

TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

PROPERTY REPORT

PROPERTY DETAILS:

Owner: William and Carolyn Evans, Kenneth Grave
Valuation Reference: 24660/265.02
Address: Gale Cutting Road, Geraldine
Location: On a steep scarp on the southwest side of the Geraldine Downs, adjacent to Pleasant Valley 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 at the eastern edge of the Geraldine Ecological District, on the western scarp 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 regenerating podocarp-hardwood forest is present on the property. This forest remnant is relatively diverse and supports three threatened species (kereru, rifleman and fierce lancewood) and several locally uncommon species. This area of forest is part of a more extensive collection of scattered patches of forest and treeland on the Geraldine Downs.

Areas of forest and treeland on the Geraldine Downs may provide roost sites (though maybe only occasionally used) for long-tailed bat (a 'nationally endangered' species). Long-tailed bat have been recorded in Talbot Forest and 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 August 2007. One area of forest on the property is regarded as a Significant Natural Area (SNA) when assessed against the District Plan criteria.

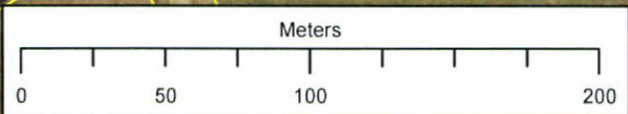
Area No.	Area Name	Central grid reference	Aprox. size (ha)	Vegetation/habitat type
34d	Gale Cutting Forest	J38: 665-785	2.67	Hardwood forest

This SNA is illustrated on the attached aerial photograph and described in greater detail on the Area Inspection Form in this report. 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) and is considered to be sustainable in the long term (criterion vii, page B19). 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 grazing. 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.

Grave-Evans
24660/265.02

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1:2,500

TIMARU DISTRICT SNA SURVEY

AREA 34d

Area Name: Gale Cutting Forest

Location (central map reference): J38: 665-785

Ecological District: Geraldine

Surveyors: Mike Harding

Property: Evans

Nearest Locality: Geraldine

Area Size (ha): 2.67

Altitude (m): 140-220

Survey Time: 2 hours

Survey Date: 09-08-07

General Description:

The SNA covers part of the steep scarp on the southwest side of the Geraldine Downs, adjacent to Gale Cutting Road.

Plant Communities:

The scarp supports hardwood forest with a single totara tree and a population of the threatened (threat status: sparse) fierce lancewood (*Pseudopanax ferox*). These plant communities are described separately below. Naturalized (exotic) species are indicated with an asterisk*.

The forest canopy on lower slopes of the SNA is dominated by low-stature mahoe, with occasional emergent narrow-leaved lacebark and kowhai. Other canopy species are fuchsia, broadleaf, bush lawyer, *Calystegia tuguriorum*, pohuehue and native jasmine. One moderate-sized totara tree is present near the centre of the SNA and one small sycamore tree is present on the lower slopes.

Understorey species are lemonwood, poroporo, native jasmine, elderberry*, Himalayan honeysuckle* and rarely *Streblus heterophyllus*, *Coprosma areolata* and tutsan*.

Groundcover species are sedge (*Carex* sp.), *Polystichum richardii*, hen and chickens fern, *Asplenium hookerianum*, *A. richardii*, *Pellaea rotundifolia*, hound's tongue fern, male fern*, foxglove*, pennywort, *Cardamine* sp. and seedlings of mahoe, matipo, five-finger, cabbage tree, narrow-leaved lacebark and kowhai.

The forest margins along the road are dominated by blackberry*, broom* and grasses*. Other species present are mountain akeake, bracken, gorse* and foxglove*.

On the steeper and drier upper slopes the forest canopy is dominated by kowhai, with trunk diameters (at breast height) mostly between 40 and 50 cm. Other canopy species present are fierce lancewood, kanuka, mahoe, mapou, five-finger, matipo, cabbage tree, pohuehue and a species of native *Clematis* (probably *C. foetida*). One small area (several vines) of old man's beard* is present mid-slope.

Understorey species present on the steeper upper slopes are lemonwood, matipo, mahoe, *Coprosma crassifolia*, *C. areolata*, *C. propinqua*, *C. rhamnoides*, *Melicope simplex*, *Helichrysum lanceolatum*, fierce lancewood, lawyer, leafless lawyer, elderberry*, spindle tree* and black nightshade*.

The groundcover is dominated by *Pellaea rotundifolia*. Other groundcover species are toatoa, hen and chickens fern, *Asplenium richardii*, *A. hookerianum*, *Polystichum richardii*, hound's tongue fern, leather-leaf fern, bidibid and seedlings of kowhai, fierce lancewood, cabbage tree and native jasmine.

At the top of the scarp the forest is dominated by tall trees of kowhai, kanuka, fierce lancewood and mahoe. *Helichrysum lanceolatum* dominates the understorey. Other species present are broadleaf, mapou, *Coprosma crassifolia*, *Melicope simplex*, leather-leaf fern, necklace fern and dwarf mistletoe (on *Melicope simplex*).

There is a patch of tall pine trees adjacent to the Area near the base of the slope. Two patches of large pine trees and a plantation of Douglas fir adjoin the upper boundary of the Area at the top of the scarp.

Birds/Fauna Observed:

Indigenous birds observed during this brief inspection were bellbird, fantail, grey warbler, kereru and rifleman. A tui was recorded in the adjoining area (Area 34c) during July 2007.

Notable Flora, Fauna and Habitats:

The most notable feature of the SNA is the presence of a healthy, though small, population of fierce lancewood (*Pseudopanax ferox*). This species has a national threat status of 'sparse' and is uncommon in South Canterbury. This population is the only recorded natural population on the Geraldine Downs. The population comprises at least five adult trees, several young trees (saplings) and numerous seedlings. The

largest adult tree has a trunk diameter (at breast height) of 33 cm. Another adult tree has three smaller trunks with diameters of 11, 7 and 8 cm.

Other notable features of the SNA are the presence of kereru (threat status: gradual decline), rifleman (gradual decline), the presence of a podocarp (totara) tree, the abundance and size of the kowhai trees, the presence of an unusually large number of locally-uncommon species (toatoa, *Helichrysum lanceolatum*, dwarf mistletoe, mountain akeake, leafless lawyer and leather-leaf fern), the habitat the area provides for forest birds, its location adjacent to a larger area of protected habitat (Area 34c) and the role it plays as part of a network of fauna habitat on the Geraldine Downs.

Notable Plant and Animal Pests:

The most important animal pest damage observed in the SNA was pig-rooting. This damage was probably caused by a wild sow that was recently removed. Possums are also likely to be present. Important plant pests observed were old man's beard (one area of several vines), sycamore, elderberry and spindle tree. The most important of these is old man's beard. Pig rooting poses a direct threat to seedlings of fierce lancewood. Old man's beard poses a direct threat to adult trees of fierce lancewood.

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

The SNA adjoins a large area of similar vegetation and habitat on an adjoining property to the north. That area (Area 34c) is formally protected by a QEII Open Space Covenant. The SNA lies relatively close to other areas of remnant and regenerating indigenous forest and treeland on the Geraldine Downs. The SNA is well buffered and protected by its location on steep slopes.

Condition and Management Issues:

The forest canopy is in relatively good condition. The forest understorey is badly affected by pig rooting. Control of pigs and old man's beard are the most urgent management issues. Monitoring and protection of the fierce lancewood population would be useful for conservation of this species in the district.

Property Owner Comment:

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M/H	A good example of the indigenous vegetation typical of the ecological district.
Rarity	M/H	Supports an important population of fierce lancewood (threat status: sparse), kereru (gradual decline), rifleman (gradual decline) and an unusually high number (six) of locally-uncommon species.
Diversity and pattern	M	Species diversity is probably reduced from that originally present, though the Area supports a relatively diverse range of plant species.
Distinctiveness/special features	M/H	Is an important part of an area of indigenous vegetation that provides regionally important habitat for forest birds. The presence of fierce lancewood is a special feature.
Other Criteria		
Size/shape	H	A moderate-sized area with a good shape and very well buffered.
Connectivity	M/H	Adjoins protected vegetation on one boundary and is part of a network of fauna habitat on the Geraldine Downs.
Long-term Sustainability	M	Some management will be required to maintain the ecological values in the long-term.

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

The SNA has been informally protected by the landowners. The location and steepness of the site limit its potential for farm development. The SNA is clearly visible from Pleasant Valley Road and Gale Cutting Road.

Discussion:

The Area very easily meets the District Plan criteria for a Significant Natural Area. Important attributes are the presence of threatened species (fierce lancewood, kereru and rifleman), the presence of totara, the abundance and size of the kowhai trees, the presence of an unusually large number of locally-uncommon species (toatoa, *Helichrysum lanceolatum*, dwarf mistletoe, mountain akeake, leafless lawyer and leather-leaf fern), the habitat the area provides for forest birds, its location adjacent to a larger area of protected habitat (Area 34c) and the role it plays as part of a network of fauna habitat on the Geraldine Downs

Scientific names of species cited by common name

Common Name	Scientific name
(* = naturalised species)	
bidibid	<i>Acaena</i> sp.
blackberry*	<i>Rubus fruticosus</i>
black nightshade*	<i>Solanum nigrum</i>
bracken	<i>Pteridium esculentum</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>
Douglas fir*	<i>Pseudotsuga menziesii</i>
dwarf mistletoe	<i>Korthalsella lindsayi</i>
elderberry*	<i>Sambucus nigra</i>
fierce lancewood	<i>Pseudopanax ferox</i>
five-finger	<i>Pseudopanax arboreus</i>
foxglove*	<i>Digitalis purpurea</i>
fuchsia	<i>Fuchsia excorticata</i>
gooseberry*	<i>Ribes uva-crispa</i>
gorse*	<i>Ulex europaeus</i>
hen and chickens fern	<i>Asplenium bulbiferum</i>
Himalayan honeysuckle*	<i>Leycesteria formosa</i>
hound's tongue fern	<i>Microsorium pustulatum</i>
kanuka	<i>Kunzea ericoides</i>
kowhai	<i>Sophora microphylla</i>
lawyer	<i>Rubus schmidelioides</i>
leafless lawyer	<i>Rubus squarrosus</i>
leather-leaf fern	<i>Pyrrhosia eleagnifolia</i>
lemonwood	<i>Pittosporum eugenioides</i>
mahoe/whiteywood	<i>Meliccytus ramiflorus</i>
male fern*	<i>Dryopteris filix-mas</i>
mapou	<i>Myrsine australis</i>
matipo/kohuhu	<i>Pittosporum tenuifolium</i>
mountain akeake	<i>Olearia avicenniifolia</i>
narrow-leaved lacebark	<i>Hoheria angustifolia</i>
native jasmine	<i>Parsonsia</i> sp.
necklace fern	<i>Asplenium flabellifolium</i>
old man's beard*	<i>Clematis vitalba</i>
pennywort	<i>Hydrocotyle</i> sp.
pohuehue	<i>Muehlenbeckia australis</i>
poroporo	<i>Solanum laciniatum</i>
sedge	<i>Carex</i> sp.
spindle tree*	<i>Euonymus europaeus</i>
sycamore*	<i>Acer pseudoplatanus</i>
toatoa	<i>Haloragis erecta</i>
totara	<i>Podocarpus totara</i>
tutsan*	<i>Hypericum androsaemum</i>