

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

**STEPHENSON PROPERTY**  
**(BROOKWOOD TRUST)**



**Report prepared for the Timaru District Council by Mike Harding**  
**January 2009**

# TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

## PROPERTY REPORT

### PROPERTY DETAILS:

**Owner:** ..... Brookwood Trust  
**Valuation Reference:** ..... 24670/160.03  
**Address:** ..... 38 Patrick Road, Gapes Valley, Geraldine  
**Location:** ..... On a terrace scarp on the north side of Gapes valley, east of Patrick Road.  
**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, 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 podocarp-hardwood forest is present on the property. This forest remnant is relatively diverse and probably provides habitat for two threatened bird species (karearea/NZ falcon and kereru/NZ pigeon) and locally uncommon plant species (supplejack, green-hooded orchid, hard fern and *Asplenium lyallii*). This area of forest is part of a corridor of indigenous forest and is close to scattered patches of indigenous forest on the east side of Waitohi Hill. Collectively these areas provide important habitat for birds and possibly for long-tailed bat (a 'nationally endangered' species). Bats have been recorded in the Te Moana valley.

### SIGNIFICANT AREAS ON THE PROPERTY:

The property was surveyed as part of the District-wide survey of Significant Natural Areas during November 2008. One area of forest on the property 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
69b	Gapes Valley Scarp Forest	J38: 609-761	1.13	Podocarp-hardwood forest

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 be threatened by the presence of sycamore. 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, removal of non-indigenous species such as sycamore, or the control of indigenous weed species such as pohuehue (*Muehlenbeckia australis*). 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.

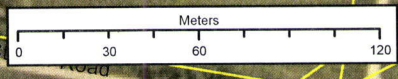
Stephenson  
24670/160.03



Patrick Road



69b



1:2,500

# TIMARU DISTRICT SNA SURVEY

AREA 69b

**Area Name:** Gapes Valley Scarp Forest  
**Location (central map reference):** J38: 609-761  
**Ecological District:** Geraldine  
**Surveyors:** Mike Harding

**Property:** Brookwood Trust (Stephenson)  
**Nearest Locality:** Gapes Valley  
**Area Size (ha):** 1.13      **Altitude (m):** 180-200  
**Survey Time:** 2½ hours      **Survey Date:** 24-11-08

## General Description:

This SNA is located on a steep south-facing scarp on the northern side of Gapes Valley, just east of Patrick Road. It lies on the rolling hill country east of Waitohi Hill. It is part of a narrow corridor of indigenous vegetation along the scarp.

## Plant Communities:

Two main plant communities are present: kanuka-podocarp-hardwood forest on the upper slopes; and lower-stature hardwood forest on the lower slopes. These plant communities are described separately below. Naturalized (exotic) species are indicated with an asterisk\*.

### Upper slope forest:

The forest canopy on the scarp crest and upper slopes is dominated by mahoe with emergent lemonwood, kanuka, narrow-leaved lacebark and totara. Other canopy species are broadleaf, mapou, matipo, *Lophomyrtus obcordata*, five-finger, lancewood, yellowwood, pohuehue and native jasmine. Sycamore\* is present in the forest canopy at the eastern end of the area. Trunk diameters (cm at breast height) of the totara trees are 12, 30, 33, 36 and 51.

Important understorey species present are mahoe, lemonwood, matipo, *Coprosma areolata*, *Coprosma rhamnoides* and *Coprosma crassifolia*.

Other understorey species occasionally present are five-finger, lemonwood, matipo, mapou, pate, wineberry, fuchsia, *Coprosma rotundifolia*, koromiko, *Lophomyrtus obcordata*, *Neomyrtus pedunculata*, bush lawyer, supplejack, poroporo, sycamore\*, elderberry\*, holly\* and bindweed\*. Several young kahikatea saplings (between 600mm and 3m tall) are present on a dry mid-slope spur at the western edge of the property.

The ground cover is mostly quite open, with scattered clumps of hen and chickens fern and patches of hound's tongue fern. Other ground cover species present are prickly shield fern, *Polystichum richardii*, *Hypolepis ambigua*, necklace fern, *Asplenium hookerianum*, mountain kiokio, *Pellaea rotundifolia*, hard fern, male fern\*, pennywort, *Carex solandri*, bittersweet\* and seedlings of mahoe, broadleaf, cabbage tree and sycamore\*. A single plant of the uncommon fern, *Asplenium lyallii*, was recorded.

Additional plant species present along the upper forest boundary are gorse\*, broom\*, blackberry\* and hawthorn\*.

### Lower slope forest:

Forest on the lower and toe slopes is lower and denser than that on the upper slopes. The forest canopy is dominated by mahoe, fuchsia, pohuehue and native jasmine. Other canopy species present are mapou, lemonwood, elderberry\*, a single emergent ash\* tree and, at the eastern end, sycamore\*.

The forest understorey is relatively open. Species present are mahoe, *Coprosma rotundifolia*, *Coprosma rhamnoides*, *Coprosma areolata*, *Coprosma propinqua*, pate, native jasmine, lancewood, supplejack and Himalayan honeysuckle\*.

Groundcover species are prickly shield fern, hound's tongue fern, hen and chickens fern, *Blechnum fluviatile*, *Blechnum chambersii*, male fern\*, foxglove\* and green-hooded orchid (*Pterostylis* sp.).

Species prominent on the lower forest margin are fuchsia, wineberry, five-finger, lemonwood, pohuehue, *Coprosma rotundifolia*, blackberry\*, broom\*, elderberry\* and sycamore\*.

## Birds/Fauna Observed:

Native birds observed during this brief survey were bellbird, fantail and harrier.

A karearea/NZ falcon was observed on the neighbouring property in January 2008. Kereru/NZ pigeon are also commonly present (G Stephenson, *pers. comm.*).

## Notable Flora, Fauna and Habitats:

Important features of this area are the presence of mature and sapling podocarps (totara and kahikatea), the relatively diverse range of indigenous plant species present, the habitat the area provides for birds including

threatened species (kereru/NZ pigeon and karearea/NZ falcon), the presence of locally uncommon plant species (supplejack, green-hooded orchid, *Asplenium lyallii* and hard fern) and the contribution the area makes to the corridor of indigenous vegetation along the Gapes Valley scarp.

**Notable Plant and Animal Pests:**

The most important plant pests present are sycamore and ash. Sycamore is common at the eastern end of the area and ash is present along the lower margin. Both species can colonise and eventually dominate indigenous forest. These two species are common and in places dominant in indigenous forest on the adjoining property (SNA 69a). The native climbing pohuehue (*Muehlenbeckia australis*) is dominant on the lower slopes and also poses a threat to the forest. Other notable plant pests present are cherry laurel at the southeast corner, holly in the scarp-crest forest, elderberry and bindweed.

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

This SNA is part of a corridor of indigenous forest on the Gapes Valley scarp. It adjoins other parts of this forest on its eastern, western and northern boundaries. The upper (northern) and lower (southern) boundaries are securely fenced. The SNA lies relatively close to other areas of indigenous forest on the slopes of Waitohi Hill.

**Condition and Management Issues:**

The main management issue is the control of sycamore and ash. If these aggressive introduced trees are not contained or removed, the ecological values of the SNA will be compromised. Killing of sycamore and ash trees would need to be followed by several (if not many) years of removal of sycamore saplings and seedlings. Control of pohuehue (*Muehlenbeckia australis*) may also be necessary to maintain the ecological values of the area, especially on the lower slopes where this species is dominant. Removal of cherry laurel and holly would also be beneficial.

**Property Owner Comment:**

Mrs Stephenson is supportive of forest protection and concerned at the effects of weeds including pohuehue. Mrs Stephenson is also keen to remove sycamore from the forest.

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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 species representative of the original forest (notably totara and kahikatea).
Rarity	M	Provides habitat for kereru and karearea. Supports several locally uncommon plant species.
Diversity and pattern	M	Supports a relatively diverse range of plant species, though species diversity is reduced from that originally present.
Distinctiveness/special features	M	The presence of good podocarp (totara and kahikatea) regeneration.
<b>Other Criteria</b>		
Size/shape	M	A small area but well buffered. It is effectively part of a more extensive area of indigenous forest.
Connectivity	M/H	Adjoins other indigenous vegetation and forms a link between these areas of vegetation. Is part of a network of fauna habitat in the wider area.
Long-term Sustainability	L/M	Some conservation management, notably sycamore control, will be required to maintain the ecological values of the area in the long term.

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

The SNA has been fenced and informally protected by the landowners. Protection of the area limits opportunities for development of the area, though only the lower slopes have potential for farming.

## Discussion:

This area meets the District Plan criteria for a Significant Natural Area. Important features of the area are the presence of mature and sapling podocarps (totara and kahikatea), the relatively diverse range of indigenous plant species present, the habitat the area provides for birds including threatened species (kereru/NZ pigeon and karearea/NZ falcon), the presence of locally uncommon plant species (supplejack, green-hooded orchid, *Asplenium lyallii* and hard fern), and the contribution the area makes to the corridor of indigenous vegetation along the Gapes Valley scarp.

### 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)	
ash* .....	<i>Fraxinus excelsior</i>
bindweed* .....	<i>Calystegia</i> sp
bittersweet* .....	<i>Solanum dulcamara</i>
blackberry* .....	<i>Rubus fruticosus</i>
broadleaf.....	<i>Griselinia littoralis</i>
broom* .....	<i>Cytisus scoparius</i>
bush lawyer .....	<i>Rubus cissoides</i>
cabbage tree/ti rakau.....	<i>Cordyline australis</i>
cherry laurel* .....	<i>Prunus laurocerasus</i>
elderberry* .....	<i>Sambucus nigra</i>
five-finger.....	<i>Pseudopanax arboreus</i>
foxglove* .....	<i>Digitalis purpurea</i>
fuchsia .....	<i>Fuchsia excorticata</i>
gorse* .....	<i>Ulex europaeus</i>
hard fern .....	<i>Paesia scaberula</i>
hawthorn* .....	<i>Crataegus monogyna</i>
hen and chickens fern.....	<i>Asplenium bulbiferum</i>
Himalayan honeysuckle* .....	<i>Leycesteria formosa</i>
holly* .....	<i>Ilex aquifolium</i>
hound's tongue fern.....	<i>Microsorium pustulatum</i>
kahikatea/white pine.....	<i>Dacrycarpus dacrydioides</i>
kanuka .....	<i>Kunzea ericoides</i>
koromiko .....	<i>Hebe salicifolia</i>
kowhai .....	<i>Sophora microphylla</i>
lancewood .....	<i>Pseudopanax crassifolius</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>
mountain kiokio.....	<i>Blechnum montanum</i>
narrow-leaved lacebark .....	<i>Hoheria angustifolia</i>
native jasmine.....	<i>Parsonia</i> sp.
necklace fern .....	<i>Asplenium flabellifolium</i>
pate .....	<i>Schefflera digitata</i>
pennywort.....	<i>Hydrocotyle novae-zelandiae</i>
pohuehue .....	<i>Muehlenbeckia australis</i>
pokaka .....	<i>Elaeocarpus hookerianus</i>
poroporo .....	<i>Solanum laciniatum</i>
prickly shield fern.....	<i>Polystichum vestitum</i>
supplejack.....	<i>Ripogonum scandens</i>
sycamore* .....	<i>Acer pseudoplatanus</i>
totara.....	<i>Podocarpus totara</i>
wineberry.....	<i>Aristotelia serrata</i>
yellowwood.....	<i>Coprosma linariifolia</i>