

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

**WALLACE-VARA PROPERTY**



**Report prepared for the Timaru District Council by Mike Harding**  
**April 2008**

# TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

## PROPERTY REPORT

### PROPERTY DETAILS:

**Owners:** ..... Mandy Wallace and Ram Vara  
**Valuation Reference:** ..... 24670/161.00  
**Address:** ..... 19 Woodside Road, Geraldine  
**Location:** ..... On a scarp on the north side of Gapes valley, between Woodside and Patrick roads.  
**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 provides habitat for one threatened species (NZ falcon) and three locally uncommon species (supplejack, silver fern and *Clematis marata*). This area of forest is close to a more extensive collection of scattered patches of forest on the east side of Waitohi Hill that 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 January 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
69a	Gapes Valley Scarp Forest	J38: 613-760	4.1	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) is uncertain due to the dominance 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, or removal of non-indigenous species such as sycamore. To assist with the protection and management of any SNA, landowners can apply to Council for financial assistance. 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.

**SIGNIFICANT TREES ON THE PROPERTY:**

In addition to the Significant Natural Areas identified on the property, one individual tree warrants recognition as a Significant Tree: the large kahikatea tree adjacent to the lower boundary of SNA 69a. This tree has the largest trunk diameter (200cm) of any kahikatea tree observed so far during this survey of forest remnants in Timaru District. Although the tree is old and has lost its crown, it is a good example of an old kahikatea tree and provides important habitat for birds. This tree is at map reference 2361145E-5675986N.

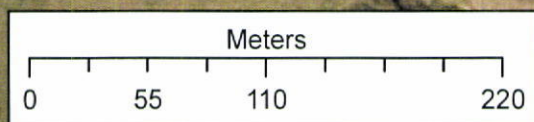




Wallace-Vara  
24670/161.00



69a



1:3,500



# TIMARU DISTRICT SNA SURVEY

AREA 69a

**Area Name:** Gapes Valley Scarp Forest  
**Location (central map reference):** J38: 613-760  
**Ecological District:** Geraldine  
**Surveyors:** Mike Harding and Andree Wallace

**Property:** Wallace and Vara  
**Nearest Locality:** Gapes Valley  
**Area Size (ha):** 4.1      **Altitude (m):** 170-200  
**Survey Time:** 4 hours      **Survey Date:** 09-01-08

## General Description:

The SNA is located on a steep south-facing scarp on the northern side of Gapes Valley, between Woodside and Patrick roads, on the rolling hill country east of Waitohi Hill.

## Plant Communities:

The main plant community present is regenerating podocarp-hardwood forest. Sycamore trees are naturalised and dominant over a substantial part of the SNA, especially at the south east corner. These plant communities are described separately below. Naturalized (exotic) species are indicated with an asterisk\*.

### Lower slope forest:

Forest on the lower and toe slopes of the scarp is variously dominated by mahoe, broadleaf and lemonwood or sycamore\* and ash\*. Sycamore\* is dominant along the lower forest margin at the west end of the SNA and on the lower and mid slopes at the east end. In places where sycamore\* and ash\* are dominant, the trees are tall, over-topping the existing forest canopy of mahoe, broadleaf and lemonwood. Trunk diameters (at breast height) of these trees are: sycamore\* 30 to 45cm; ash\* 40 to 60cm.

Other important canopy or subcanopy species on the lower slopes are five-finger, fuchsia, wineberry and a single kahikatea tree (trunk diameter 39cm) at the southwest corner of the SNA.

The forest understorey on the lower slopes is dominated by mahoe. Other understorey species present are pate, matipo, mapou, lemonwood, lancewood, five-finger, *Streblus heterophyllus*, *Lophomyrtus obcordata*, *Coprosma rotundifolia*, *C. areolata*, *C. crassifolia*, horopito, lowland ribbonwood, *Melicope simplex*, sycamore\*, elderberry\*, plum\*, supplejack, native jasmine, white climbing rata (on tree trunks), *Clematis marata*, occasional kahikatea and matai saplings (3-4m tall) and one totara sapling (1m tall) at the east end. Two small tutsan\* plants were removed from the lower eastern slopes.

The ground cover on the lower slopes is dominated by hen and chickens fern, prickly shield fern and seedlings of sycamore\*. Other species present are *Polystichum richardii*, hound's tongue fern, *Pellaea rotundifolia*, male fern\*, pennywort and occasional seedlings of the canopy species, especially mahoe.

Additional species present, but mostly confined to the lower forest margin, are holly\*, *Coprosma rigida*, pohuehue, blackberry\*, hawthorn and, at the southeast corner, a single yew\* tree and a single tree of *Hoheria glabrata* (presumably planted).

### Upper slope/scarp crest forest:

Forest on the drier steeper upper slopes is dominated by kanuka, mahoe and broadleaf. Trunk diameters (at breast height) of the kanuka trees range between 30 and 45cm. Other canopy or subcanopy species present are lemonwood, mapou, matipo, yellowwood, five-finger, lemonwood, lancewood and sycamore\*.

The upper forest understorey is dominated by mapou, *Coprosma crassifolia* and *C. areolata*. Other understorey species present are *Coprosma rhamnoides*, *Lophomyrtus obcordata*, lemonwood, matipo, shrubby mahoe, bush lawyer and native jasmine.

The ground cover of the upper forest is sparser than that on the lower slopes. Important species present are *Asplenium hookerianum* and hen and chickens fern. Other ground-cover species present are hound's tongue fern, *Polystichum richardii*, *Pellaea rotundifolia*, *Asplenium richardii*, necklace fern, *Carex forsteri*, *Cardamine* sp. and seedlings of broadleaf, marbleleaf, five-finger, supplejack and sycamore\*.

Additional species present, but mostly confined to the upper forest margin, are cabbage tree, poroporo, gorse\*, broom\*, blackberry\*, hawthorn\* and pohuehue.

#### Mid-slope forest:

The mid-slope forest is transitional in composition between the upper and lower slope forests. Additional species present on the mid-slopes are kowhai (one large tree and seedlings), one moderate-sized totara tree, one moderate-sized matai tree (trunk diameter 45cm), a single silver fern, an orchid (*Pterostylis* sp.), *Hydrocotyle moschata*, bittersweet\* and a single Himalayan honeysuckle\* shrub.

Species that are much more common on the mid slopes are bush lawyer, *Coprosma rhamnoides*, *Lophomyrtus obcordata* and *Carex forsteri*.

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

Native birds observed during this relatively brief inspection were silvereye, bellbird and fantail.

A single falcon/karearea was observed overhead, calling and displaying territorial behaviour. A falcon has been seen regularly in the area (Andree Wallace, *pers.comm.*).

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

Notable features of the SNA are the presence of mature and sapling podocarps (kahikatea, matai and totara), the diverse range of indigenous species, locally uncommon species (supplejack, *Clematis marata* and silver fern) and the habitat the area appears to provide for falcon (a threatened species: threat status 'gradual decline').

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

The most important plant pests present are sycamore and ash. Sycamore is dominant over approximately half the SNA and large ash trees are present on the lower slopes. Otherwise the forest is substantially free of plant pests, except at the forest margins where naturalised species pose little threat to the forest. Sycamore is still spreading through the SNA and, if left uncontrolled, is likely to eventually dominate the entire SNA except perhaps the drier upper slopes and crest of the scarp. Animal pests were not surveyed, though sign of possums and old pig sign was observed. Healthy forest understorey regeneration indicates that animal pests have not been present in high numbers in recent years.

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

The SNA adjoins other areas of similar forest along the scarp to the east and west. The SNA is securely fenced and is well buffered by its location on a steep south-facing slope. It 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 further compromised. It is still possible to control these trees while maintaining the ecological integrity of the SNA, as indigenous species are still dominant in the forest subcanopy and understorey. However, control over most parts of the infestation would need to be limited to killing standing trees (rather than felling trees) so that damage to the forest understorey was avoided. Killing of sycamore and ash trees would need to be followed by several (if not many) years of removal of sycamore saplings and seedlings. Removal of plum, hawthorn and holly would also be beneficial.

#### **Property Owner Comment:**

The SNA has been fenced and informally protected by the family for many years. Other birds often observed in the area are kereru, kingfisher and grey warbler. The family value the forest and would like to maintain and improve its ecological values. They are keen to control sycamore and ash, though are very reluctant to use herbicides.

## ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M	A good example of the indigenous forest typical of the ecological district, though compromised by the dominance of sycamore and ash.
Rarity	M	Supports locally uncommon species (supplejack, silver fern and <i>Clematis marata</i> ), provides habitat for kereru and may provide important habitat for falcon (threat status: gradual decline).
Diversity and pattern	M/H	Supports a diverse range of species and two main habitats: damp lower slope and dry upper slope/scarp crest.
Distinctiveness/special features	M	The presence of mature and regenerating podocarps (kahikatea, totara and matai).
<b>Other Criteria</b>		
Size/shape	M	A moderate-sized and well-buffered area.
Connectivity	M/H	Adjoins and links other areas of indigenous forest, and forms part of a network of fauna habitat in the area.
Long-term Sustainability	L	Ongoing and costly management will be needed to maintain the ecological values of most 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. The SNA has potential to offer opportunities for activities that will complement development proposed on other parts of the property, such as foot tracks for recreational use and nature study.

### Discussion:

The area easily meets the District Plan criteria for a significant natural area. Important attributes are the presence of mature and sapling podocarps (kahikatea, matai and totara), the diverse range of indigenous species, locally uncommon species (supplejack, *Clematis marata* and silver fern) and the habitat the area provides for kereru, falcon and other forest fauna. An important consideration regarding its eventual inclusion as an SNA in the District Plan is the extent to which sycamore and ash trees are able to be contained and eventually removed.



Silver fern



## 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>
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>
elderberry*	<i>Sambucus nigra</i>
five-finger	<i>Pseudopanax arboreus</i>
fuchsia	<i>Fuchsia excorticata</i>
gorse*	<i>Ulex europaeus</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>
horopito/pepperwood	<i>Pseudowintera colorata</i>
hound's tongue fern	<i>Microsorium pustulatum</i>
kahikatea/white pine	<i>Dacrycarpus dacrydioides</i>
kanuka	<i>Kunzea ericoides</i>
kowhai	<i>Sophora microphylla</i>
lancewood	<i>Pseudopanax crassifolius</i>
lemonwood	<i>Pittosporum eugenioides</i>
lowland ribbonwood	<i>Plagianthus regius</i>
mahoe/whiteywood	<i>Melicytus ramiflorus</i>
male fern*	<i>Dryopteris filix-mas</i>
mapou	<i>Myrsine australis</i>
marbleleaf/putaputaweta	<i>Carpodetus serratus</i>
matai/black pine	<i>Prumnopitys taxifolia</i>
matipo/kohuhu	<i>Pittosporum tenuifolium</i>
narrow-leaved lacebark	<i>Hoheria angustifolia</i>
native jasmine	<i>Parsonsia</i> sp.
necklace fern	<i>Asplenium flabellifolium</i>
pate	<i>Schefflera digitata</i>
pennywort	<i>Hydrocotyle</i> sp.
plum*	<i>Prunus</i> sp.
pohuehue	<i>Muehlenbeckia australis</i>
pokaka	<i>Elaeocarpus hookerianus</i>
poroporo	<i>Solanum laciniatum</i>
prickly shield fern	<i>Polystichum vestitum</i>
shrubby mahoe	<i>Melicytus micranthus</i>
silver fern/ponga	<i>Cyathea dealbata</i>
supplejack	<i>Ripogonum scandens</i>
sycamore*	<i>Acer pseudoplatanus</i>
totara	<i>Podocarpus totara</i>
tutsan*	<i>Hypericum androsaemum</i>
white climbing rata	<i>Metrosideros diffusa</i>
wineberry	<i>Aristotelia serrata</i>
yellowwood	<i>Coprosma linariifolia</i>
yew*	<i>Taxus baccata</i>