pteridium esculentum	raarahu	bracken
Pyrrosia eleagnifolia	ota	leatherleaf
fern		
Rumohra adiantiformis	karawhiu	

ORCHIDS

Thelymitra longifolia	maikuku	sun orchid
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GRASSES

Cortaderia toetoe	toetoe	toetoe
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SEDGES

Uncinia uncinata	matau a Maui	hook grass
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DICOT HERBS

Haloragus erecta
Nertera depressa
Senecio minimus

ADDITIONAL INFORMATION:

POTENTIAL PROBLEM PLANTS

Buddleja davidii	Buddleia
Leycesteria formosa	Himalayan honeysuckle
Cytisus scoparius	Broom
Ulex europaeus	Gorse

NOTES ON A RAPID RECONNAISSANCE OF (PART) SITE 15, HAYWARDS QUARRY BUSH, HEBDEN CRESCENT, S.H.2.

FOR THE REASONS OUTLINED BELOW, THIS SITE IS CONSIDERED ECOLOGICALLY SIGNIFICANT IN TERMS OF THE RESOURCE MANAGEMENT ACT 1991, SECTION 6.

BOUNDARY

The strip of forest on the northwestern edge of Site 15, part of the area indicated by the DoC as having significant natural values, has recently been completely covered over with quarry spoil. It has therefore been eliminated from this survey and should be deleted from the S.N.A. area. It is the subject of a recommendation below.

The existing S.N.A. boundary appears to include, and should include, the very steep escarpment in the southwest section, (centred on NZMS 260 Map R27 PtQ27, GR 744025), covered in second-growth native vegetation, forming a natural, green backdrop to the lower operating level of the quarry site. It is this escarpment, marked 3, with cross-hatching, on the vegetation map, which is the subject of these notes, a near-vertical portion of Site 15. **For clarity, from here on it will be referred to as 15a.**

Because of the need to observe safety procedures advised by quarry staff, it was not possible to ascertain exactly the line of the fence separating Site 15 from 15a, nor to conduct a personal reconnaissance. Instead, the site was surveyed through binoculars. A large part of Site 15 was botanised in error before we realised it was Firth's property, not Winstones. The plant species list for Site 15 is considered only broadly indicative of 15A's species, but is included here, since 15 and 15A are contiguous and ecologically continuous.

The S.N.A. boundary should be revised to exclude the spoil-slope area marked ////// coded 5, and to include the areas marked 1, 3 and 4.

FLORA AND FAUNA

The significant vegetation of 15 includes (est.) 12 metre rewarewa/tawa, with a sub-canopy of titoki-karaka and an understorey of e.g. kawakawa, ramarama, mahoe, horoeka and hangehange. A post-mature hinau to 700 mm d.b.h. with layers of epiphytes was seen, indicating the considerable age of some components of the ecosystem. Nikau and supplejack are plentiful and there is a developing groundcover of fern species. Whereas fuchsia and five-finger, species habitually browsed by possum were not seen,

the vegetation is in reasonably good condition except near the quarry face, where it is damaged and fragmented by quarrying activity. It is notable that the escarpment is virtually weed-free.

Tawa, karaka, titoki, pidgeonwood and nikau, all present on the site, are favoured food of kereru, native pigeon. Site 15 must therefore be of significance as bird habitat and food source, making Site 15 and 15a complementary to Site 3.

RARITY/REPRESENTATIVENESS

Lowland forest sites are among those of most concern in the Wellington Conservancy, ("Plant Conservation Strategy", Wgtn Conservancy of DoC, 1996). This is because so many of them have been destroyed or severely modified by development. Site 15 is representative of Wellington west's tawa-dominant, lowland- hill-country forest from which mature podocarps have been logged.

A DoC inventory lists northern rata and black beech for Site 15. The presence of these species is very significant, since northern rata (*Metrosideros robusta*) is now a very uncommon component of Wellington ecosystems, and the southern limit of black beech (*Nothofagus solandri* var. *solandri*) in Wellington was previously thought to be further north, at Dry Creek.

Aside from the vegetation, a significant feature of the site which contributes to its rarity value, is its situation, i.e. adjacent to and immediately north of the Wellington Faultline, a regionally- and nationally-outstanding landscape feature, part of our natural heritage.

HISTORY/CULTURAL FACTORS

The NZMS 1 Series Map N160 HUTT, 1965, shows native forest extending from the vicinity of Site 15a, almost continuously for a mile to the northwest. Most of this has now been lost.

Crossing the spur crest is an overgrown 4WD track running roughly parallel to S.H.2, which, if permission from Winstones could be obtained, could eventually become part of a scenic walkway linking the site with e.g. Dry Creek.

The presence of kiekie is of significant to iwi.

DIVERSITY

Sixty-nine indigenous species were listed in the reconnaissance, including 32 trees/shrubs. Further botanical survey would no doubt add to this list.

The steep, south-facing slope, a moist gully and a rounded spur crest, each landform with its own characteristic vegetation, offer considerable habitat diversity despite the small area.

DISTINCTIVENESS/LANDSCAPE INTEGRITY

This steep, vegetated landform above the extractive, industrial site floor, stands out in complete contrast to its surroundings. Rising to over 100 metres altitude, it has natural prominence in the landscape.

Site 15a's indigenous vegetation adorns this portion of the Wellington Faultline appropriately. With sympathetic management, it will eventually contribute significantly

to healing the surrounding landscape to the extent that is possible in an industrial area.

CONTINUITY/LINKAGES

The proximity of S.N.A. Site 3, Kelson Bush, Liverton Rd Bush and Belmont Regional Park, makes Sites 15 and 15a part of a series of indigenous vegetation sites, a seed source and a refuge for bird life. Nearby gullies at right angles to and above SH2, already contain advanced second-growth vegetation such as nikau, rewarewa and puka.

RESTORATION/SUSTAINABILITY

Without further fragmentation by incursion of roading or quarrying, if buffered by the proposed planting of locally-sourced, indigenous species e.g. on the groomed area to the northeast, (marked 5), and complemented by the vegetation of the rest of Site 15, 15a may be just large enough to be self-sustaining. Given time and protection, rimu, rata, black beech and pukatea (which have been recorded in the DoC inventory for Site 15) could become established on Site 15a. They may already be present in seedling or sapling form.

Tawa, titoki, pigeonwood, karaka and nikau seedlings are evidence of bird activity, of tui and pigeon in particular, which augur well for the site's potential to continue its succession towards mature forest. This process will be greatly assisted by animal pest control. See recommendation below.

OTHER CONSERVATION VALUES

The dense vegetation is providing significant protection for this steep face, from erosion and slipping. It also acts as a buffer to the rest of Site 15 and is a prominent natural feature viewed by all those entering the quarry from the south.

THREATS

The immediate threat is further quarrying, roading and/or tipping of spoil in the vicinity. Spread of fire from nearby gorse as a result of vandalism is an indirect threat. Predation of birds, particularly kereru, is a threat to the survival of the forest and its biota.

RECOMMENDATIONS

1. That under the supervision of an ecologist, the area marked 5, be planted with locally-sourced indigenous plants.

2. That in cooperation with Wellington Regional Council, Sites 15 and 15a be subject to animal pest control.

ACKNOWLEDGEMENT

Full cooperation from Winstones quarry manager during the reconnaissance was appreciated.