

TIMARU DISTRICT
SIGNIFICANT NATURAL AREAS
SURVEY

OMYA PROPERTY
KAKAHU



Report prepared for Timaru District Council by Mike Harding
July 2019

TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

PROPERTY REPORT

PROPERTY DETAILS:

Owners: Omya New Zealand Ltd
Valuation References: . 24670-22200
Location:..... Kakahu River, near Hall Road
Ecological District:..... Geraldine Ecological District.
TDC Land Type:..... 'Hard Rock Hills and Downs'
Land Environment: N3.1a

ECOLOGICAL CONTEXT:

The Omya property lies on the south-east slopes of Kakahu Hill, approximately 15 km south-west of Geraldine. It is on the true-left (north) side of Kakahu River, just above the old Sanatorium site. The property lies in Geraldine Ecological District (McEwen, 1987).

It is likely that the original vegetation of this area was predominantly podocarp-broadleaved forest, dominated by matai, totara, kahikatea and a range of broadleaved species including kowhai and broadleaf.

Today the original forest cover in this part of Geraldine Ecological District is largely confined to remnants in gullies or on steep slopes associated with limestone scarps. 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.

SIGNIFICANT AREAS ON THE PROPERTY:

Indigenous vegetation on the property comprises kanuka forest with patches of emergent totara. The property is surrounded by similar vegetation, except at the southern boundary where it adjoins a strip of tall willow trees along the Kakahu River. There are relatively extensive areas of remnant and regenerating indigenous forest in the wider area, providing a locally significant network of fauna habitat. This part of the ecological district is a stronghold for a remnant South Canterbury population of long-tailed bat; a threatened species.

The property was surveyed as part of the District-wide survey of Significant Natural Areas in late June 2019. One area, comprising nearly all parts of the property, was assessed as significant and is described in in this report as SNA 828. The boundaries of this SNA are illustrated below. This area meets the ecological significance criteria in Appendix 3 of the Canterbury Regional Policy Statement. SNAs are subject to confirmation by Council. SNAs will eventually be listed in the District Plan by way of a notified plan review.



SNA 828, indicated by hatching.

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. Indigenous vegetation on the property is protected by a QEII Open Space covenant.



Totara emergent from the kanuka canopy at the lower part of SNA 828.

Area Name: Omya Kakahu	Property: Omya NZ Ltd.
Ecological District: Geraldine	Nearest Locality: Kakahu
Central Map Reference: (NZTM): 1446185E-5109820N	Size: 8.12 ha
Surveyor: Mike Harding	Survey Time: 3 hours
	Survey Date: 28-06-2019

General Description:

This SNA lies on a moderately steep south-facing slope above the Kakahu River. The underlying geology is semischistose mudstone and sandstone with minor conglomerate, hematic volcanics, tuff and chert of the Kakahu lithological association (Cox and Barrell, 2007). It lies between altitudes of 160 and 220m. Small streams at the site drain south to the Kakahu River. A formed walking track passes through the northeast corner of the site.

Plant Communities:Kanuka forest:

This forest is present on upper slopes and the main spurs. It is dominated by kanuka (*Kunzea ericoides* agg.). Other canopy species are mahoe (*Melicytus ramiflorus*), mapou (*Myrsine australis*), five-finger (*Pseudopanax arboreus*), marbleleaf (*Carpodetus serratus*), yellowwood (*Coprosma linariifolia*) and native jasmine (*Parsonsia heterophylla*). Present, but uncommon, are cabbage tree (*Cordyline australis*) and lemonwood (*Pittosporum eugenioides*).



The forest understorey at upper parts of SNA 828.

The forest understorey is dominated by mapou, *Coprosma rhamnoides* and mahoe. Other understorey plant species present are shrubby mahoe (*Melicytus micranthus*), weeping mapou (*Myrsine divaricata*), and saplings of five-finger and totara (*Podocarpus totara*). Species present on the forest floor are common shield fern (*Polystichum richardii*), *Asplenium hookeri*, hanging spleenwort (*Asplenium flaccidum*) and hookgrass (*Uncinia* sp.).

Species present at forest openings are fuchsia (*Fuchsia excorticata*), wineberry (*Aristotelia serrata*), *Coprosma rotundifolia*, blackberry* (*Rubus fruticosus* agg.), *Hypolepis ambigua*, water fern (*Histiopteris incisa*), bracken (*Pteridium esculentum*), Chilean flame creeper* (*Tropaeolum speciosum*) and foxglove* (*Digitalis purpurea*).

Totara-kanuka forest:

This forest is present on lower slopes and in the main gully. The forest canopy is also dominated by kanuka, but with emergent trees of totara. Other canopy species are marbleleaf, lancewood (*Pseudopanax crassifolius*), fuchsia, wineberry, kohuhu (*Pittosporum tenuifolium*), broadleaf (*Griselinia littoralis*), kaikomako (*Pennantia corymbosa*), native jasmine, bush lawyer (*Rubus cissoides*), *Clematis foetida* and pohuehue (*Muehlenbeckia australis*). Several dead (felled) trees of hawthorn* (*Crataegus monogyna*) are present.

The forest understorey is more diverse at these damper parts of the site. Species commonly present are *Coprosma rotundifolia*, kohuhu, shrubby mahoe, rohotu (*Neomyrtus pedunculatus*), poataniwha (*Melicope simplex*), weeping mapou, pate (*Schefflera digitata*), bush lawyer, and saplings of five-finger, lancewood and totara.



The forest understorey at lower parts of SNA 828.

Ground-cover species are prickly shield fern (*Polystichum vestitum*), hen and chickens fern (*Asplenium gracillimum*), kiokio (*Blechnum novae-zelandiae*), *Blechnum fluviatile*, *Blechnum penna-marina*, *Blechnum chambersii*, *Asplenium bookerianum*, *Asplenium richardii* and hanging spleenwort.

Birds/Fauna Observed:

Native bird species observed at or adjacent to the site during this brief survey were bellbird (*Anthornis melanura*), fantail (*Rhipidura fuliginosa*), rifleman (*Acanthisitta chloris*), grey warbler (*Gerygone igata*) and Australasian harrier (*Circus approximans*). Additional species likely to utilise the forest habitat at this site are kereru/NZ pigeon (*Hemiphaga novaeseelandiae*), silvereye (*Zosterops lateralis*) and possibly tui (*Prosthemadura novaeseelandiae*) and tomtit (*Petroica macrocephala*). The site lies within the present range of long-tailed bat (*Chalinolobus tuberculatus* “South Island”).

Notable Flora, Fauna and Habitats:

The site provides suitable habitat for long-tailed bat, a species listed as ‘threatened; nationally critical’ by O’Donnell *et al* (2013). Two plant species at the SNA are listed by de Lange *et al* (2018) as ‘threatened’:

Kunzea ericoides agg (kanuka) nationally vulnerable

Neomyrtus pedunculatus (rohutu)..... nationally critical

However, these listings result from the threat posed by myrtle rust, and have the qualifiers DP (data poor) and De (taxon that does not fit within the criteria; designated to the most appropriate listing).

The site lies within the N3.1a Level IV Land Environment (Leathwick *et al*, 2003) in which indigenous vegetation is reduced to less than 10% of its former extent (Cieraad *et al*, 2015).

Condition and Management

Indigenous vegetation and habitat at this site are in relatively good condition. The forest canopy is intact and there is strong regeneration in the forest understorey, including totara. The only significant exotic plant species present is hawthorn, which appears to have been controlled. Other exotic plant species, such as Chilean flame creeper and blackberry, do not pose a significant threat. A stand of macrocarpa (*Cupressus macrocarpa*) trees adjacent to the north-west corner of the site do not appear to be spreading. Sign of possums and wallabies was observed. Feral goats are present in the area. The most important management issues at the site are continued control of hawthorn, and control of wallabies, possums and feral goats.

ASSESSMENT AGAINST REGIONAL POLICY STATEMENT CRITERIA:

Criteria	Significant?	Comments
Representativeness	Yes	Indigenous vegetation that is typical/characteristic of the natural diversity of the ecological district.
Rarity/Distinctiveness	Yes	Indigenous vegetation that has been reduced to less than 20% of its former extent. Provides suitable habitat for a ‘threatened’ (nationally critical) species (long-tailed bat).
Diversity and Pattern	No	Does not contain a high diversity of indigenous species or habitat types.
Ecological Context	Likely	It is part of a network of fauna habitat.

Discussion:

Indigenous vegetation at this site is effectively an enclave within a much more extensive tract of similar vegetation. It is part of one of the largest areas of indigenous vegetation at lowland parts of Timaru District. The site provides likely habitat for long-tailed bat and good habitat for forest birds. It supports mature secondary forest with excellent podocarp (totara) regeneration. The site is already formally protected (by a QEII covenant) and appears to be well managed.

References Cited:

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- Leathwick, J.; Wilson, G.; Rutledge, D.; Wardle, P.; Morgan, F.; Johnston, K.; McLeod, M.; Kirkpatrick, R. 2003. *Land Environments of New Zealand*. David Bateman, Auckland. 184p.
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- O'Donnell, C.F.J.; Christie, J.E.; Lloyd, B.; Parsons, S.; Hitchmough, R.A. 2013. Conservation status of New Zealand bats 2012. *New Zealand Threat Classification Series 6*. Department of Conservation, Wellington.