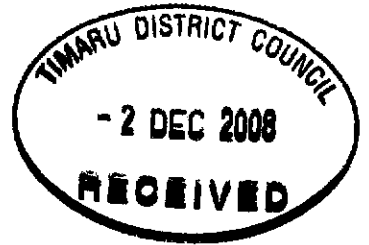


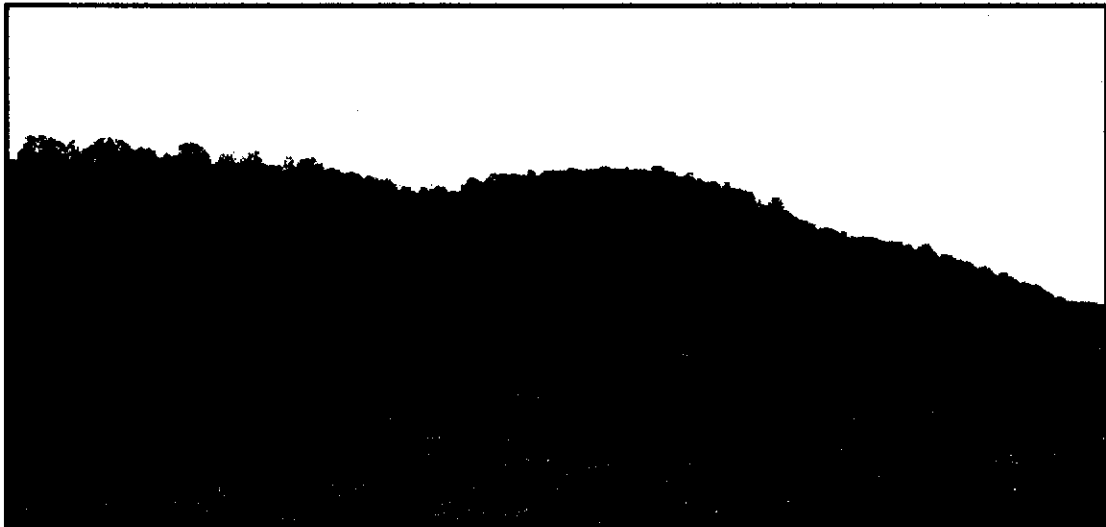
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TIMARU DISTRICT

SIGNIFICANT NATURAL AREAS SURVEY

McARTHUR/POW PROPERTY



Report prepared for Timaru District Council by Mike Harding
November 2008

TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

PROPERTY REPORT

PROPERTY DETAILS:

Owner: RG McArthur and Keith Pow
Valuation Reference: 24670/113.00
Address: Fletcher Road, Upper Waitohi
Location: Rolling hill country between Upper Waitohi and 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 dissected rolling hill country between Hilton and Upper Waitohi in South Canterbury, comprising loess-covered hills. It includes the catchment of a small stream that flows east to the Kakahu River. The property lies in the central inland part of Geraldine Ecological District.

It is likely that the original vegetation of this area was predominantly mixed podocarp-hardwood forest with smaller areas of scrub, shrubland, wetland and limestone bluff flora. This is the part of the Geraldine Ecological District with the largest remaining areas of indigenous forest. Nevertheless, indigenous forest is still generally confined to small remnants in gullies and around limestone bluffs, with some larger areas of younger regenerating forest.

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. The property lies near the known range of the South Canterbury population of long-tailed bat. This species is regarded as nationally-endangered.

Indigenous vegetation on the property comprises one relatively large area of kanuka-hardwood forest on a south-facing slope. The property lies approximately two kilometres from a protected area of indigenous forest at Waitohi Scenic Reserve and near to other areas of regenerating indigenous forest.

SIGNIFICANT AREAS ON THE PROPERTY:

The property was surveyed as part of the District-wide survey of Significant Natural Areas during August 2008. Most parts of the property were visited and assessed. One area, totalling approximately 19.5 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
229	Fletcher Road Scarp Forest	J38: 610-697	19.5	kanuka-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 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 (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 or habitat by any means (including burning and spraying with herbicides) or 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. It is expected that SNAs will eventually be listed in the District Plan by way of a notified plan change.

OTHER AREAS INSPECTED ON THE PROPERTY:

Other areas of indigenous vegetation and habitat on the property were inspected but are not regarded as significant when assessed against the criteria on pages B18-B20 of the Timaru District Plan. Failure of an area to meet the significance criteria does not necessarily mean that it is not important for nature conservation or the protection of indigenous biodiversity; it simply means that the area (as assessed at this time) does not meet the criteria in the Timaru District Plan.

Other areas of indigenous vegetation on the property are scattered patches of cabbage trees along the stream. These patches are too small and/or modified to meet the District Plan criteria. However, they do have potential value and, if protected or managed, may eventually become significant.



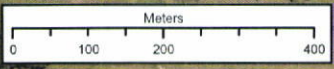
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229

Fletcher Road

South Boundary Road

Draffin Road



1:10,000

Area Name: Fletcher Road Scarp Forest	Property: McArthur/Pow
Location (central map reference): J38: 610-697	Nearest Locality: Hilton
Ecological District: Geraldine	Area Size (ha): 19.5
Surveyors: Mike Harding	Altitude (m): 140-180
	Survey Time: 3 hours
	Survey Date: 13-08-08

General Description:

This SNA is a long narrow strip of regenerating indigenous forest on a moderately-steep south-facing terrace scarp on the rolling hill country between Hilton and Upper Waitohi.

Plant Communities:

The main plant community present is kanuka-hardwood forest, described in detail below. Naturalized (self-introduced) species are indicated with an asterisk*.

The forest canopy of most of the SNA is dominated by mahoe. Kanuka is also common, though more patchily distributed. Other canopy species are lemonwood, cabbage tree, five-finger, mapou, pohuehue and, along the lower margin, fuchsia and wineberry. Trunk diameters (at breast height) of the larger trees are: mahoe, 20-30 cm; kanuka, 40-50 cm; lemonwood, 30-40 cm, and cabbage tree 30-45 cm. A single large old kahikatea/white pine tree is present mid-way along the SNA at the northern property boundary in a small gully. This tree has a trunk diameter of approximately 140 cm. Small totara trees and several large pine trees are scattered through the forest at the eastern (Fletcher Road) end of the SNA.

The forest understorey and ground-cover over most parts of the SNA are relatively open. Important understorey species are mahoe and mapou. Understorey species less commonly present are lemonwood, five-finger, broadleaf, koromiko, *Coprosma areolata*, *Coprosma rhamnoides*, *Coprosma crassifolia*, *Coprosma rotundifolia*, *Coprosma propinqua*, totara, turepo, pate, *Clematis marata*, elderberry*, bush lawyer, lawyer, leafless lawyer and, at the eastern end, a small patch of cherry laurel* trees.

Ground cover species present are necklace fern, *Asplenium appendiculatum*, *Asplenium richardii*, *Asplenium hookerianum*, *Pellaea rotundifolia*, prickly shield fern, male fern*, foxglove* and pennywort.

Species commonly present at forest margins or in canopy gaps are broom*, gorse*, blackberry*, bracken, poroporo, elderberry*, burdock*, black nightshade*, scrambling fuchsia, native jasmine, pohuehue, bush lawyer and *Hypolepis ambigua*.

Birds/Fauna Observed:

Native birds observed during this relatively brief inspection were bellbird, grey warbler, fantail and silvereye. The area is likely to provide habitat for kereru/NZ pigeon.

Notable Flora, Fauna and Habitats:

Notable features of the SNA are the presence of podocarps (one large kahikatea tree and numerous young totara trees), the presence of locally uncommon species (*Coprosma areolata* and leafless lawyer), the size of the area and the contribution the area makes to the network of forest bird habitat in the wider area.

Notable Plant and Animal Pests:

The area is relatively free of aggressive plant pests. A small patch of cherry laurel trees is present at the eastern end and elderberry bushes are scattered throughout. The native climber, pohuehue, is present and in places dominant on the forest margins. Other weeds present do not pose a significant threat to the forest. Animal pests were not surveyed, though a domestic (?) goat was observed and most parts of the area appear to have been recently grazed by cattle.

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

This SNA has two very long boundaries. The upper (northern) boundary is fenced as a property boundary. The lower (southern) boundary is mostly fenced, though this fence does not appear stock-proof in many places. The area is buffered to some extent by its location on a damper south-facing slope. It does not adjoin other areas of indigenous vegetation, though is approximately one kilometre from another smaller area of

regenerating indigenous forest (SNA 226) and lies within two kilometres of an important remnant of indigenous forest at Waitohi Scenic Reserve.

Condition and Management Issues:

The forest canopy over most of the SNA is in relatively good condition. However, the forest understorey and ground-cover is very open and depleted in most places, presumably a result of recent grazing. Protection of the forest understorey from grazing, and regular pest control (especially possums) are probably the most important management issues.

Property Owner Comment:

Mr Pow is interested in erected a stock-proof fence along the lower boundary.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M/H	A good example of indigenous vegetation typical of the ecological district and containing species (notably kahikatea and totara) that are representative of the original vegetation.
Rarity	M	Supports two locally uncommon plant species (<i>Coprosma areolata</i> and leafless lawyer) and probably provides habitat for NZ pigeon/kereru.
Diversity and pattern	L/M	Species diversity is relatively low and much reduced from that originally present.
Distinctiveness/special features	M	The large kahikatea tree is a special feature.
Other Criteria		
Size/shape	H	A large area for this ecological district.
Connectivity	M	Not connected to other indigenous vegetation, but an important part of the network of fauna habitat in the area.
Long-term Sustainability	M	Some management of grazing, weeds and pests is probably required to protect the ecological values of the area in the long term.

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

This area has been informally protected by the landowners. It has limited potential for development.

Discussion:

This area easily meets the District Plan criteria for a Significant Natural Area. Important features of the area are the presence of podocarps (one large kahikatea tree and numerous young totara trees), the presence of locally uncommon species (*Coprosma areolata* and leafless lawyer), the size of the area and the contribution the area makes to the network of forest bird habitat in the wider area.

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)	
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>
burdock*	<i>Arctium minus</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>
kahikatea/white pine	<i>Dacrycarpus dacrydioides</i>
kanuka	<i>Kunzea ericoides</i>
koromiko	<i>Hebe salicifolia</i>
lawyer	<i>Rubus schmidelioides</i>
leafless lawyer	<i>Rubus squarrosus</i>
lemonwood	<i>Pittosporum eugenioides</i>
mahoe/whiteywood	<i>Melicytus ramiflorus</i>
male fern*	<i>Dryopteris filix-mas</i>
mapou	<i>Myrsine australis</i>
native jasmine	<i>Parsonsia</i> sp.
necklace fern	<i>Asplenium flabellifolium</i>
pate	<i>Schefflera digitata</i>
pennywort	<i>Hydrocotyle</i> sp.
pohuehue	<i>Muehlenbeckia australis</i>
poroporo	<i>Solanum laciniatum</i>
scrambling fuchsia	<i>Fuchsia perscandens</i>
totara	<i>Podocarpus totara</i>
turepo	<i>Streblus heterophyllus</i>
wineberry	<i>Aristotelia serrata</i>