

**TIMARU DISTRICT
SIGNIFICANT NATURAL AREAS
SURVEY**

TOPHAM PROPERTY



Report prepared for Timaru District Council by Mike Harding
April 2014

TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

PROPERTY REPORT

PROPERTY DETAILS:

Owner:Lincoln and Pauline Topham
Valuation References: .24810/038.00
Address:Cleland Road, Pleasant Point 7982
Location:Northwest side of Sterndale Valley Road
Ecological District:Geraldine
TDC Land Type:.....'Soft Rock Hills and Downs'
Land Environments:.....N3.1a

ECOLOGICAL CONTEXT:

The property lies on the lower southeast slopes of the Brothers Range, west of Totara Valley. It lies in Geraldine Ecological District, though close to the boundary of Fairlie Ecological District (McEwen, 1987). It also lies in the N3.1a Level IV Land Environment as defined by Leathwick *et al* (2003). Indigenous vegetation within the N3.1a land environment is regarded as acutely-threatened (Walker *et al*, 2005).

It is likely that the original vegetation of this area was predominantly podocarp-hardwood forest, dominated by matai, totara, kowhai, broadleaf and other hardwood trees. 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 the property comprises shrubland and sparsely vegetated rockland associated with a large limestone bluff that extends onto the adjoining property. The area lies near to areas of indigenous forest, shrubland and rockland vegetation on other properties, contributing to the network of fauna habitat in the wider area. This part of the ecological district is within the range of a remnant South Canterbury population of long-tailed bat; a threatened (nationally critical) species.

The property was surveyed as part of the District-wide survey of Significant Natural Areas during March 2014. One area, comprising approximately 2.4 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	Map reference (NZTM)	Aprox. size (ha)	Vegetation/habitat type
439b	Topham limestone	E1437610-N5097030	2.4	rockland; shrubland

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 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, 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.



1:5,000

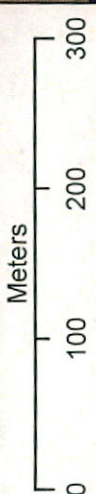
Stemdale Valley Road

Ksen Road

Topham Property
24810/038.00



439b



Meters

300

200

100

0

Area Name: Topham Limestone
 Map ref. (NZTM): E1437610-N5097030
 Ecological District: Geraldine
 Surveyors: Mike Harding

Property: Topham
 Nearest Locality: Totara Valley
 Area Size (ha): 2.4 Altitude (m): 180-220
 Survey Time: ½ hour Survey Date: 20-03-14

General Description:

This SNA is a small area of exposed limestone at the northeast end of a much larger limestone bluff on the adjacent property (SNA 439a).

Plant Communities:

The main plant community present is sparsely-vegetated rockland with associated shrubs, described below. Naturalized (exotic) species are indicated with an asterisk*.

Plant species present on or associated with areas of exposed limestone are matagouri, mingimingi, mahoe, pohuehue, mistletoe, elderberry*, *Carex breviculmis*, *Epilobium nummulariifolium*, *Dichondra repens*, oxalis, cardamine, *Chaerophyllum rigida*, *Parietaria debilis*, toatoa, maidenhair fern, *Asplenium lyallii*, Californian thistle*, nodding thistle*, white clover*, suckling clover*, dandelion*, mouse-ear hawkweed*, mouse-ear chickweed*, yarrow*, cocksfoot*, Chewings fescue*, dove's foot*, nettle*, black nightshade*, burdock*, shepherd's purse*, hemlock*, narrow-leaved plantain*, cleavers*, dwarf mallow*, hawkbit*, hawksbeard*, sow thistle*, stonecrop*, horehound*, daisy* and pasture grasses.



An un-described limestone Cardamine at SNA 439b

Notable Flora, Fauna and Habitats:

Important features of this area are: the presence of limestone habitat, a naturally uncommon ecosystem listed as 'vulnerable' by Holdaway *et al* (2012); the presence of locally-uncommon plant species, *Chaerophyllum rigida* and *Parietaria debilis*; and that the area adjoins a much larger area of outcropping limestone.

Notable Plant and Animal Pests:

Invasive pasture grasses and herbs, notably Chewings fescue, mouse-ear hawkweed, stoncrop and narrow-leaved plantain are the most important weeds present. Animal pests were not surveyed.

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

The boundary of this SNA is the extent of the exposed limestone. It includes areas of shrubland on steeper parts of the lower slopes. It lies within a larger paddock on the property boundary.

Condition and Management Issues:

The steeper areas of exposed limestone are in relatively good condition. The gentler limestone pavement is affected by invasive pasture grasses and weeds. The main management issue is control of invasive weeds.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M	Modified indigenous vegetation typical of that remaining at similar sites in the ecological district.
Rarity	M/H	Lies within an acutely-threatened land environment (N3.1a); is a naturally uncommon ecosystem (limestone bluff); and supports two locally-uncommon plant species.
Diversity and pattern	L/M	Plant species diversity is low and probably reduced from that originally present.
Distinctiveness/special features	L/M	The gently-sloping limestone pavement on the ridge crest is a notable feature.
Other Criteria		
Size/shape	M	A small to moderate-sized area that is partly buffered by its location.
Connectivity	M	Adjoins a much larger area of limestone on the adjacent property.
Long-term Sustainability	M	Some control or containment of invasive naturalized plants may be necessary to maintain ecological values.

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

This area has been set aside from farm development, presumably because of the rocky outcrops and steepness of the slopes. It has only limited potential for further development.

Discussion:

This area meets the District Plan criteria for a Significant Natural Area. Important features of the area are the presence of exposed limestone with good populations of two locally uncommon plant species. While modified, it nevertheless supports a range of typical indigenous limestone plant species and is part of a much larger, and ecologically important, area of limestone habitat.

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)	
black nightshade*	<i>Solanum nigrum</i>
burdock*	<i>Arctium minus</i>
Californian thistle*	<i>Cirsium arvense</i>
cardamine	<i>Cardamine</i> sp.
Chewings fescue*	<i>Festuca rubra</i> ssp. <i>commutata</i>
cleavers*	<i>Galium aparine</i>
cocksfoot*	<i>Dactylis glomerata</i>
daisy*	<i>Bellis perennis</i>
dandelion*	<i>Taraxacum officinale</i>
dove's foot*	<i>Geranium molle</i>
dwarf mallow*	<i>Malva neglecta</i>
elderberry*	<i>Sambucus nigra</i>
hawkbit*	<i>Leontodon taraxacoides</i>
hawksbeard*	<i>Crepis capilaris</i>
hemlock*	<i>Conium maculatum</i>
horehound*	<i>Marrubium vulgare</i>
mahoe/whiteywood	<i>Melicytus ramiflorus</i>
maidenhair fern	<i>Adiantum cunninghamii</i>
matagouri	<i>Discaria toumatou</i>
mingimingi	<i>Coprosma propinqua</i>
mistletoe	<i>Ileostylis micranthus</i>
mouse-ear chickweed*	<i>Cerastium fontanum</i>
mouse-ear hawkweed*	<i>Pilosella officinarum</i>
narrow-leaved plantain*	<i>Plantago lanceolata</i>
nettle*	<i>Urtica urens</i>
nodding thistle*	<i>Carduus nutans</i>
oxalis	<i>Oxalis exilis</i>
pohuehue	<i>Muehlenbeckia australis</i>
shepherd's purse*	<i>Capsella bursa-pastoris</i>
sow thistle*	<i>Sonchus oleraceus</i>
stonecrop*	<i>Sedum acre</i>
suckling clover*	<i>Trifolium dubium</i>
toatoa	<i>Haloragis erecta</i>
white clover*	<i>Trifolium repens</i>
yarrow*	<i>Achillea millefolium</i>

References Cited

- Holdaway, R.J.; Wiser, S.K.; Williams, P.A. 2012. Status assessment of New Zealand's naturally uncommon ecosystems. *Conservation Biology* 26: 619-629.
- 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.
- Walker, S.; Price, R.; Rutledge, D. 2005. New Zealand's remaining indigenous vegetation cover: recent changes and biodiversity protection needs. *Landcare Research Contract Report LC0405/038*.