

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

**TURNBULL PROPERTY**



Report prepared for Timaru District Council by Mike Harding  
December 2014

# TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

## PROPERTY REPORT

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### PROPERTY DETAILS:

**Owner:** .....Turnbull  
**Valuation Reference:** ...24670/013.00  
**Address:** .....McIntosh Road  
**Location:** .....Beautiful Valley-Waitohi Hill  
**Ecological District:** .....Orari  
**TDC Land Type:**.....'Southeast Hill Country and Mountains'  
**Land Environments:**.....Q2.1a

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### ECOLOGICAL CONTEXT:

The property lies on the southwest slopes of Waitohi Hill in Beautiful Valley. It is in Orari Ecological District (McEwen, 1987) and Q2.1a Level IV Land Environment as defined by Leathwick *et al* (2003).

It is likely that the original vegetation of this area was predominantly podocarp-hardwood forest, dominated by kahikatea, matai, totara, kowhai, broadleaf, lemonwood, mahoe, narrow-leaved lacebark and other hardwood trees. Kanuka and manuka low-forest/shrubland may have occupied disturbed sites. Sedgeland and rushland (wetland) vegetation would have been present at poorly drained valley-floor sites.

Today the original forest cover in this part of the Orari Ecological District is largely confined to remnants in gullies or on steep slopes. Otherwise, the indigenous vegetation of the ecological district is substantially depleted or modified. The indigenous fauna would have originally been significantly more numerous and diverse, with a greater range of birds, lizards and invertebrates than is presently found in the area.

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### SIGNIFICANT AREAS ON THE PROPERTY:

Indigenous vegetation on the property comprises low-stature regenerating hardwood forest in deeper gullies, young manuka scrub on some lower slopes and pasture. Indigenous vegetation on the property lies relatively close to areas of indigenous forest in Geraldine Forest (Blakely Pacific) and contributes to the network of fauna habitat in the wider area.

The property was surveyed as part of the District-wide survey of Significant Natural Areas during November 2014. One area, comprising approximately seven hectares, is regarded as a Significant Natural Area (SNA) when assessed against the District Plan criteria.

Area No.	Area Name	Map reference (NZTM)	Aprox. size (ha)	Vegetation/habitat type
312	Turnbull Forest	1444370E-5116650N	7	Hardwood forest

The boundaries of this SNA are illustrated on the aerial photograph and the values described on the SNA Form in this report. Note that the boundaries of the SNAs 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, track construction, spraying with herbicides and over-planting.

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.



Turnbull  
24670/013.00

312

1:5,000



Road





**Area Name:** Turnbull Forest

**Central map ref. (NZTM):** 1444370E-5116650N

**Ecological District:** Orari

**Surveyors:** Mike Harding

**Property:** Turnbull

**Nearest Locality:** Beautiful Valley

**Area Size (ha):** 7

**Altitude (m):** 420-520

**Survey Time:** 2 hours

**Survey Date:** 19-11-14

### General Description:

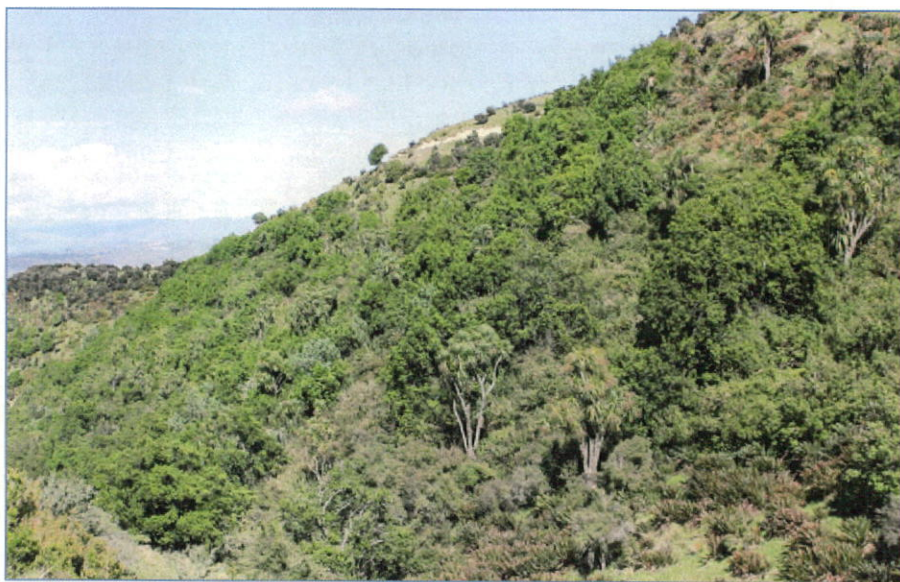
This SNA lies on moderately-steep southeast-facing slopes of a small valley near the southern boundary of the property. It includes the main area of regenerating hardwood forest. Manuka scrub on the opposite side of the valley is not significant.

### Plant Communities:

The main plant community present is young hardwood forest, with dense to scattered manuka scrub at its margin as described below. Naturalized (exotic) species are indicated with an asterisk\*.

The forest canopy is dominated by broadleaf. Other canopy species are matipo, cabbage tree, lancewood, lemonwood, fuchsia, mountain akeake, pohuehue, native bindweed and a single emergent radiata pine\* tree. Several kowhai trees are present in or adjacent to the site on the lower northwest-facing slopes. Mountain ribbonwood is present in the canopy at the higher (up-valley) end of the site.

The main ground-cover species is prickly shield fern. Other species are necklace fern, *Asplenium bookerianum*, *Asplenium richardii*, hen and chickens fern, hound's tongue fern, mountain kiokio, *Blechnum fluviatile*, cardamine, buttercup, wall lettuce\* and seedlings of *Coprosma propinqua*, broadleaf and five-finger.



Species commonly present on the forest margins or in forest openings are *Coprosma propinqua*, scrambling

fuchsia, *Olearia bullata*, manuka, koromiko, matagouri, korokio, bush lawyer, lawyer, Himalayan honeysuckle\*, gorse\*, broom\*, bracken, mountain kiokio, thousand-leaved fern, *Hypolepis ambigua*, hard fern, mountain flax, tutu, Maori onion, bittersweet\*, cleavers\*, foxglove\*, bidibid, silver tussock and fescue tussock. Spanish heath\* is common at lower forest margins.

Additional species present near the stream are five-finger, wineberry, kanuka, *Coprosma dumosa*, *Carex coriacea*, *Carex secta*, *Blechnum penna-marina*, selfheal\* and Chilean flame creeper\* (uncommon).

### Birds/Fauna Observed:

Native birds observed during this brief survey were silvereye, bellbird, grey warbler, fantail, welcome swallow, tomtit and rifleman. Other bird species likely to be present are kereru (NZ pigeon) and karearea (NZ falcon).

### Notable Flora, Fauna and Habitats:

Important features of this area are the habitat the area provides for forest birds, the presence of *Olearia bullata* (a locally uncommon species) and the diversity of plant species present (51 vascular species).



**Notable Plant and Animal Pests:**

Spanish heath is the most important plant pest observed at the site. However, this and other naturalized plants at the site (e.g. gorse, broom and Chilean flame creeper) do not pose a significant threat to the taller forest. Animal pests were not surveyed, though sign of possums, feral pigs and wallabies was observed.

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

The boundaries of this area are the main hardwood forest edge. Scattered to dense native scrub (notably manuka) is present adjacent to the forest, though is not significant. The area is not fenced, though is relatively well buffered by its location on steep shady slopes. It lies close to other areas of regenerating hardwood forest in nearby valleys.

**Condition and Management Issues:**

The forest canopy is in good condition. The forest margin and, in places, understorey are affected by grazing animals (notably cattle) and wallabies. The main management issue is continued control of wild animals and protection of the forest from intensive grazing.

**ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:**

Primary Criteria	Rank	Notes
Representativeness	M	Regenerating indigenous forest typical of that elsewhere in the ecological district.
Rarity	L/M	One locally-uncommon plant species is present at the forest margin: <i>Olearia bullata</i> .
Diversity and pattern	M	Moderate plant species diversity.
Distinctiveness/special features	L/M	The presence of kowhai trees at the forest edge is an interesting feature.
<b>Other Criteria</b>		
Size/shape	M	A moderate-sized area that is well buffered by its size and location.
Connectivity	M	Lies close to other areas of indigenous forest and contributes to the network of forest bird habitat in the area.
Long-term Sustainability	M	Continued animal pest control is probably 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 development. It lies on steeper slopes that have only limited potential for other uses.

**Discussion:**

This area just meets the District Plan criteria for a Significant Natural Area. Important features of the area are the presence of good forest bird habitat, a locally uncommon species (*Olearia bullata*) and a diverse range of vascular plant species.

## 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.
bittersweet*	<i>Solanum dulcamara</i>
bracken	<i>Pteridium esculentum</i>
broadleaf	<i>Griselinia littoralis</i>
broom*	<i>Cytisus scoparius</i>
bush lawyer	<i>Rubus cissoides</i>
buttercup	<i>Ranunculus hirtus</i>
cabbage tree/ti rakau	<i>Cordyline australis</i>
cardamine	<i>Cardamine debilis</i>
Chilean flame creeper*	<i>Tropaeolum speciosum</i>
cleavers*	<i>Galium aparine</i>
fescue tussock	<i>Festuca novae-zelandiae</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>
hen and chickens fern	<i>Asplenium gracillimum</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>
korokio	<i>Corokia cotoneaster</i>
koromiko	<i>Hebe salicifolia</i>
kowhai	<i>Sophora microphylla</i>
lancewood	<i>Pseudopanax crassifolius</i>
lawyer	<i>Rubus schmidelioides</i>
lemonwood	<i>Pittosporum eugenioides</i>
mahoe/whiteywood	<i>Meliccytus ramiflorus</i>
manuka	<i>Leptospermum scoparium</i>
Maori onion	<i>Bulbinella angustifolia</i>
matagouri	<i>Discaria toumatou</i>
matai/black pine	<i>Prumnopitys taxifolia</i>
matipo/kohuhu	<i>Pittosporum tenuifolium</i>
mountain akeake	<i>Olearia avicenniifolia</i>
mountain flax	<i>Phormium cookianum</i>
mountain kiokio	<i>Blechnum montanum</i>
mountain ribbonwood	<i>Hoheria lyallii</i>
narrow-leaved lacebark	<i>Hoheria angustifolia</i>
native bindweed	<i>Calystegia tuguriorum</i>
necklace fern	<i>Asplenium flabellifolium</i>
pohuehue	<i>Muehlenbeckia australis</i>
prickly shield fern	<i>Polystichum vestitum</i>
radiata pine*	<i>Pinus radiata</i>
scrambling fuchsia	<i>Fuchsia perscandens</i>
selfheal*	<i>Prunella vulgaris</i>
silver tussock	<i>Poa cita</i>
Spanish heath*	<i>Erica lusitanica</i>
thousand-leaved fern	<i>Hypolepis millefolium</i>
totara	<i>Podocarpus totara</i>
tutu	<i>Coriaria sarmentosa</i>
wall lettuce*	<i>Mycelis muralis</i>
wineberry	<i>Aristotelia serrata</i>

## References Cited

**Leathwick, J; Wilson, G; Rutledge, D; Wardle, P; Morgan, F; Johnston, K; McLeod, M; Kirkpatrick, R. 2003.** *Land Environments of New Zealand*. David Bateman Ltd.

**McEwen, WM (editor).** 1987. Ecological regions and districts of New Zealand, third revised edition (Sheet 4). *New Zealand Biological Resources Centre Publication No. 5*. Department of Conservation, Wellington, 1987.