

TIMARU DISTRICT
SIGNIFICANT NATURAL AREAS
SURVEY

PECK PROPERTY
GLEN HAYS



Report prepared for Timaru District Council by Mike Harding
June 2015

TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

PROPERTY REPORT

PROPERTY DETAILS:

Owner: Graham and Sharon Peck
Valuation Reference: ...24810/084.00
Address: Henriksen Road
Location: Lower northeast slopes of Brothers Range, Totara Valley
Ecological District: Geraldine
TDC Land Type: 'Soft Rock Hills and Downs'
Land Environments: N3.1a

ECOLOGICAL CONTEXT:

The property lies on lower northeast slopes of the Brothers Range, near Totara Valley. It is in Geraldine Ecological District (McEwen, 1987). Limestone scarps on the property lie within the N3.1a Level IV Land Environment as defined by Leathwick *et al* (2003). Indigenous vegetation within this land environment is regarded as acutely-threatened (Walker *et al*, 2005).

It is likely that the original vegetation of this area was predominantly podocarp-hardwood forest, dominated by matai, totara, kowhai, broadleaf and other hardwood trees. Shrubland, treeland and tussockland may have occupied steeper slopes and disturbed sites. Limestone bluffs supported specialised flora, and valley floors would have supported areas of wetland vegetation.

Today the original forest cover in this part of Geraldine Ecological District is largely confined to remnants in gullies or on steep slopes associated with limestone scarps. Otherwise, the indigenous vegetation of the ecological district is substantially depleted or modified. The indigenous fauna would have originally been significantly more numerous and diverse, with a greater range of birds, lizards and invertebrates than is presently found in the area.

SIGNIFICANT AREAS ON THE PROPERTY:

Indigenous vegetation on the property comprises treeland (scattered trees), shrubland, herbfield and sparsely vegetated rockland on or associated with a limestone bluff and large limestone boulders. These habitats support populations of two 'at risk' (naturally uncommon) plant species, as listed by de Lange *et al* (2012), and several uncommon and yet to be described species restricted to limestone. The property lies near to areas of indigenous vegetation on other properties, contributing to the network of fauna habitat in the wider area. This part of the ecological district is within the range of a remnant South Canterbury population of long-tailed bat; a threatened (nationally critical) species.

The property was surveyed as part of the District-wide survey of Significant Natural Areas during March 2015. One area, comprising approximately four hectares, is regarded as a Significant Natural Area (SNA) when assessed against the District Plan criteria. The boundary of this SNA is illustrated on the aerial photograph below and the values described on the SNA Form in this report. Note that the boundaries of the SNA are indicative, rather than precise.

This area meets the ecological criteria in the Timaru District Plan (criteria i-vi, pages B18-B19) and is considered to be sustainable in the long term, or sustainable with appropriate management (criterion vii, page B19). SNAs are subject to confirmation by Council after regarding the matters listed in the District Plan (pages B19-B20). It is expected that SNAs will eventually be listed in the District Plan by way of a notified plan change.

At present, consent is required from Council for clearance of areas of indigenous vegetation or habitat which meet the Interim Definitions in the District Plan. Clearance includes burning, track construction, spraying with herbicides and over-planting. To assist with the protection and management of any SNA, landowners can apply to Council for financial assistance. Any questions regarding the protection, management and use of SNAs should be directed to the District Planner.



1:7,500



TIMARU DISTRICT SNA SURVEY

SNA 419

Area Name: Glen Hays scarp
Ecological District: Geraldine
Central map ref. (NZTM): 1437376E-5097926N
Surveyors: Mike Harding

Property: Peck (Glen Hays)
Nearest Locality: Totara Valley
Area Size (ha): 4.7 **Altitude (m):** 160-200
Survey Time: 2 hours **Survey Date:** 24-03-15

General Description:

This SNA lies on the steep southeast-facing slopes of a limestone scarp and includes adjacent gentler slopes with scattered large limestone boulders. It is near the southern boundary of the property above Henriksen Road and lies close to other areas of indigenous vegetation on limestone.

Plant Communities:

Plant communities at the SNA are small patches of trees (forest) on the limestone bluffs and shrubland, herbfield and sparsely-vegetated rockland on and associated with the limestone bluff and rocks. These plant communities are described below. Naturalized (exotic) species are indicated with an asterisk*.

Trees present at the site are broadleaf, mahoe, walnut*, matipo and five-finger. Shrubs and climbers are mingimingi, matagouri, native broom, *Coprosma crassifolia*, koromiko, cotoneaster*, mistletoe, pohuehue, scrub pohuehue, native jasmine and ivy*.

Herbaceous species on or adjacent to the outcropping limestone are toatoa, *Eiandia allanii*, *Geranium microphyllum*, *Geranium* aff. *brevicaule*, *Colobanthus apetalus*, *Colobanthus* aff. *strictus*, *Craspedia* sp., *Cardamine* sp., *Epilobium nummularifolium*, *Lagenifera pumila*, hairy pennywort, *Asplenium lyallii*, maidenhair fern, necklace fern, *Hypnum cupressiforme*, Californian thistle*, narrow-leaved plantain*, mouse-ear hawkweed*, white clover*, suckling clover*, selfheal*, yarrow*, sandwort*, stoncrop*, burdock*, black nightshade* and hemlock*. Common grasses are cocksfoot*, Chewings fescue*, blue tussock and *Poa imbecilla*.



Typical habitat for limestone plants on large boulders at SNA 419

Birds/Fauna Observed:

Native birds observed during this brief survey were grey warbler, fantail, bellbird, spur-winged plover and harrier.

Notable Flora, Fauna and Habitats:

Important features of this area are: the presence of indigenous vegetation on limestone, a naturally uncommon ecosystem listed as 'nationally vulnerable' (Holdaway *et al*, 2012); the presence of two 'at risk' (naturally uncommon) plant species, *Einadia allanii* and *Geranium microphyllum* (de Lange *et al*, 2012); the presence of un-described limestone plant species (*Colobanthus* aff. *strictus*, *Geranium* aff. *brevicaule*, *Cardamine* sp. and *Craspedia* sp.) and its location near to other areas of indigenous vegetation on limestone.

Notable Plant and Animal Pests:

Ivy and cotoneaster are the most important woody plant pests. Hemlock, stonecrop, cocksfoot and Chewings fescue are also common and in places dominant, though control of these species is difficult. Animal pests were not surveyed.

Boundaries (buffering, fencing, adjoining plant communities and habitats):

The boundary of this SNA has been drawn to include the limestone scarp and most of the large scattered boulders beneath the scarp. This includes areas of pasture which are not significant. The top of the limestone scarp is fenced and some parts of the scarp crest are un-grazed. Otherwise the site is grazed as part of large paddocks. It lies reasonably close to other areas of indigenous vegetation on limestone.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M	Indigenous vegetation that is moderately representative of the original vegetation and typical of that on limestone in the area.
Rarity	H	Indigenous vegetation on a nationally vulnerable limestone ecosystem, within a threatened land environment; provides habitat for two 'at risk' plant species and several un-described limestone plant species
Diversity and pattern	M	Plant species diversity is moderate though reduced from that originally present.
Distinctiveness/special features	M	The large scattered limestone boulders beneath the bluff are notable and provide good habitat for limestone plant species.
Other Criteria		
Size/shape	M	A moderate-sized area, parts of which are well buffered.
Connectivity	M	Lies close to other areas of indigenous vegetation on limestone.
Long-term Sustainability	M	Control of plant pests, notably ivy, may be necessary to protect ecological values in the long term.

Final Consideration (of other matters: Section D, page B-19 of Timaru District Plan):

Vegetation at this site has been informally protected. Significant ecological values at the site are restricted to the exposed limestone and associated slopes. These areas have only limited potential for farm development.

Discussion:

This site easily meets the District Plan criteria for an SNA. Important values are the presence of indigenous vegetation on limestone, 'at risk' and un-described limestone plant species and the extent of the limestone habitat.

Limestone woollyhead (Craspedia sp.)



Scientific names of species cited by common name in this report

(Note: this is not a complete species list; it is a list only of species cited by common name in this report)

Common Name Scientific name

(* = naturalised species)

black nightshade*	<i>Solanum nigrum</i>
blue tussock.....	<i>Poa colensoi</i>
broadleaf	<i>Griselinia littoralis</i>
burdock*	<i>Arctium minus</i>
Californian thistle*	<i>Cirsium arvense</i>
Chewings fescue*	<i>Festuca rubra</i> ssp. <i>commutata</i>
cocksfoot*	<i>Dactylis glomerata</i>
cotoneaster*	<i>Cotoneaster glaucophyllus</i>
five-finger	<i>Pseudopanax arboreus</i>
hairy pennywort	<i>Hydrocotyle moschata</i>
hemlock*	<i>Conium maculatum</i>
ivy*	<i>Hedera helix</i>
koromiko	<i>Hebe salicifolia</i>
mahoe/whiteywood	<i>Melicytus ramiflorus</i>
maidenhair fern	<i>Adiantum cunninghamii</i>
matagouri	<i>Discaria toumatou</i>
matai/black pine	<i>Prumnopitys taxifolia</i>
matipo/kohuhu	<i>Pittosporum tenuifolium</i>
mingimingi	<i>Coprosma propinqua</i>
mistletoe	<i>Ileostylis micranthus</i>
mouse-ear hawkweed*	<i>Pilosella officinarum</i>
narrow-leaved plantain*	<i>Plantago lanceolata</i>
native broom	<i>Carmichaelia</i> aff. <i>australis</i>
native jasmine	<i>Parsonsia heterophylla</i>
necklace fern	<i>Asplenium flabellifolium</i>
pohuehue	<i>Muehlenbeckia australis</i>
sandwort*	<i>Arenaria serpyllifolia</i>
scrub pohuehue	<i>Muehlenbeckia complexa</i>
selfheal*	<i>Prunella vulgaris</i>
stonecrop*	<i>Sedum acre</i>
suckling clover*	<i>Trifolium dubium</i>
toatoa.....	<i>Haloragis erecta</i>
totara	<i>Podocarpus totara</i>
walnut*	<i>Juglans regia</i>
white clover*	<i>Trifolium repens</i>
yarrow*	<i>Achillea millefolium</i>



Einadia allanii at SNA 419

References Cited

- de Lange, PJ; Rolfe, JR; Champion, PD; Courtney, SP; Heenan, PB; Barkla, JW; Cameron, EK; Norton, DA; Hitchmough, RA. 2012. *Conservation status of New Zealand indigenous vascular plants, 2012*. Department of Conservation, Wellington, New Zealand. 70p.
- Holdaway, R.J.; Wiser, S.K.; Williams, P.A. 2012. Status assessment of New Zealand's naturally uncommon ecosystems. *Conservation Biology* 26: 619-629.
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- McEwen, WM (editor). 1987. Ecological regions and districts of New Zealand, third revised edition (Sheet 4). *New Zealand Biological Resources Centre Publication No. 5*. Department of Conservation, Wellington, 1987.
- Walker, S.; Price, R.; Rutledge, D. 2005. New Zealand's remaining indigenous vegetation cover: recent changes and biodiversity protection needs. *Landcare Research Contract Report LC0405/038*.