

TIMARU DISTRICT

SIGNIFICANT NATURAL AREAS
SURVEY

JAMES GRIFFITHS PROPERTY



Report prepared for Timaru District Council by Mike Harding
July 2010

TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

PROPERTY REPORT

PROPERTY DETAILS:

Owner: JM Griffiths
Valuation References: 24670/165.00
Address: Gualter Road, Hilton
Location: West of Gualter Road, northwest of Hilton.
Ecological District: Geraldine Ecological District.
TDC Land Type: Soft Rock Hills and Downs.
Land Environment: N3 (eastern South Island undulating plains and hills).

ECOLOGICAL CONTEXT:

The property covers moderately steep slopes at the head of a small gully on the downlands within Geraldine Ecological District. The original vegetation of this area would have been predominantly podocarp-hardwood forest. Denser podocarp-hardwood (matai-totara-kahikatea-lowland ribbonwood) forest would have occupied older slopes and terraces and, and tall kanuka-kowhai forest would have been present on recently disturbed surfaces. Minor areas of matagouri-*Coprosma-Olearia* shrubland and small wetlands were likely to have been present on valley-floors, probably with associated areas of short tussockland. 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.

Indigenous vegetation on the property comprises an area of regenerating hardwood forest, protected by a QEII Open Space Covenant. This area of indigenous vegetation lies close to other indigenous vegetation on nearby properties, including important areas on limestone substrates.

SIGNIFICANT AREAS ON THE PROPERTY:

The property was surveyed as part of the District-wide survey of Significant Natural Areas during June 2010. One area, totalling approximately 11 hectares, is regarded as a Significant Natural Area (SNA) when assessed against the District Plan criteria. This SNA is listed in the table below.

| Area No. | Area Name | Central grid reference | Aprox. size (ha) | Vegetation/habitat type |
|----------|--------------------|------------------------|------------------|-------------------------|
| 6 | Griffiths Covenant | J38: 606-743 | 11.2 | Hardwood forest |

This SNA is illustrated on the attached aerial photograph and described in greater detail on the SNA Survey Form in this report. 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) and is considered to be sustainable in the long term, or sustainable with appropriate management (criterion vii, page B19). SNAs are subject to confirmation by Council after regarding the matters listed in the District Plan (pages B19-B20). It is expected that SNAs will eventually be listed in the District Plan by way of a notified plan change.

At present, consent is required from Council for clearance of areas of indigenous vegetation or habitat which meet the Interim Definitions in the District Plan. Clearance includes burning,

spraying with herbicides and over-planting. SNAs encompass most, but not necessarily all, areas of vegetation and habitat which meet the Interim Definitions.

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.

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

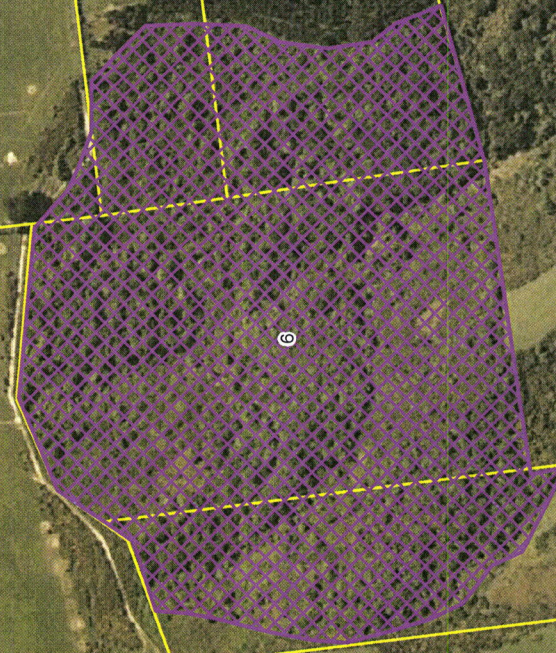
(* = naturalised species)

| | |
|------------------------------|---------------------------------|
| bidibid | <i>Acaena</i> sp. |
| blackberry* | <i>Rubus fruticosus</i> |
| bracken | <i>Pteridium esculentum</i> |
| broom* | <i>Cytisus scoparius</i> |
| bush lawyer | <i>Rubus cissoides</i> |
| cabbage tree/ti rakau | <i>Cordyline australis</i> |
| five-finger | <i>Pseudopanax arboreus</i> |
| fuchsia | <i>Fuchsia excorticata</i> |
| gorse* | <i>Ulex europaeus</i> |
| hanging spleenwort | <i>Asplenium flaccidum</i> |
| hawthorn* | <i>Crataegus monogyna</i> |
| hen and chickens fern | <i>Asplenium bulbiferum</i> |
| Himalayan honeysuckle* | <i>Leycesteria formosa</i> |
| hound's tongue fern | <i>Microsorium pustulatum</i> |
| kahikatea/white pine | <i>Dacrycarpus dacrydioides</i> |
| kanuka | <i>Kunzea ericoides</i> |
| Khasia berry* | <i>Cotoneaster simonsii</i> |
| kiokio | <i>Blechnum novae-zelandiae</i> |
| kowhai | <i>Sophora microphylla</i> |
| lancewood | <i>Pseudopanax crassifolius</i> |
| lowland ribbonwood | <i>Plagianthus regius</i> |
| mahoe/whiteywood | <i>Melicetyus 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> |
| mountain kiokio | <i>Blechnum montanum</i> |
| native jasmine | <i>Parsonsia</i> sp. |
| necklace fern | <i>Asplenium flabellifolium</i> |
| old man's beard* | <i>Clematis vitalba</i> |
| pohuehue | <i>Muehlenbeckia australis</i> |
| poroporo | <i>Solanum laciniatum</i> |
| prickly shield fern | <i>Polystichum vestitum</i> |
| silver fern/ponga | <i>Cyathea dealbata</i> |
| swamp kiokio | <i>Blechnum minus</i> |
| sycamore* | <i>Acer pseudoplatanus</i> |
| Tasmanian blackwood* | <i>Racosperma melanoxylon</i> |
| totara | <i>Podocarpus totara</i> |
| tutsan* | <i>Hypericum androsaemum</i> |
| wineberry | <i>Aristotelia serrata</i> |



J M Griffiths Property
24670/165.00

Water Road



G



1:5,000

Area Name: Griffiths Covenant

Location (central map reference): J38: 606-743

Ecological District: Geraldine

Surveyors: Mike Harding and Julie Brown

Property: James Griffiths

Nearest Locality: Hilton

Area Size (ha): 11.2

Altitude (m): 140-220

Survey Time: 2½ hours

Survey Date: 22-06-10

General Description:

This SNA lies on moderately steep slopes at the head of a south-facing gully northwest of Hilton and east of Rocky Ridges. The area is protected by a QEII Open Space Covenant. It adjoins other areas of indigenous vegetation further down the gully on an adjoining property (SNA 179b) and lies close to other important areas of indigenous vegetation to the west.

Plant Communities:

Two main plant communities are present: mixed hardwood forest on the west-facing (east) side of the gully; and lower-stature regenerating forest and scrub on the east-facing side of the gully. These plant communities are described separately below. Naturalized (exotic) species are indicated with an asterisk*.

Mixed hardwood forest:

The canopy of this forest is dominated by mahoe and kanuka. Trunk diameters (at breast height) of the larger kanuka trees range between 24 and 36cm. Other canopy species commonly present are matipo, hawthorn*, cabbage tree, five-finger, bush lawyer, native jasmine and pohuehue. Hawthorn* is also a common sub-canopy tree.

The forest understorey is dominated by mahoe and/or matipo. Other understorey species are mapou, lancewood, *Coprosma rhamnoides*, *Coprosma propinqua*, *Coprosma propinqua* X *robusta* and hawthorn*. Occasionally present are five-finger, *Coprosma crassifolia*, sycamore*, Khasia berry*, tutsan* and silver fern.

Ground-cover species commonly present are prickly shield fern, hen and chickens fern, *Asplenium hookerianum*, hanging spleenwort, *Pellaea rotundifolia*, hound's tongue fern, blackberry*, bidibid, moss and seedlings of matipo, mahoe, cabbage tree, wineberry, lancewood, kanuka, five-finger, native jasmine, *Coprosma* species and occasionally sycamore*. Two plants of the rare fern, *Asplenium lyallii*, were observed on the upper slopes at the head of the gully. Also present in this area are necklace fern and mountain kiokio.

Species commonly present in forest openings are Himalayan honeysuckle*, mahoe, cabbage tree, gorse*, broom*, poroporo, bracken and the fern, *Hypolepis ambigua*.

Species typically present at damper sites in the gully bottom and in the vicinity of small tributary streams are fuchsia, prickly shield fern, *Asplenium richardii*, male fern*, kiokio, *Blechnum fluviatile*, *Blechnum chambersii*, swamp kiokio and the fern, *Leptolepia novae-zelandiae*.

Regenerating forest/scrub:

This community is present on the west side of the gully. It was not surveyed in detail; instead it was viewed through binoculars. It comprises patches of taller indigenous vegetation, mostly on the spurs, interspersed with low scrub and fernland. The taller vegetation is dominated by mahoe, with matipo and occasional cabbage trees. The lower-stature vegetation is dominated by fuchsia, gorse*, Himalayan honeysuckle* and blackberry*.

Birds/Fauna Observed:

Native birds observed during this brief survey were fantail, bellbird, grey warbler and silvereye. Also likely to be present are kereru (NZ pigeon) and rifleman.

Notable Flora, Fauna and Habitats:

Important features of this area are the extent of the forest, the diversity of plant species present, including three locally-uncommon plant species (silver fern, *Asplenium lyallii* and *Leptolepia novae-zelandiae*), the

habitat the area provides for forest birds and the buffering the area provides for the stream. *Asplenium lyallii* is usually found only on limestone substrates.

Notable Plant and Animal Pests:

Hawthorn and sycamore are the most important plant pests present. Hawthorn trees are common throughout the forested part of the area. It appears that strongly regenerating indigenous species, notably mahoe and matipo, are out-growing hawthorn. Hawthorn is present in other nearby areas of forest. Seedlings and saplings of sycamore are present at scattered locations through the forest. While no emergent trees were observed, sycamore could readily become a dominant canopy species as it has in other areas of indigenous forest in the District. Other plant pests, such as Khasia berry and tutsan are relatively uncommon and pose only a minor threat. Himalayan honeysuckle, gorse, broom and blackberry are prominent on the west side of the gully, though it is likely that indigenous woody species will eventually regenerate through these species. Suckers and seedlings of Tasmanian blackwood are present alongside planted trees at the eastern margin of the forest, though are probably unlikely to spread far into the forest. Animal pests were not surveyed, though possum sign was observed.

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

The area is well buffered by its location at the head of a gully. It adjoins other areas of indigenous forest down-valley (on an adjoining property) and lies close to other areas of indigenous forest. The area adjoins a pine plantation on its eastern boundary and farmland on other boundaries. The area is securely fenced, though apparently the fence at the lower margin is not stock proof.

Condition and Management Issues:

The forested part of the area is in good condition. Plant species diversity is significantly higher than that in other nearby areas of forest that are accessible to domestic stock. The absence of grazing by stock and (presumably) low numbers of wild animals are reflected in the dominance of palatable understorey species, such as mahoe, and the presence of locally-uncommon species, such as silver fern and *Asplenium lyallii*. The main management issues are control of invasive woody weeds, especially sycamore, continued exclusion of stock and ongoing wild animal control. Control of hawthorn may be beneficial. Spread of other species, such as Tasmanian blackwood, Khasia berry and old man's beard (present in nearby areas of forest), should be monitored.

Property Owner Comment:

James Griffiths noted that large numbers of goats were present in the forest at one time. He is concerned at the impact of possums, including possums moving into the forest following control operations.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

| Primary Criteria | Rank | Notes |
|----------------------------------|-------------|---|
| Representativeness | M | A good example of regenerating indigenous vegetation typical of the ecological district. |
| Rarity | M | Supports three locally uncommon plant species. Is likely to provide habitat for an 'at-risk' (declining) bird species (rifleman). |
| Diversity and pattern | M | A relatively diverse range of plant species is present compared with other similar areas of indigenous forest. |
| Distinctiveness/special features | M | A special feature is that the area covers the complete upper catchment of a small stream. |
| Other Criteria | | |
| Size/shape | M/H | A small to moderate-sized area with a good shape and very well buffered. |
| Connectivity | M | Adjoins other indigenous vegetation at its lower boundary and contributes to the network of fauna habitat in the area. |
| Long-term Sustainability | M/H | Some plant and animal pest control, notably sycamore and possums, may be required to maintain ecological values in the long term. |

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

This area has been deliberately set aside from productive use and formally protected (with a QEII covenant) by the landowner. It has limited potential for farm development.

Discussion:

This area meets the District Plan criteria for a Significant Natural Area. Important features of the area are the extent of the forest, the diversity of plant species present, including three locally-uncommon plant species (silver fern, *Asplenium lyallii* and *Leptolepia novae-zelandiae*), the habitat the area provides for forest birds and the buffering the area provides for the stream.



View of SNA 6 from the adjoining property