

TIMARU DISTRICT
SIGNIFICANT NATURAL AREAS
SURVEY

GOSLIN PROPERTY

Report prepared for Timaru District Council by Mike Harding
October 2015

TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

PROPERTY REPORT

PROPERTY DETAILS:

Owner:RG & CB Goslin
Valuation Reference: ...24670/243.00
Address:716 Main Waitohi Road, Temuka
Location:North side of Opihi River at Hanging Rock Bridge
Ecological District:Geraldine
TDC Land Type:.....'Soft Rock Hills and Downs'
Land Environments:.....N3.1d and Q4.3b

ECOLOGICAL CONTEXT:

The property lies on north side of the Opihi River at Hanging Rock Bridge. It is in Geraldine Ecological District (McEwen, 1987). Limestone scarps on the property lie within the N3.1d and Q4.3b Level IV Land Environments as defined by Leathwick *et al* (2003). Indigenous vegetation within these land environments is regarded as chronically-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:

This property was not surveyed as part of the District-wide survey of Significant Natural Areas because permission for access was declined by the landowner. However, nearby properties have been surveyed and there are good recent aerial photo images of the area. So it is possible to determine what indigenous vegetation is likely to be present on the property.

Indigenous vegetation on the property appears to comprise treeland (scattered trees), shrubland, herbfield and sparsely vegetated rockland on or associated with limestone bluffs. On other properties these habitats support populations of three '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.

Without the benefit of a field survey it is difficult to accurately determine the extent of significant indigenous vegetation on the property. Aerial images indicate that exposed limestone on the property occurs as small bluffs and outcrops. These areas are likely to be a Significant Natural Areas (SNAs) when assessed against the District Plan criteria. This report attempts to define

those areas from aerial images, as illustrated below. The location and size of these areas, as confirmed by the landowner, are listed in the table below.

Area No.	Map ref. (NZTM)	Aprox. size(ha)	Vegetation/habitat type
302	1443275E-5105412N	0.31	trees; scrub; rockland
303	1443915E-5105540N	1.05	trees; scrub; rockland

The boundaries of these areas are illustrated as on the aerial photograph below and the likely values described on the SNA Form in this report. Note that the boundaries of the SNAs are indicative, rather than precise. These areas are likely to meet the ecological criteria in the Timaru District Plan (criteria i-vi, pages B18-B19) and are 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.

Goslin Property
24670/243.00

Wigley Road



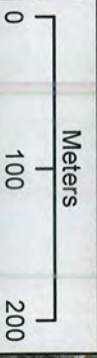
302

Opihi Road



303

Winchester Hanging Rock Road



1:5,000



TIMARU DISTRICT SNA SURVEY

SNAs 302 and 303

Area Name: Goslin limestone	Property: Goslin
Ecological District: Geraldine	Nearest Locality: Totara Valley
302 Central map ref. (NZTM): 1443275E-5105412N	Area Size (ha): 0.31 Altitude (m): 180
303 Central map ref. (NZTM): 1443915E-5105540N	Area Size (ha): 1.05 Altitude (m): 200
Assessor: Mike Harding	Survey Time: n/a Survey Date: n/a

General Description:

These areas comprise limestone scarps and associated limestone outcrops and boulders at the southern part of the property. The SNA boundaries are drawn (from an aerial photo image) to include the main areas of outcropping limestone and associated vegetation.

Plant Communities:

The main indigenous plant community present is vegetation (trees, shrubs and herbs) on or associated with the limestone outcrops. The species likely to be present are described below. Naturalized (exotic) species are indicated with an asterisk*.

Areas of trees are likely to be dominated by broadleaf, mahoe and pohuehue. Other likely tree species are kowhai, matipo, cabbage tree, five-finger and wineberry. Other species that may be present within trees on the limestone are mingimingi, koromiko, flax, bush lily and silver tussock. Other woody species likely to be present are mountain akeake, matagouri, native broom, mistletoe, scrub pohuehue, elderberry* and Himalayan honeysuckle*.

Indigenous herbaceous species typically present on limestone in this area are toatoa, *Einadia allanii*, *Cardamine* sp., woollyhead (*Craspedia* sp.), *Colobanthus* aff. *strictus*, *Colobanthus apetalus*, *Geranium microphyllum*, *Geranium* aff. *brevicaule*, *Epilobium nummularifolium*, *Gingidia enysii*, *Dichondra repens*, *Lagenifera pumila*, *Oxalis excilis*, *Carex breviculmis*, *Asplenium hyalii*, maidenhair fern and *Blechnum chambersii*.

Grasses commonly present are silver tussock, blue tussock, *Poa imbecilla*, hard grass*, cocksfoot*, Chewings fescue*, sweet vernal* and browntop*.

Birds/Fauna Observed:

Native birds typically present at similar sites are bellbird, grey warbler, fantail, silvereye, welcome swallow and harrier. The property lies within the recorded range of long-tailed bat.

Notable Flora, Fauna and Habitats:

Important features of this area are likely to be: the presence of indigenous vegetation on limestone, a naturally uncommon ecosystem listed as 'nationally vulnerable' (Holdaway *et al*, 2012); the likely presence of 'at risk' (naturally uncommon) plant species, such as *Gingidia enysii*, *Einadia allanii* and *Geranium microphyllum* (de Lange *et al*, 2012); the likely 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. The sites may provide habitat for long-tailed bat, listed as a 'threatened' (nationally critical) species by O'Donnell *et al* (2012).

Notable Plant and Animal Pests:

Assessment of plant and animal pests was not possible.

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

The boundaries of these areas are drawn to include the largest limestone outcrops and the shrubland and treeland associated with the outcrops. However, the significant ecological values are likely to be confined to the exposed limestone and associated vegetation. The sites lie close to other areas of indigenous vegetation on limestone.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M	Indigenous vegetation that is typical of that remaining on limestone in the ecological district.
Rarity	H	Indigenous vegetation on a nationally vulnerable limestone ecosystem, within a threatened land environment; likely to provide habitat for 'at risk' and un-described limestone plant species.
Diversity and pattern	?	Plant species diversity is unclear.
Distinctiveness/special features	?	
<hr/> Other Criteria <hr/>		
Size/shape	M	Small areas of exposed limestone but well buffered.
Connectivity	M	The sites lie close to other areas of indigenous vegetation on limestone.
Long-term Sustainability	?	Unclear.

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

The parts of these sites that are likely support significant ecological values are on or associated with the exposed limestone. These areas appear generally unsuitable for farm development.

Discussion:

If the above assessment is accurate, these sites meet the District Plan criteria for Significant Natural Areas (SNAs). Important values are the presence of indigenous vegetation on limestone, the likely presence of 'at risk' and un-described limestone plant species and their location close to other areas of the limestone habitat. The sites may provide habitat for a 'threatened' (nationally critical) species (long-tailed bat).

Scientific names of plant 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)	
blue tussock.....	<i>Poa colensoi</i>
broadleaf	<i>Griselinia littoralis</i>
browntop*	<i>Agrostis capillaris</i>
bush lily.....	<i>Astelia fragrans</i>
cabbage tree/ti rakau	<i>Cordyline australis</i>
Chewings fescue*	<i>Festuca rubra</i> ssp. <i>commutata</i>
cocksfoot*	<i>Dactylis glomerata</i>
elderberry*	<i>Sambucus nigra</i>
five-finger	<i>Pseudopanax arboreus</i>
flax	<i>Phormium tenax</i>
hard grass*	<i>Cynosurus rigidum</i>
Himalayan honeysuckle*	<i>Leycesteria formosa</i>
koromiko	<i>Hebe salicifolia</i>
kowhai.....	<i>Sophora microphylla</i>
maidenhair fern	<i>Adiantum cunninghamii</i>
matipo	<i>Pittosporum tenuifolium</i>
matagouri	<i>Discaria toumatou</i>
matai/black pine	<i>Prumnopitys taxifolia</i>
mingimingi.....	<i>Coprosma propinqua</i>
mistletoe.....	<i>Ileostylis micranthus</i>
mountain akeake	<i>Olearia avicenniifolia</i>
native broom	<i>Carmichaelia</i> aff. <i>australis</i>
pohuehue	<i>Muehlenbeckia australis</i>
scrub pohuehue	<i>Muehlenbeckia complexa</i>
silver tussock.....	<i>Poa cita</i>
sweet vernal*	<i>Anthoxanthum odoratum</i>
toatoa.....	<i>Haloragis erecta</i>
totara	<i>Podocarpus totara</i>
wineberry	<i>Aristotelia serrata</i>

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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