TIMARU DISTRICT

SIGNIFICANT NATURAL AREAS SURVEY

MALLINSON PROPERTY

Report prepared for Timaru District Council by Mike Harding
September 2015

TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

PROPERTY REPORT

PROPERTY DETAILS:

Owner: ..... Mallinson
Valuation Reference: ... 24660/001.00
Address: ..... Malhamdale, Four Peaks, RD21 Geraldine 7991
Location:..... Hills between Leishmans Stream and Hae Hae Te Moana River
Ecological District:..... Orari
TDC Land Type:..... 'Hard Rock Hills and Downs'
Land Environments:..... Q2 (south-eastern hill country)

ECOLOGICAL CONTEXT:

This property lies in the foothills of the Four Peaks Range in South Canterbury. It is within Orari Ecological District (McEwen, 1987) and within the Q2.1a Level IV Land Environment as defined by Leathwick *et al* (2003). Indigenous vegetation within the Q2.1a Land Environment is listed as 'critically under-protected' by Walker *et al* (2006).

The property covers moderately-steep slopes from an altitude of approximately 300m on the valley floor to over 700m on higher slopes alongside the Hae Hae Te Moana North Branch (Hare) River and Leishman Stream.

The original vegetation of this area would have been predominantly hardwood forest with emergent podocarps (matai and totara). 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 is part of a network of forest remnants and regenerating forest in this part of the ecological district.

SIGNIFICANT AREAS ON THE PROPERTY:

This property was not surveyed as part of the District-wide survey of Significant Natural Areas because permission for access was declined by the landowner. However, neighbouring properties have been surveyed and there are good recent aerial photo images of the area. So it is possible to determine what indigenous vegetation is likely to be present on the property.

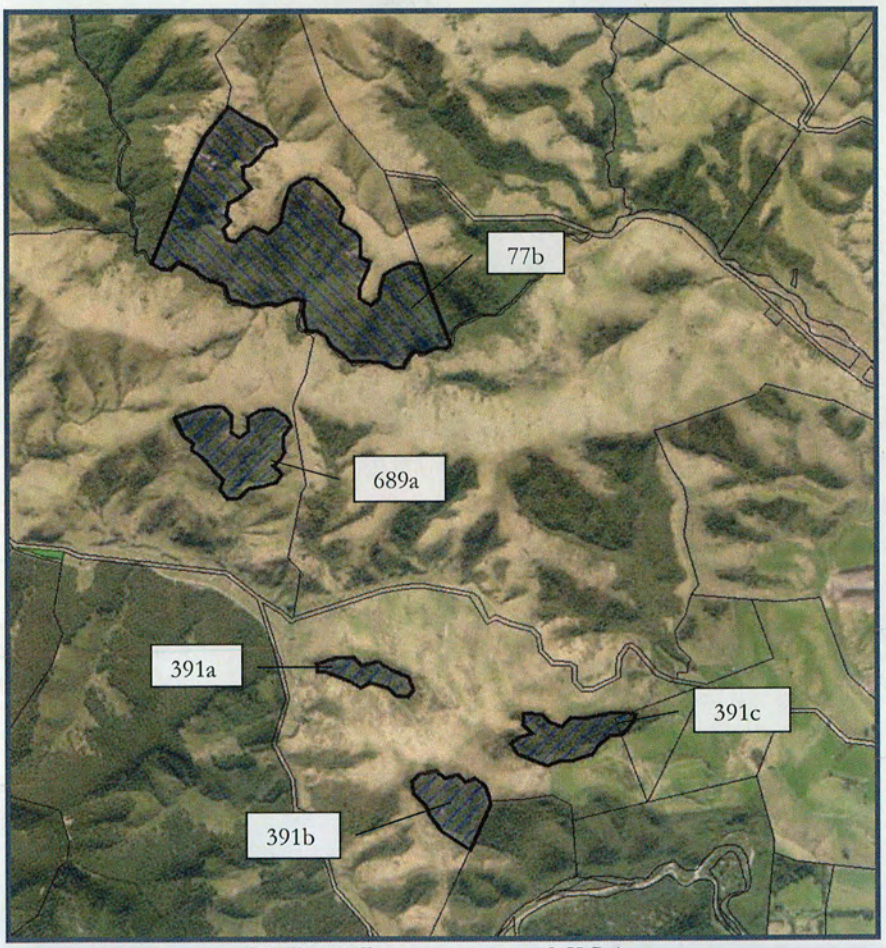
Indigenous vegetation on the property appears to comprise regenerating hardwood forest, with smaller areas of older forest which include podocarp (totara) trees. On nearby properties these habitats support populations of two 'threatened' plant species (*Carmichaelia kirkii* and *Carmichaelia torulosa*) and one 'at risk' (declining) plant species (*Teucridium parvifolium*), as listed by de Lange *et al* (2012). Forest on the property lies near to other areas of indigenous vegetation on adjacent properties, contributing to the network of fauna habitat in the wider area. Eastern falcon/karearea, an 'at risk' (recovering) species (Robertson *et al*, 2012), is present in the area.

Without the benefit of a field survey it is more difficult to accurately determine the extent of significant indigenous vegetation on the property. Aerial images and views from adjacent properties indicate the presence of one large area of indigenous forest in the Hare River and four other smaller areas of regenerating indigenous forest on upper slopes elsewhere on the property, as listed in the table and illustrated on the aerial photograph below. These areas are likely to be Significant Natural Areas (SNAs) when assessed against the District Plan criteria.

Area No.	Map ref. (NZTM)	Aprox. size(ha)	Vegetation/habitat type
77b	1446131E-5125295N	70	hardwood forest; totara likely to be present
689a	1445800E-5124266N	14	hardwood forest; totara may be present
391a	1446437E-5123184N	4	hardwood forest
391b	1446850E-5122545N	8	hardwood forest
391c	1447435E-5122882N	9	hardwood forest

The likely values areas described on the two SNA forms in this report. Note that the boundaries of the SNAs are indicative, rather than precise. These areas are likely to meet the ecological criteria in the Timaru District Plan (criteria i-vi, pages B18-B19) and are 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.



Mallinson Property, presumed SNAs.

TIMARU DISTRICT SNA SURVEY SNA 77b

Area Name:
Ecological District: Orari
Central map ref. (NZTM): 1446131E-5125295N
Assessor: Mike Harding

Property: Mallinson
Nearest Locality: Te Moana
Area Size (ha): c.70 **Altitude (m):** 300-600
Survey Time: n/a **Survey Date:** n/a

General Description:

This large area lies on moderately-steep south-facing slopes above the Hare River. It is part of a much larger area of indigenous forest that extends up-valley (SNA 77c) and down-valley (SNA 77a).

Plant Communities:

Plant communities in this area are extensive young (regenerating) indigenous hardwood forest, with areas of taller (older) forest at the valley bottom and in steeper gullies. Surveys of adjacent forest indicate that important canopy species are likely to be broadleaf, five-finger, lancewood, fuchsia, matipo, mountain ribbonwood, marbleleaf and mapou. Other canopy species likely to be present are kowhai, cabbage tree, wineberry, totara, lemonwood, native jasmine, clematis, bush lawyer and pohuehue. The forest understorey is likely to support *Coprosma crassifolia*, *Coprosma rhamnoides*, mahoe, horopito, weeping mapou and numerous fern species, notably prickly shield fern and hen and chickens fern.

SNA 77b

Birds/Fauna:

Native birds typically present at similar sites are bellbird, grey warbler, fantail, rifleman, silvereye, tomtit, kereru, welcome swallow and harrier. Karearea/eastern falcon are present in the area.

Notable Flora, Fauna and Habitats:
Important features of this area are the habitat it provides for forest birds, the likely presence of podocarps (totara), the extent (size) of the area, and that it is part of a much larger area of forest. The larger area is one of the most extensive patches of indigenous forest remaining in the ecological district.

Notable Plant and Animal Pests:
Assessment of plant and animal pests was not possible, though possums and feral pigs are almost certainly present.

Boundaries (buffering, fencing, adjoining plant communities and habitats):
The boundaries of this area are drawn to include the main area of forest and denser scrub at the upper forest margin. It is part of a larger area of forest and lies close to other areas of indigenous forest and scrub.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M/H	Indigenous vegetation that appears typical of that remaining in this part of Orari Ecological District and includes podocarp (totara) trees. It is moderately representative of the vegetation originally present.
Rarity	M	The presence of 'threatened' or 'at risk' plant species could not be determined. It is likely to provide habitat for an 'at risk' bird species (karearea/eastern falcon).
Diversity and pattern	M	Plant species diversity is likely to be moderate, though probably reduced from that originally present.
Distinctiveness/special features		
Other Criteria		
Size/shape	H	A large area of forest for the ecological district.
Connectivity	M/H	Adjoins and links other areas of indigenous vegetation in the Hare valley.
Long-term Sustainability	M/H	Some animal pest control is likely to be necessary 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 protected from clearance by the landowner. It occupies steeper slopes that appear generally unsuitable for further farm development.

Discussion:
If the above assessment is accurate, this site very easily meets the District Plan criteria for an SNA. Important values are the habitat it provides for forest birds, the likely presence of podocarps (totara), the extent (size) of the area, and that it is part of a larger area which is one of the most extensive patches of remaining in the ecological district.

TIMARU DISTRICT SNA SURVEY SNAs 689a and 391a, b, c

Area Name:	**Property:** Mallinson	
Ecological District: Orari	**Nearest Locality:** Te Moana	
689a Central map ref. (NZTM): 1445800E-5124266N	**Area Size (ha):** c.14	**Altitude (m):** 400-500
391a Central map ref. (NZTM): 1446437E-5123184N	**Area Size (ha):** c.4	**Altitude (m):** 350-450
391b Central map ref. (NZTM): 1446850E-5122545N	**Area Size (ha):** c.8	**Altitude (m):** 400-500
391c Central map ref. (NZTM): 1447435E-5122882N	**Area Size (ha):** c.9	**Altitude (m):** 350-500
Assessor: Mike Harding	**Survey Time:** n/a	**Survey Date:** n/a

General Description:
These four areas of indigenous forest are located in gullies on upper slopes. They are all at shaded (south-facing) sites and appear to support similar vegetation, so are described together.

Plant Communities:
These forest patches comprise young (regenerating) indigenous hardwood forest. Podocarps (totara) may be present at some of the sites. Similar forest patches nearby are dominated by broadleaf, fuchsia, lemonwood, marbleleaf and mapou. Other canopy species likely to be present are kowhai, lancewood, wineberry, narrow-leaved mahoe, mountain ribbonwood, cabbage tree, bush lawyer, pohuehue, clematis and native jasmine. The forest understories are likely to be dominated by *Coprosma* species, horopito, prickly shield fern, hen and chickens fern, mountain kiokio and hound's tongue fern.

Birds/Fauna:
Native birds typically present at similar sites are bellbird, grey warbler, fantail, rifleman, silvereye, tomtit, kereru, welcome swallow and harrier. Karearea/eastern falcon are present in the area.

Notable Flora, Fauna and Habitats:
Important features of this area are the habitat provided for forest birds, the possible presence of podocarps (totara) and the contribution the patches make to the network of forest habitat in the wider area.

Notable Plant and Animal Pests:
Assessment of plant and animal pests was not possible, though possums and feral pigs are almost certainly present.

Boundaries (buffering, fencing, adjoining plant communities and habitats):
The boundaries of these areas are drawn to include the main areas of forest and denser scrub at the forest margins. All lie close to other areas of indigenous vegetation. SNA 391c adjoins a protected area (scenic reserve).

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M	Indigenous vegetation that appears typical of that remaining in this part of Orari Ecological District and moderately representative of that originally present.
Rarity	M	The presence of 'threatened' or 'at risk' plant species could not be determined. Likely to provide habitat for an 'at risk' bird species (karearea/eastern falcon).
Diversity and pattern	M	Plant species diversity is likely to be moderate, though probably reduced from that originally present.

Distinctiveness/special features		
Other Criteria		
Size/shape	**M**	Small to moderate-sized areas that are well buffered by their locations on steep shaded slopes.
Connectivity	**M**	Lie close to other areas of indigenous vegetation and are part of a network of fauna habitat in the wider area.
Long-term Sustainability	**M/H**	Some animal pest control is likely to be necessary to maintain ecological values in the long term.

Final Consideration (of other matters: Section D, page B-19 of Timaru District Plan):
These areas occupy steeper slopes that appear generally unsuitable for further farm development.

Discussion:
If the above assessment is accurate, these sites meet the District Plan criteria for Significant Natural Areas (SNAs). Important values are the habitat provided for forest birds, the possible presence of podocarps (totara) and the contribution the patches make to the network of forest habitat in the wider area..

Scientific names of plant 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 (* = naturalised species)	Scientific name
broadleaf	*Griselinia littoralis*
bush lawyer	*Rubus cissoides*
cabbage tree/ti rakau	*Cordyline australis*
clematis	*Clematis paniculata*
five-finger	*Pseudopanax arboreus*
fuchsia	*Fuchsia excorticata*
hen and chickens fern	*Asplenium gracillimum*
horopito/pepperwood	*Pseudowintera colorata*
hound's tongue fern	*Microsorum pustulatum*
kowhai	*Sophora microphylla*
lancewood	*Pseudopanax crassifolius*
lemonwood	*Pittosporum eugenioides*
mahoe/whiteywood	*Melicytus ramiflorus*
mapou	*Myrsine australis*
marbleleaf/putaputaweta	*Carpodetus serratus*
matai/black pine	*Prumnopitys taxifolia*
matipo/kohuhu	*Pittosporum tenuifolium*
mountain kiokio	*Blechnum montanum*
mountain ribbonwood	*Hoheria lyallii*
narrow-leaved mahoe	*Melicytus lanceolatus*
native jasmine	*Parsonsia heterophylla*
pohuehue	*Muehlenbeckia australis*
prickly shield fern	*Polystichum vestitum*
totara	*Podocarpus totara*
weeping mapou	*Myrsine divaricata*
wineberry	*Aristotelia serrata*

References Cited

de Lange, PJ; Rolfe, JR; Champion, PD; Courtney, SP; Heenan, PB; Barkla, JW; Cameron, EK; Norton, DA; Hitchmough, RA. 2012. *Conservation status of New Zealand indigenous vascular plants, 2012*. Department of Conservation, Wellington, New Zealand. 70p.

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.

Robertson, HA; Dowding, JE; Elliot, GP; Hitchmough, RA; Miskelly, CM; O'Donnell, CFJ; Powlesland, RG; Sagar, PM; Scofield, RP; Taylor, GA. 2012. Conservation status of New Zealand birds, 2012. *New Zealand Threat Classification Series 4*. Department of Conservation, Wellington.

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