

TIMARU DISTRICT

SIGNIFICANT NATURAL AREAS
SURVEY

BRUNTON PROPERTY



Report prepared for the Timaru District Council by Mike Harding
July 2009

TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

PROPERTY REPORT

PROPERTY DETAILS:

Owner: RJ and SA Brunton
Valuation Reference: 24670/179.01
Address: Gapes Valley, 21 RD, Geraldine
Location: On a prominent limestone ridge on the rolling hill country between Gapes Valley and Kakahu Bush.
Ecological District: Geraldine Ecological District
TDC Land Type: Soft Rock Hills and Downs
Land Environment: N3 (downlands of South Canterbury and coastal Otago)

ECOLOGICAL CONTEXT:

The property lies in the Geraldine Ecological District, on the rolling hill country east of Waitohi Hill (and just east of the Orari Ecological District). The original vegetation of this area would have been predominantly podocarp-hardwood forest, dominated by totara, matai and kahikatea emergent over a hardwood canopy. Important canopy hardwood species would probably have been narrow-leaved lacebark, kowhai, lemonwood, five-finger, broadleaf and mahoe. The indigenous fauna would have been significantly more numerous and diverse, with a greater range of birds, lizards and invertebrates than is presently found in the area.

One end of a larger area of hardwood forest is present on the property. This forest lies on an area of sloping limestone pavement; a nationally-rare ecosystem. This area of forest is one of a number of similar areas of forest on limestone scarps nearby and forms part of a network of fauna habitat in the area. Collectively these areas provide important habitat for birds and possibly for long-tailed bat (a 'nationally endangered' species). Bats have been recorded nearby at Kakahu Bush.

SIGNIFICANT AREAS ON THE PROPERTY:

The property was surveyed as part of the District-wide survey of Significant Natural Areas during May 2009. The area of hardwood forest (including the forest on adjoining properties) is regarded as a Significant Natural Area (SNA) when assessed against the District Plan criteria.

Area No.	Area Name	Central grid reference	Aprox. size (ha)	Vegetation/habitat type
164a	Rocky Ridges	J38: 588-741	0.14	hardwood forest on limestone

This SNA is illustrated on the attached aerial photograph and described in greater detail in this document. Note that the boundaries of the SNA are indicative, rather than precise. This SNA meets the ecological criteria in the Timaru District Plan (criteria i-vi, pages B18-B19), though its long term sustainability (criterion vii, page B19) may depend on management (notably weed control). SNAs are subject to confirmation by Council after regarding the matters listed under Final Considerations (pages B19-B20).

The implication of an area being listed as an SNA is that consent is required from Council for clearance of indigenous vegetation by any means (including burning and spraying with

herbicides) or over-planting. This does not normally prevent clearance to prevent shading of buildings, the maintenance of tracks and fences, weed control or removal of non-indigenous species such as barberry. 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. It is expected that SNAs will eventually be listed in the District Plan by way of a notified plan change.

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)

barberry*	<i>Berberis glaucocarpa</i>
black nightshade*	<i>Solanum nigrum</i>
broadleaf	<i>Griselinia littoralis</i>
bush lily	<i>Astelia</i> sp.
cabbage tree/ti rakau	<i>Cordyline australis</i>
clematis	<i>Clematis</i> sp.
common privet*	<i>Ligustrum vulgare</i>
common shield fern	<i>Polystichum richardii</i>
cotoneaster*	<i>Cotoneaster</i> sp.
cranesbill*	<i>Geranium</i> sp.
five-finger	<i>Pseudopanax arboreus</i>
foxglove*	<i>Digitalis purpurea</i>
fuchsia	<i>Fuchsia excorticata</i>
hawthorn*	<i>Crataegus monogyna</i>
holly*	<i>Ilex aquifolium</i>
horehound*	<i>Marrubium vulgare</i>
hound's tongue fern	<i>Microsorium pustulatum</i>
kahikatea/white pine	<i>Dacrycarpus dacrydioides</i>
leafless lawyer	<i>Rubus squarrosus</i>
lemonwood	<i>Pittosporum eugenioides</i>
mahoe/whiteywood	<i>Melicytus ramiflorus</i>
male fern*	<i>Dryopteris filix-mas</i>
mapou	<i>Myrsine australis</i>
matagouri	<i>Discaria toumatou</i>
matai/black pine	<i>Prumnopitys taxifolia</i>
matipo/kohuhu	<i>Pittosporum tenuifolium</i>
mistletoe	<i>Ileostylis micranthus</i>
narrow-leaved lacebark	<i>Hoheria angustifolia</i>
old man's beard*	<i>Clematis vitalba</i>
pennywort	<i>Hydrocotyle</i> sp.
pohuehue	<i>Muehlenbeckia australis</i>
poroporo	<i>Solanum laciniatum</i>
scrub pohuehue	<i>Muehlenbeckia complexa</i>
silver tussock	<i>Poa cita</i>
stonecrop*	<i>Sedum acre</i>
toatoa	<i>Haloragis erecta</i>
totara	<i>Podocarpus totara</i>
wineberry	<i>Aristotelia serrata</i>



Rocky Ridges
Brunton 24670/179.01
Timaru DC 24670/179.03

Meters
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1:2,500

TIMARU DISTRICT SNA SURVEY

AREA 164a

Area Name: Rocky Ridges
Location (central map reference): J38: 589-740
Ecological District: Geraldine
Surveyors: Mike Harding

Property: Timaru District Council/Brunton
Nearest Locality: Gapes Valley
Area Size (ha): 0.14 **Altitude (m):** 260-285
Survey Time: 1 hour **Survey Date:** 21-05-09

General Description:

This SNA comprises the northern part of a strip of indigenous forest on the prominent limestone ridge south of the Rocky Ridges property. Most of this area lies on other properties, including a Council-owned property. A small part of this area, at the northern end, lies on the Brunton property.

Plant Communities:

Indigenous hardwood forest is the main plant community present. This forest (including the forest on adjacent properties) is described in detail below. Naturalized (exotic) species are indicated with an asterisk*.

The forest canopy is dominated by broadleaf. Other canopy and sub-canopy species present are mahoe, matipo, mapou, cabbage tree, five-finger, wineberry, barberry*, hawthorn*, pohuehue, leafless lawyer and old man's beard*. Barberry* is dominant at the northern end. Also present at or near the northern end are isolated trees of cotoneaster* and holly*.

The forest understorey is in most places open and depleted. Understorey species present, mostly at rocky sites protected from grazing, are *Coprosma propinqua*, mapou, fuchsia, barberry*, common privet*, leafless lawyer, poroporo, black nightshade* and rarely *Clematis marata*.

Ground-cover species present are *Blechnum chambersii*, *Asplenium lyallii*, *Pellaea rotundifolia*, common shield fern, hound's tongue fern, male fern*, a single bush lily, *Epilobium nummulariifolium*, *Leptinella* sp., cranesbill*, toatoa, pennywort and seedlings of *Coprosma propinqua*, pohuehue and barberry*.

Species commonly present in forest openings and at the forest margins are *Coprosma propinqua*, leafless lawyer, barberry*, matagouri, *Calystegia tuguriorum*, *Parsonsia capsularis*, old man's beard*, pohuehue, scrub pohuehue and clematis. Species occasionally present are mistletoe (on *Coprosma propinqua*), stonecrop*, horehound*, foxglove* and silver tussock. Barberry* and common privet* are common along the forest margin on the upper (northwest) side.

Birds/Fauna Observed:

Native birds observed during this brief survey were grey warbler, silvereye, bellbird and rifleman.

Notable Flora, Fauna and Habitats:

Important features of this area are the occurrence of indigenous woody vegetation on a limestone substrate, the habitat the area provides for forest birds including rifleman (an 'at risk' species), the proximity of the area to other patches of indigenous woody vegetation and the extent of the limestone pavement.

Notable Plant and Animal Pests:

Several important plant pests are present, notably old man's beard and barberry. Barberry is present throughout the area and old man's beard is relatively common, posing a significant threat to the indigenous vegetation and compromising the ecological integrity of the area. Other important plant pests are hawthorn, common privet, cotoneaster and holly. Animal pests were not surveyed.

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

This area is part of a larger strip of forest, parts of which lie on two adjacent properties. It is narrow but well buffered by its location on steeply sloping limestone pavement. Other areas of indigenous vegetation are present nearby.

Condition and Management Issues:

Containment or control of woody plant pests is the most important management issue. Encouragement of understorey regeneration is also important.

Property Owner Comment:

Mr Brunton is interested in undertaking weed control and would appreciate advice regarding weed species. He has already removed old man's beard from other parts of his property.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M	A good example of indigenous vegetation typical of such sites in the ecological district.
Rarity	M/H	Provides habitat for an 'at risk' bird species (rifleman). Indigenous vegetation on limestone pavement is a nationally-rare vegetation type.
Diversity and pattern	L/M	Species diversity is substantially reduced.
Distinctiveness/special features	M	The sloping limestone pavement is a special feature.
<hr/> Other Criteria		
Size/shape	M	A small to moderate-sized area that is well buffered.
Connectivity	M	Part of a larger area of vegetation and lies close to other areas of indigenous vegetation.
Long-term Sustainability	L/M	The ecological integrity of the area is seriously threatened by woody weeds.

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

This area is protected by its location on steeply-sloping limestone. It has very limited potential for farm development. The forest is clearly visible from the Geraldine-Fairlie Highway.

Discussion:

This area meets the District Plan criteria for a Significant Natural Area. Important features of the area are the occurrence of indigenous woody vegetation on a limestone substrate, the habitat the area provides for forest birds including rifleman (an 'at risk' species), the proximity of the area to other patches of indigenous woody vegetation and the extent of the limestone pavement. Control of woody weeds is an important management priority; Council may be able to assist with weed control.