

**TIMARU DISTRICT**  
**SIGNIFICANT NATURAL AREAS**  
**SURVEY**

**BARNETT PROPERTY**



**Report prepared for the Timaru District Council by Mike Harding**  
**August 2012**

# TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

## PROPERTY REPORT

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### PROPERTY DETAILS:

**Owner:** ..... Pete Barnett  
**Valuation Reference:** ..... 24660/304.04  
**Address:** ..... 214a Talbot St, Geraldine  
**Location:** ..... On the Geraldine Downs, between Downs Road and Talbot Forest Scenic Reserve  
**Ecological District:** ..... Geraldine Ecological District  
**TDC Land Type:** ..... Soft Rock Hills and Downs  
**Land Environment:** ..... N3.1a (downlands of South Canterbury and coastal Otago)

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### ECOLOGICAL CONTEXT:

The property lies at the eastern edge of the Geraldine Ecological District, on low rolling hills of the Geraldine Downs. 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, pokaka, 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 area of indigenous forest is present on the property. This area is a modified and regenerating remnant of the original forest. It is part of a more extensive area of scattered patches of forest and treeland on the Geraldine Downs. The most important of these is Talbot Forest Scenic Reserve, which lies approximately 200m north of the property.

Collectively the areas of forest and treeland on the Geraldine Downs provide habitat for birds including kereru and are likely to provide important (though maybe only occasionally used) roost sites for long-tailed bats (nationally endangered). Bats have been recorded at Talbot Forest.

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### SIGNIFICANT AREAS ON THE PROPERTY:

The property was surveyed as part of the District-wide survey of Significant Natural Areas during June 2012. One area of indigenous vegetation is regarded as a Significant Natural Area (SNA) when assessed against the District Plan criteria.

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 area meets the ecological criteria in the Timaru District Plan (criteria i-vi, pages B18-B19), but will require some management to maintain its ecological values in the long-term. 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 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, or grazing. To assist with the protection and management of any SNA, landowners can apply to Council for financial assistance. It is expected that SNAs will eventually be listed in the District Plan. Any questions regarding the protection, management and use of SNAs should be directed to the District Planner.



*Dwarf mistletoe (Korthalsella lindsayi) on weeping mapou (SNA 152a)*

Barnett Property  
24660/304.04

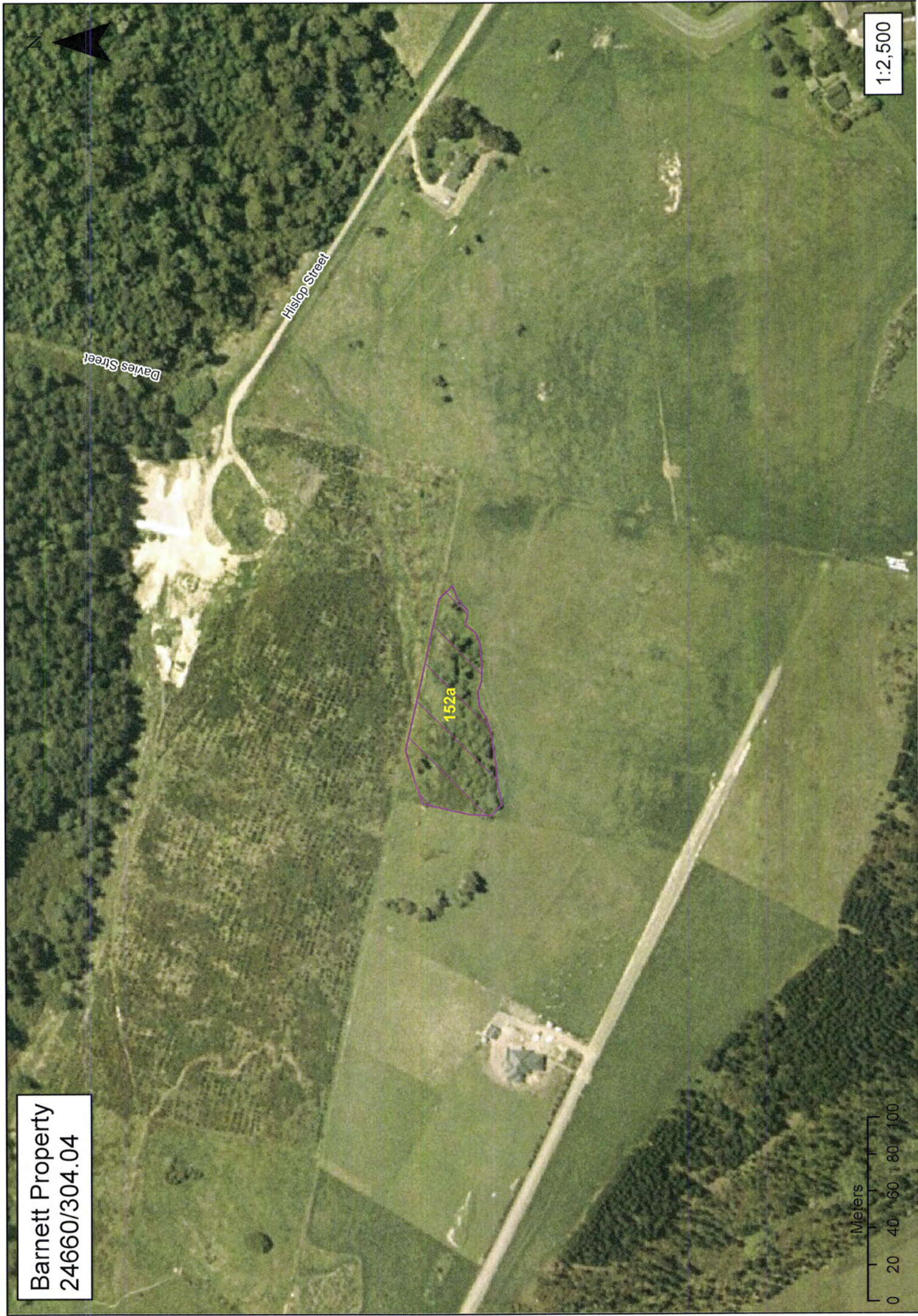
Davies Street

Hislop Street

152a



1:2,500



**Area Name:** Barnett Forest Remnant  
**Location (central map reference):** J38: 685-782  
**Ecological District:** Geraldine  
**Surveyors:** Mike Harding and Pete Barnett

**Property:** Pete Barnett  
**Nearest Locality:** Geraldine  
**Area Size (ha):** 0.41      **Altitude (m):** 150-170  
**Survey Time:** 1 hour      **Survey Date:** 23-06-12

### General Description:

This SNA comprises a small remnant of indigenous forest in a shallow northeast-trending gully at the northwest corner of the property. The property covers a moderately-steep north-facing slope adjacent to Riddells Reserve at the edge of the town of Geraldine. It lies within 200m of Talbot Forest Scenic Reserve.

### Plant Communities:

The main plant communities present are podocarp-hardwood forest and vineland-scrub, with areas of rank pasture. These plant communities are described separately below. Naturalized (exotic) species are indicated with an asterisk\*.

#### Podocarp-hardwood forest:

The canopy of this forest is dominated by totara, kowhai, mahoe and pohuehue. Trunk diameters (cm at breast height) of the larger trees are: totara, 35-40; and kowhai, 25-35. One large narrow-leaved lacebark tree is present at the eastern edge of the area and a large rohutu tree (with a trunk diameter of 29cm) is present at the northwest corner. Small trees of rohutu, mapou, turepo and elderberry\* are present near the forest margins. Other canopy species are native convolvulus, native jasmine, lawyer and *Clematis foetida*.

The forest understorey is mostly open and elsewhere dominated by dense clusters of pohuehue vines. Other understorey species present are *Coprosma rotundifolia*, shrubby mahoe and poataniwha.

Ground-cover species are *Asplenium hookerianum*, common shield fern and seedlings of mahoe, kowhai, matipo and *Coprosma* species. Occasionally present are *Blechnum penna-marina*, *Hypolepis ambigua*, necklace fern, hen and chickens fern, hairy pennywort and hookgrass.



*The eastern end of the SNA, with the large narrow-leaved lacebark tree at right.*

Species present on the forest margin or in forest openings are *Coprosma crassifolia*, *Coprosma rotundifolia*, *Coprosma areolata*, *Coprosma propinqua*, weeping mapou, mapou, pohuehue, native convolvulus, velvety nightshade\*, poroporo, Californian thistle\*, Scotch thistle\*, blackberry\*, foxglove\*, burdock\*, hemlock\*, creeping buttercup\*, male fern\*, button fern and swards of pasture grasses\*.

A single young matai tree is present at the edge of a forest opening at the upper end of the area. Dwarf mistletoe (*Korthalsella lindsayi*) is present at the forest margins on weeping mapou, poataniwha and rohutu.

#### Vineland-scrub:

A dense patch of low-stature vegetation (one to two metres tall) is present at the northwest edge of the area. It is dominated by pohuehue and blackberry\*, with lesser amounts of native convolvulus. Other species present at the margins are gorse\*, broom\*, spindle tree\* and *Hypolepis ambigua*. Totara and mahoe appear to be present in places beneath the vine canopy.



Looking east along the SNA: vineland-scrub (foreground) and main forest patch (centre and right)

#### **Birds/Fauna Observed:**

Native birds observed during this brief survey were grey warbler, bellbird, fantail and silvereye. A number of other native birds are likely to utilize the area, including kereru (NZ pigeon).

#### **Notable Flora, Fauna and Habitats:**

Important features of this area are the presence of podocarps (totara and matai), including young trees, the presence and size of the rohutu and kowhai trees, the occurrence of locally-uncommon species (dwarf mistletoe and weeping mapou), the habitat the area provides for forest birds, and the proximity of the forest to a larger area of protected indigenous forest (Talbot Forest Scenic Reserve).

#### **Notable Plant and Animal Pests:**

The plants that are having the greatest influence on forest recovery are the native climber (pohuehue) and pasture grasses. Pohuehue is smothering parts of the forest canopy and inhibiting growth of some forest

margin species. Dense swards of pasture grasses in forest openings and at the forest margin are preventing recruitment and regeneration of native species. Other problem plants are blackberry, elderberry, spindle tree and broom. Animal pests were not surveyed, but possum sign (scratching) was observed.

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

This patch of forest is buffered to some extent by its location in a shallow damp gully. It lies at the property boundary and adjoins a pine plantation at its northwest boundary and well established native plantings at its northeast boundary (Riddells Reserve). It is fenced along the property boundary and partly fenced on other (southern) boundaries.

**Condition and Management Issues:**

This patch of forest is in relatively good condition. It supports a good number of indigenous species, including well-established trees (notably kowhai, narrow-leaved lacebark, totara and rohutu). Control or containment of pohuehue is an important management issue. However, complete elimination of pohuehue would be counter-productive, as pohuehue provides some protection at the forest margins, is an important food source for kereru and supports native insects. Another important management issue is encouragement of forest regeneration. This could be achieved by planting at the forest margins, or by reducing competition (i.e. removing pasture grasses and other weeds) to encourage natural regeneration.

Ideally, SNA should be fenced from stock. Possums (and any other animal pests) controlled.

**Property Owner Comment:**

Pete Barnett explained that they intend to protect the forest and hope to eventually extend the forest onto the adjacent slope. This is a commendable objective.

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**ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:**

Primary Criteria	Rank	Notes
Representativeness	M/H	A good example of indigenous forest typical of the ecological district and containing canopy species representative of the original forest.
Rarity	M/H	Lies in an acutely-threatened land environment. Supports locally uncommon plant species. May provide habitat for long-tailed bat.
Diversity and pattern	M	Plant species diversity is typical for Geraldine Downs forest remnants.
Distinctiveness/special features	M	The large kowhai, narrow-leaved lacebark and rohutu trees are notable.
<b>Other Criteria</b>		
Size/shape	M	A moderate-sized area with some buffering.
Connectivity	M/H	Lies close to and complements the habitat at Talbot Forest Scenic Reserve.
Long-term Sustainability	M	Ecological values of the area are likely to persist with some management.

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

This area of forest occupies lower damper slopes at the corner of the property. It has limited potential for farm development. The property owners are enthusiastic about protecting and increasing the size of this area.

**Discussion:**

This area meets the District Plan criteria for a Significant Natural Area. Important features of the area are the presence of podocarps (totara and matai), the presence and size of the rohutu and kowhai trees, the occurrence of locally-uncommon species (dwarf mistletoe and weeping mapou), the habitat the area provides for forest birds, and the proximity of the forest to a larger area of protected indigenous forest (Talbot Forest Scenic Reserve).

## 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)	
blackberry*	<i>Rubus fruticosus</i>
broadleaf .....	<i>Griselinia littoralis</i>
broom*	<i>Cytisus scoparius</i>
burdock*	<i>Arctium minus</i>
button fern .....	<i>Pellaea rotundifolia</i>
Californian thistle*	<i>Cirsium arvense</i>
common shield fern .....	<i>Polystichum richardii</i>
creeping buttercup*	<i>Ranunculus repens</i>
dwarf mistletoe .....	<i>Korthalsella lindsayi</i>
elderberry*	<i>Sambucus nigra</i>
five-finger .....	<i>Pseudopanax arboreus</i>
foxglove*	<i>Digitalis purpurea</i>
gorse*	<i>Ulex europaeus</i>
hairy pennywort .....	<i>Hydrocotyle moschata</i>
hemlock*	<i>Conium maculatum</i>
hen and chickens fern .....	<i>Asplenium gracillimum</i>
hookgrass .....	<i>Uncinia</i> sp.
kahikatea/white pine .....	<i>Dacrycarpus dacrydioides</i>
kowhai .....	<i>Sophora microphylla</i>
lawyer .....	<i>Rubus schmidelioides</i>
lemonwood .....	<i>Pittosporum eugenioides</i>
mahoe/whiteywood .....	<i>Melicytus ramiflorus</i>
male fern*	<i>Dryopteris filix-mas</i>
mapou .....	<i>Myrsine australis</i>
matai/black pine .....	<i>Prumnopitys taxifolia</i>
matipo/kohuhu .....	<i>Pittosporum tenuifolium</i>
narrow-leaved lacebark .....	<i>Hoheria angustifolia</i>
native convolvulus .....	<i>Calystegia tuguriorum</i>
native jasmine .....	<i>Parsonsia</i> sp.
necklace fern .....	<i>Asplenium flabellifolium</i>
poataniwha .....	<i>Melicope simplex</i>
pohuehue .....	<i>Muehlenbeckia australis</i>
pokaka .....	<i>Elaeocarpus hookerianus</i>
poroporo .....	<i>Solanum laciniatum</i>
rohutu .....	<i>Lophomyrtus obcordata</i>
Scotch thistle*	<i>Cirsium vulgare</i>
shrubby mahoe .....	<i>Melicytus micranthus</i>
spindle tree*	<i>Euonymus europaeus</i>
totara .....	<i>Podocarpus totara</i>
turepo .....	<i>Streblus heterophyllus</i>
velvety nightshade*	<i>Solanum chenopodioides</i>
weeping mapou .....	<i>Myrsine divaricata</i>