

SITE INFORMATION - NATURAL AREAS IN DUNEDIN CITY

Site Number and Name	1016 Portobello 1		Name of Owners	[REDACTED] and [REDACTED]	Date visited	7 December 2010
	22 Dicksons Hill S 23 Hoopers Inlet NW					
Tenure	Private	GPS coordinates	NZTM E1417489 N4919734		Assessor	S. Rate
Land use	Part of property leased for grazing				Area (ha)	9.1
Ecological District	Dunedin		Bioclimatic Zone	Coastal forest		
Altitudinal range	c.50-118 m asl		Predominant aspects	NW, SE, NE		
Is this site legally protected?	No		Protection Agency	n/a		

Vegetation/Habitat Types (dominant species)**1 - Kanuka forest on hillslopes (9.1 ha; indigenous, secondary)****General Condition^a 3**

Dry forest dominated by kanuka (*Kunzea ericoides*). The open understorey is dominated by mahoe (*Melicactus ramiflorus*), with less common kohuhu (*Pittosporum tenuifolium*) and mapou (*Myrsine australis*), and a few hawthorn (*Crataegus monogyna*). The groundcover comprises litter and patchy cover of hounds tongue fern (*Microsorium pustulatum*). On lower hillslopes broadleaved species become more common. In the gully SE of the high point, fuchsia (*Fuchsia excorticata*), mahoe, and silver fern (*Cyathea dealbata*) are common, with a groundcover of hen and chicken fern (*Asplenium bulbiferum*), and *Blechnum chambersii*. Alongside the driveway are plantings of tree lucerne (*Chamaecytisus palmensis*). On forest edges and within nearby gorse scrub, native plantings have been undertaken.

^aGeneral Condition is assessed in five categories (5 Excellent, 4 Good, 3 Moderate, 2 Poor, 1 Very poor) based on the dominance and regeneration of indigenous species, and the presence of pest plants and animals.

Rare/notable plant species

No nationally threatened or uncommon species recorded (as per de Lange *et al.* 2009). Ongaonga (*Urtica ferox*) is listed in Appendix A 'Threatened plants present on land within Dunedin City' (DCC 2006). Ngaio (*Myoporum laetum*), Hall's totara (*Podocarpus hallii*), pokaka (*Elaeocarpus hookerianus*), and kowhai (*Sophora microphylla*) (planted) are listed in Appendix B 'Important native tree species present on land within Dunedin City' (DCC 2006).

Native fauna

Bellbird (*Anthornis melanura*), grey warbler (*Gerygone igata*), tui (*Prosthemadera novaeseelandiae novaeseelandiae*), fantail (*Rhipidura fuliginosa*), and SI rifleman (*Acanthisitta chloris chloris*) were recorded at the site. Rifleman is listed as nationally 'At Risk - Declining' (Miskelly *et al.* 2008). Kereru (*Hemiphaga novaeseelandiae*) and [REDACTED], have also been recorded at this site ([REDACTED] pers. comm. 7 December 2010).

Exotic fauna

Chaffinch (*Fringilla coelebs*), blackbird (*Turdus merula*), redpoll (*Carduelis flammea*), and skylark (*Alauda arvensis*) were recorded at the site.

Uncommon or rare vegetation or habitat types

None noted.

Taxa with distribution limits at site

None noted.

Other important features

The entire site is located in the 'At Risk' category (20-30% indigenous vegetation cover remaining) of the Threatened Land Environment Classification (Walker *et al.* 2007).

Number of naturally established
native plant species seen

53

Number of exotic and non-local
native plant species seen

32

% native

62

General Notes

Several walking tracks are present within forest; one connects to a neighbouring property to the east. Pokaka is present at two sites: one tree was recorded north of the parking area during the field visit (NZTM 1417381 4920074) and several trees are present near the eastern property boundary [REDACTED] pers. comm. December 2010). Plants used for revegetation have been sourced locally, and in some cases plantings are from seedlings transplanted within the property.

Appropriateness of boundary

The significant area includes all the kanuka forest (see Map 1). Planted areas are currently excluded from the significant area, but these areas are likely to improve in value over time. The site is likely to require re-assessing at some future date due to restoration being undertaken.

Landowner Aspirations/Comments

[REDACTED] is planning to restore a large area of pasture and gorse shrubland to the SW of the significant area to indigenous forest. This area is already fenced from pasture higher up the slopes of Harbour Cone. Areas bordering Highcliff Road are to be retained as pasture. Several smaller areas within or adjacent to forest are to be retained as open spaces.

MANAGEMENT ISSUES

Unit	Activity	Effects/notes
1	Domestic stock	
	Animal pests	
	Weeds	Gorse (<i>Ulex europaeus</i>) is present on forest edges and in small clearings. Hawthorn (<i>Crataegus mongyna</i>) and blackberry (<i>Rubus fruticosus</i> agg.) are scattered throughout. Elder (<i>Sambucus nigra</i>), flowering current (<i>Ribes sanguineum</i>), male fern (<i>Dryopteris filis-max</i>), holly (<i>Ilex aquifolium</i>), tutsan (<i>Hypericum androsaemum</i>), Khasia berry (<i>Cotoneaster simonsii</i>), <i>Cotoneaster microphylla</i> , sweet brier (<i>Rosa rubiginosa</i>), and the non-local natives rangiora (<i>Brachyglottis repanda</i>), karamu (<i>Coprosma robusta</i>), <i>C. propinqua</i> × <i>robusta</i> , and <i>Hoheria sextylosa</i> - which appears to have been planted - are also present. Several other non-local natives have been planted.
	Vegetation clearance	
	Infilling	
	Drainage/Ponding	
	Dumping of waste	
	Recreational impact	
	Erosion	
	Herbicide application	
	Buildings	
	Easements for utilities	
	Roading works	
	Fire	
	Planting	On edges of driveway and forest. Exotic species include tree lucerne. Indigenous species include <i>Olearia avicenniifolia</i> , ngaio, harakeke (<i>Phormium tenax</i>), kohuhu, kowhai, Hall's totara, and <i>Olearia lineata</i> . Non-local natives include <i>Dodonaea viscosa</i> , <i>Arthropodium cirratum</i> , <i>Senecio greyi</i> , <i>Pachystegia insignis</i> , pohutukawa (<i>Metrosideros excelsa</i>), karamu, <i>Hoheria sextylosa</i> , a manuka cultivar, and <i>Corokia macrocarpa</i> . Planted areas are currently excluded from the significant area.
	Restoration works	

SHORT-TERM MANAGEMENT OPTIONS AND PRIORITIES

Type of management	Details	Priority
Weed control	Woody weeds should be controlled within the fenced area(s). Priorities for control are elder, hawthorn, blackberry, Khasia berry, sweet brier, rangiora, karamu, and <i>Hoheria sextylosa</i> .	High
Planting	Use naturally-occurring, locally-sourced indigenous plant species for restoration. Avoid planting non-local natives such as karamu and <i>Hoheria sextylosa</i> which can become weedy dominants.	High

DUNEDIN CITY DISTRICT PLAN CRITERIA

Criteria	Ranking			Comments/Justification
	H	M	L	
Wetland				N/A
Rarity and distinctiveness		•		Only c.5% of landcover on Otago Peninsula comprises indigenous forest and scrub. 'At Risk' SI rifleman and [REDACTED] recorded. Five locally important plant species present.
Representativeness		•		Moderate quality example of dry secondary kanuka forest in Dunedin ED.
Viability	•			This site is undergoing restoration and is part of a larger area of indigenous vegetation. Weeds are low in abundance within forest.
Ecological context	•			Contiguous with indigenous vegetation on neighbouring properties, that includes ASCV sites and QEII covenants.
Naturalness		•		Largely intact canopy. Few woody weeds.
Diversity and pattern		•		One indigenous vegetation type. Moderate number of indigenous plant species.
Size and shape		•		Moderate size but irregularly shaped.

Overall Assessment - Is this site significant in terms of District Plan Criteria

Yes

Comments/Reasons:

This property contains secondary kanuka forest that is part of one of the largest remaining areas of indigenous vegetation on the peninsula and includes other ASCV sites and QEII covenants. The site provides habitat for 'At Risk' rifleman and [REDACTED], and several locally important plant species. Restoration efforts are currently underway and ecological values are likely to improve over time.

Table 1: List of vascular plants observed during site visit, 7 December 2010. Abundance is assessed over the whole site. *Exotic species.

Species	Common name	Plant type	Abundance
<i>Acaena juvenca</i>	Bidibid	Dicot herb	Rare
<i>Acaena novae-zelandiae</i>	Bidibid	Dicot herb	Rare
<i>Agrostis capillaris</i> *	Browntop	Grass	Rare
<i>Arctium minus</i> subsp. <i>minus</i> *	Burdock	Dicot herb	Rare
<i>Aristotelia serrata</i>	Wineberry	Tree	Rare
<i>Asplenium appendiculatum</i>		Fern	Rare
<i>Asplenium bulbiferum</i>	Hen and chicken fern	Fern	Occasional
<i>Asplenium flabellifolium</i>	Necklace fern	Fern	Rare
<i>Asplenium hookerianum</i>	Hooker's spleenwort	Fern	Rare
<i>Asplenium lyallii</i>	Lyall's spleenwort	Fern	Rare
<i>Astelia fragrans</i>		Monocot herb	Rare
<i>Blechnum chambersii</i>		Fern	Occasional
<i>Blechnum discolor</i>	Crown fern	Fern	Rare
<i>Blechnum fluviatile</i>	Kiwakiwa	Fern	Occasional
<i>Blechnum procerum</i>		Fern	Occasional
<i>Brachyglottis repanda</i> *	Rangiora	Tree	Rare
<i>Cardamine debilis</i>		Dicot herb	Rare
<i>Carex coriacea</i>	Rautahi	Sedge	Rare
<i>Carpodetus serratus</i>	Putaputaweta	Tree	Rare
<i>Cedronella canariensis</i> *	Balm of Gilead	Dicot herb	Rare
<i>Chamaecytisus palmensis</i> *	Tree lucerne	Tree	Occasional
<i>Coprosma areolata</i>		Tree	Rare
<i>Coprosma propinqua</i>	Mingimingi	Shrub	Rare
<i>Coprosma rhamnoides</i>		Shrub	Occasional
<i>Coprosma robusta</i> *	Karamu	Shrub	Rare
<i>Coprosma robusta</i> * x <i>propinqua</i>		Shrub	Rare
<i>Coprosma rotundifolia</i>		Tree	Rare
<i>Cordyline australis</i>	Ti kouka; cabbage tree	Tree	Rare
<i>Cotoneaster microphyllus</i> *		Shrub	Rare
<i>Cotoneaster simsonii</i> *	Khasia berry	Shrub	Rare
<i>Crataegus monogyna</i> *	Hawthorn	Tree	Rare
<i>Crepis capillaris</i> *	Hawksbeard	Dicot herb	Rare
<i>Cyathea dealbata</i>	Ponga; silver fern	Tree fern	Rare
<i>Cyathea smithii</i>	Soft tree fern	Tree fern	Rare
<i>Dactylis glomerata</i> *	Cocksfoot	Grass	Rare
<i>Digitalis purpurea</i> *	Foxglove	Dicot herb	Occasional
<i>Dryopteris filix-mas</i> *	Male fern	Fern	Occasional
<i>Elaeocarpus hookerianus</i>	Pokaka	Tree	Rare
<i>Fuchsia excorticata</i>	Fuchsia	Tree	Occasional
<i>Galium aparine</i> *	Cleavers	Dicot herb	Rare
<i>Histiopteris incisa</i>	Water fern; matata	Fern	Occasional
<i>Holcus lanatus</i> *	Yorkshire fog	Grass	Rare
<i>Hydrocotyle heteromeria</i>	Waxweed	Dicot herb	Occasional
<i>Hypericum androsaemum</i> *	Tutsan	Dicot herb	Rare
<i>Hypochaeris radicata</i> *	Catsear	Dicot herb	Rare
<i>Hypolepis ambigua</i>		Fern	Occasional
<i>Ilex aquifolium</i> *	Holly	Shrub	Rare
<i>Jacobaea vulgaris</i> * (syn. <i>Senecio jacobaea</i>)	Ragwort	Dicot herb	Rare
<i>Kunzea ericoides</i>	Kanuka	Tree	Abundant
<i>Lagenifera strangulata</i>		Dicot herb	Rare
<i>Leptolepia novae-zelandiae</i>	Lace fern	Fern	Rare
<i>Melicytus ramiflorus</i>	Mahoe	Tree	Occasional
<i>Metrosideros diffusa</i>	White rata	Liane	Rare

<i>Microsorium pustulatum</i>	Hound's tongue fern	Fern	Occasional
<i>Muehlenbeckia australis</i>	Pohuehue	Liane	Rare
<i>Mycelis muralis</i> *	Wall lettuce	Dicot herb	Rare
<i>Myoporum laetum</i>	Ngaio	Tree	Rare
<i>Myrsine australis</i>	Mapou	Tree	Occasional
<i>Nasturtium microphyllum</i> *		Dicot herb	Rare
<i>Nematoceras macranthum</i>	Spider orchid	Orchid	Rare
<i>Ozothamnus leptophyllus</i>		Shrub	Rare
<i>Parsonsia heterophylla</i>	NZ jasmine	Liane	Rare
<i>Pellaea rotundifolia</i>	Button fern	Fern	Rare
<i>Pittosporum eugenoides</i>	Lemonwood	Tree	Rare
<i>Pittosporum tenuifolium</i>	Kohuhu	Tree	Occasional
<i>Plantago lanceolata</i> *	Narrow-leaved plantain	Dicot herb	Rare
<i>Podocarpus hallii</i>	Hall's totara	Tree	Rare
<i>Polystichum neozelandicum</i> subsp. <i>zerophyllum</i>		Fern	Rare
<i>Polystichum vestitum</i>	Shield fern	Fern	Occasional
<i>Pseudopanax crassifolius</i>	Lancewood	Tree	Rare
<i>Pteridium esculentum</i>	Bracken	Fern	Rare
<i>Ranunculus repens</i> *	Creeping buttercup	Dicot herb	Rare
<i>Ribes sanguineum</i> *	Flowering currant	Shrub	Rare
<i>Rosa rubiginosa</i> *	Sweet brier	Shrub	Rare
<i>Rubus cissoides</i>	Lawyer	Liane	Occasional
<i>Rubus fruticosus</i> agg.*	Blackberry	Liane	Occasional
<i>Rumex obtusifolius</i> *	Broad-leaved dock	Dicot herb	Rare
<i>Sambucus nigra</i> *	Elder	Tree	Rare
<i>Senecio minimus</i>		Dicot herb	Rare
<i>Solanum laciniatum</i>	Poroporo	Shrub	Rare
<i>Stellaria media</i> *	Chickweed	Dicot herb	Rare
<i>Stellaria parviflora</i>		Dicot herb	Rare
<i>Trifolium repens</i> *	White clover	Dicot herb	Rare
<i>Ulex europaeus</i> *	Gorse	Shrub	Occasional
<i>Urtica ferox</i>	Ongaonga	Shrub	Rare

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Plate 1: Interior of kanuka forest showing regeneration of mahoe.



Plate 2: Kanuka forest from the driveway looking northeast.

