TIMARU DISTRICT

SIGNIFICANT NATURAL AREAS SURVEY

ZWARTS and LAMBIE PROPERTIES TANIWHA GULLY

Report prepared for Timaru District Council by Mike Harding
November 2018

TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

PROPERTY REPORT

PROPERTY DETAILS:

Owners: ..... Lisa and Shaun Zwarts/Stella and Allan Lambie
Valuation References: . 24810-11805/24810-11800
Location:..... Opihi Road, Hanging Rock.
Ecological District:..... Geraldine Ecological District.
TDC Land Type:..... 'Soft Rock Hills and Downs'
Land Environments:..... N3.1a/L1.2a.

ECOLOGICAL CONTEXT:

The parts of these two properties covered by this survey lie at the western end of the land parcels in the lower part of Taniwha Gully. This gully is a well-known location of Maori rock art at Hanging Rock. Other parts of the gully lie on an adjacent property (24810-11500) and are managed by the Te Ara Rock Art Trust. The Hanging Rock/Taniwha Gully landform lies on the south side of the Opihi River just below the confluence of the Opuha River and just above the Hanging Rock Bridge. The property lies in Geraldine Ecological District (McEwen, 1987).

It is likely that the original vegetation of this area was predominantly podocarp-hardwood forest, dominated by matai, totara and a range of hardwood species including kowhai and broadleaf. Shrubland, treeland and tussockland may have occupied steeper slopes and disturbed sites. Limestone bluffs supported specialised flora, and valley floors would have supported areas of wetland vegetation.

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 these properties comprises hardwood treeland, shrubland and sparsely vegetated rockland associated with the limestone scarp on the side of the gully and sedgeland (wetland) on the valley floor. The properties lie close to areas of indigenous forest, shrubland and rockland vegetation on nearby properties, contributing to the network of fauna habitat in the wider area. This part of the ecological district is a stronghold for a remnant South Canterbury population of long-tailed bat; a threatened species.

The properties were surveyed as part of the District-wide survey of Significant Natural Areas during October 2018. Vegetation on the limestone landforms adjacent to the properties was surveyed in July 2013. Two areas were assessed as significant and described in 2013 as SNA 87a and SNA 87b. Vegetation on limestone substrates on these properties is contiguous with SNA 87b and is described in this report as an extension to SNA 87b (Figure 1).

SNA 87a (top left) and SNA 87b (lower right), indicated by hatching.

The boundaries of this SNA are illustrated above and the values of the parts lying on these two properties (Zwarts and Lambie) described on the SNA form in this report. Note that the boundaries of the SNAs are indicative, rather than precise. These areas meet the ecological significance criteria in Appendix 3 of the Canterbury Regional Policy Statement criteria. SNAs are subject to confirmation by Council. It is expected that SNAs will eventually be listed in the District Plan by way of a notified plan review.

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.

TIMARU DISTRICT SNA SURVEY SNA 87b (part)

Area Name: Taniwha Gully
Properties: Zwarts and Lambie
Ecological District: Geraldine
Nearest Locality: Hanging Rock
Surveyor: Mike Harding
Survey Time: 1½ hours **Survey Date:** 13-10-18

General Description:

The part of this SNA that lies on the properties comprises a limestone scarp-face, adjacent steep slopes and part of the valley floor. It lies on the east side of Taniwha Gully and on the south side of the Opihi River. It is at the east part of the prominent Hanging Rock landform. This report describes the vegetation and habitat on the parts of this SNA that lie on these two properties.

Plant Communities:

The plant communities present are treeland-shrubland and sparsely vegetated rockland on the exposed limestone, and grassland-sedgeland on the valley floor. These plant communities are described below. Naturalised (exotic) species are indicated with an asterisk*.

Woody species on or associated with the limestone scarp are mahoe (*Melicytus ramiflorus*), ti/cabbage tree (*Cordyline australis*), mingimingi (*Coprosma propinqua*) and pohuehue (*Muehlenbeckia australis*). Present but less common are broadleaf (*Griselinia littoralis*), plum* (*Prunus cerasifera*), leafless lawyer (*Rubus squarrosus*) and mistletoe (*Ileostylis micranthus*), Planted species are matai (*Prumnopitys taxifolia*), one pear tree and one walnut tree.

Mingimingi, ti tree, broadleaf and broom.*

Low-growing species on or associated with the scarp are blackberry* (*Rubus fruticosus* agg.), bittersweet* (*Solanum dulcamara*), hemlock* (*Conium maculatum*), cleavers* (*Galium aparine*), *Asplenium lyallii*, maidenhair fern (*Adiantum cunninghamii*), *Blechnum chambersii*, *Hypolepis ambigua*, prickly shield fern (*Polystichum vestitum*) (rare), male fern* (*Dryopteris filix-mas*), *Cardamine debilis* agg., *Hypnum cupressiforme* and grasses*.

Native ferns Asplenium lyallii and Blechnum chambersii on limestone.

The crest of the bluff is mostly dominated by rank grass, notably Chewings fescue* (*Festuca rubra*) and cocksfoot* (*Dactylis glomerata*), broom* (*Cytisus scoparius*) and hemlock*. Occasional ti/cabbage tree are present. Parts of the grassy areas have been planted with a range of native species.

The valley-floor wetland is at most parts dominated by exotic grasses, notably Yorkshire fog* (*Holcus lanatus*), and at one location crack willow* (*Salix fragilis*). Other species present are pukio (*Carex secta*), *Carex sinclairii*, harakeke/flax (*Phormium tenax*) and creeping buttercup* (*Ranunculus repens*).

Additional indigenous plant species recorded at other parts on SNA 87b in 2013 are kowhai (*Sophora microphylla*), koromiko (*Hebe salicifolia*), mountain akeake (*Olearia avicenniifolia*), native broom (*Carmichaelia australis*), *Chenopodium allanii*, *Colobanthus* aff. *strictus* and *Lagenophora petiolata*.

Birds/Fauna Observed:

Native bird species observed at or adjacent to the site during this brief survey were fantail (*Rhipidura fuliginosa*), grey warbler (*Gerygone igata*) and Australasian harrier (*Circus approximans*). Additional species recorded at the SNA in 2013 were bellbird (*Anthornis melanura*) silvereye (*Zosterops lateralis*) and welcome swallow (*Hirundo tahitica*). 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). One plant species recorded at other parts of the SNA in 2013, *Chenopodium allanii*, is listed by de Lange *et al* (2018) as 'at risk, naturally uncommon'.

Most parts of the site lie within Level IV Land Environments (N3.1a and L1.2a) as defined by Leathwick *et al* (2003) in which indigenous vegetation is reduced to less than 10% of its former extent (Cieraad *et al*, 2015). The site is part of a naturally uncommon ecosystem (calcareous scarp) as defined by Williams *et al* (2007) which is listed as nationally 'vulnerable' (Holdaway *et al*, 2012).

An 'at risk' species, Chenopodium allanii, is present elsewhere in SNA 87b.

Condition and Management

Exotic plant species (notably grasses) are common and in places dominant, as is typical of many limestone scarps in the area. This part of the SNA is in moderate condition. Important management issues are continued control of woody weeds, notably crack willow* and plum*, and possum control. Some judicious containment of the native climber pohuehue may be required to prevent smothering of native trees. Continued planting of native woody species will assist in restoration of indigenous vegetation, provided species are propagated from those occurring naturally in the area.

ASSESSMENT AGAINST REGIONAL POLICY STATEMENT CRITERIA:

Criteria	Significant?	Comments
Representativeness	**Yes**	Indigenous vegetation that is typical/characteristic of the natural diversity (vegetation on limestone scarps) of the ecological district.
Rarity/Distinctiveness	**Yes**	Indigenous vegetation that has been reduced to less than 20% of its former extent and is within an originally rare ecosystem. Provides 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:

The parts of the properties included within this part of the SNA are steep and in places inaccessible. They have been informally protected by the landowners and have little potential for further development. The landowners have commenced a restoration (planting) programme. Vegetation and habitat within the SNA is in moderate condition, though similar to that present on limestone scarps elsewhere in the area. These areas are part of a larger SNA and make a useful contribution to the protection of indigenous biodiversity in this part of Timaru District.

References Cited:

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Leafless lawyer.