

TIMARU DISTRICT COUNCIL
SIGNIFICANT NATURAL AREAS
SURVEY
McLAUGHLIN PROPERTY
OAKSIDE FARM



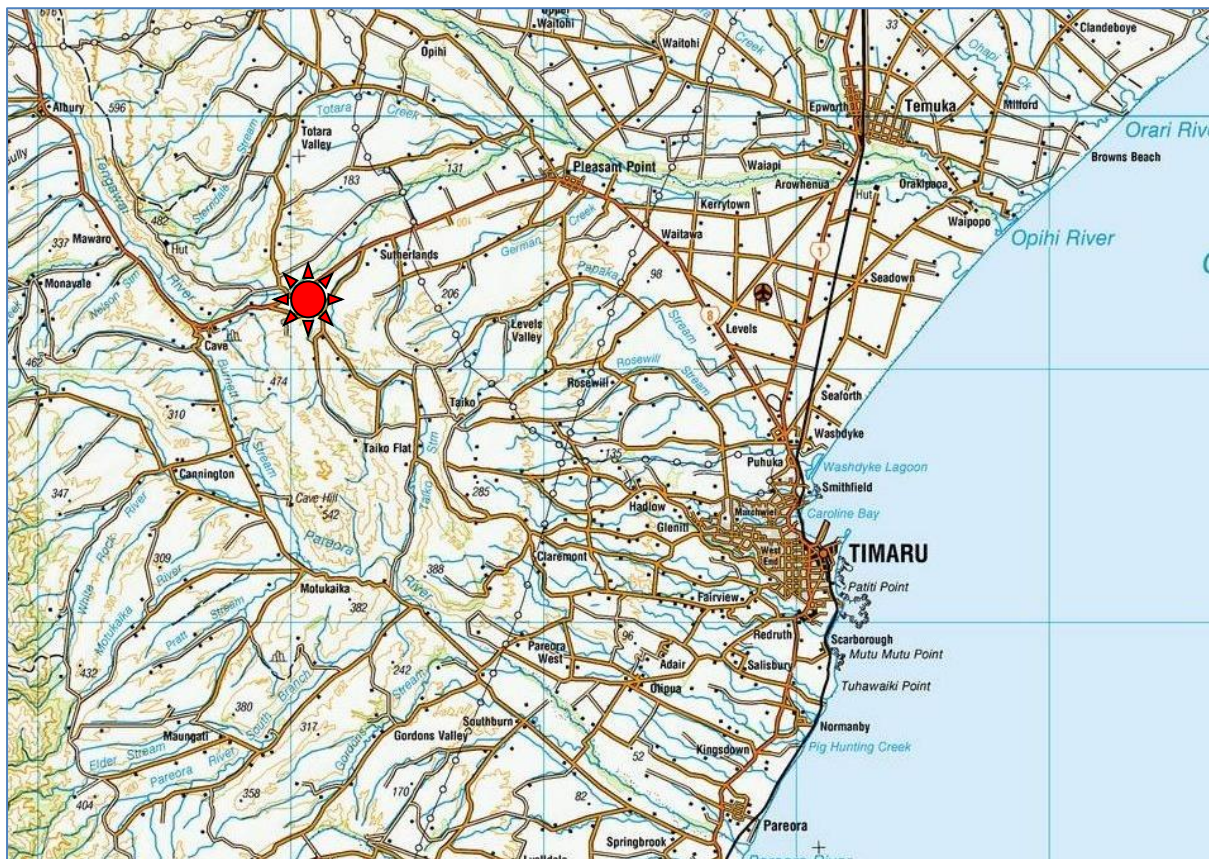
Report prepared for Timaru District Council
Mike Harding
April 2022

TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY PROPERTY REPORT

PROPERTY DETAILS:

Owner: McLaughlin (Oakside Farm)
Valuation Reference: ... 24820-13600
Location:..... Robinson Road, Cave
Ecological District:..... Waimate/Fairlie/Geraldine
Land Environments:..... N3.1a and L1.2b

LOCATION AND DESCRIPTION:



Location of Oakside Farm (red star).

Oakside Farm is located on low hill country and river terraces between Robinson Road, Davidson Road and the Pleasant Point Cave Highway, east of Cave. Underlying geology is calcareous sandstone, siltstone and mudstone with limestone and conglomerate (GNS Science, NZ Geology Web Map.). The surface geology is predominantly silt (loess). The north side of the property drains to the Tengawai River; the south side is in the catchment of Robinsons Road Creek.

ECOLOGICAL CONTEXT:

The property lies on the boundary of the Waimate, Fairlie and Geraldine ecological districts, within Pareora Ecological Region (McEwen, 1987). The south part of the property lies within the

N3.1a, and the north (river terrace) part in the L1.2b, Level IV Land Environments as defined by Leathwick *et al* (2003).

It is likely that the original vegetation of this area was predominantly podocarp-broadleaved forest, dominated by matai, totara, kowhai, broadleaf and other broadleaved trees. Shrubland, scrub, treeland and tussockland would have occupied steeper slopes and disturbed sites. Poorly-drained valley floors would have supported areas of wetland vegetation.

Today the original forest cover in this part of these ecological districts is largely confined to remnants in gullies or on steep slopes associated with rock outcrops. 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.

SURVEY METHOD AND COVERAGE:

The field survey upon which this report is based was undertaken over two hours on 7th April 2022. The purpose of the field survey was to determine the presence and extent of significant indigenous vegetation and significant habitats of indigenous fauna.

Names of indigenous plant species cited in this report are as listed on the Ngā Tipu o Aotearoa-New Zealand Plants database (Manaaki Whenua-Landcare Research). Plant community names follow the method proposed by Atkinson (1985). The threat status of indigenous species is as listed in the most recent publications of the Department of Conservation, referenced in this report.

SIGNIFICANT NATURAL AREAS ON THE PROPERTY:

Four separate areas are assessed as significant natural areas (SNAs) under the Timaru District Plan and Canterbury Regional Policy Statement (RPS) criteria, as listed below.

SNA No.	Central Map Reference (NZTM)	Aprox. size(ha)	Vegetation/habitat type
974	1441625-5093090	1.09	shrubland; treeland
975	1441565-5092930	0.41	treeland
976	1439625-5092545	0.56	treeland
977	1439825-5092635	0.08	shrubland

These SNAs are illustrated on the aerial photographs below and described in greater detail on the SNA Survey Forms in this report. Exotic (naturalised) species in these descriptions are indicated with an asterisk*. A list of all species observed is presented at the end of this report.

ASSESSMENT OF ECOLOGICAL SIGNIFICANCE:

The four SNAs are assessed together here because the characteristics for which they are ecologically significant are the same; that is, indigenous vegetation/habitat that has been reduced to less than 20% of its former extent in the ecological district. Additional ecological values are noted in the individual SNA descriptions.

Significant Natural Areas (SNAs) are determined by assessing indigenous vegetation and habitats of indigenous fauna against the criteria in Appendix 3 of the Canterbury Regional Policy Statement (RPS), with reference to guidelines for application of these criteria (Wildlands, 2013); and by criteria in the Timaru District Plan, with reference to assessment guidelines (Harding, 2012).

Assessment against Canterbury Regional Policy Statement Appendix 3 criteria:

Criteria	Yes/No Rank	Assessment
Representativeness	Yes M	1. Indigenous vegetation that is typical of the natural diversity of the ecological district. A degraded example, but one of few that remain in this part of the ecological district.
Rarity/Distinctiveness	Yes H	3. Indigenous vegetation/habitat that has been reduced to less than 20% of its former extent in the ecological district.
Diversity and Pattern	No L	7. A low diversity of indigenous ecosystems, habitat types, or taxa.
Ecological Context	No	Not known to provide an important contribution to linkages, networks or ecological functioning.

Assessment against Timaru District Plan Part B criteria:

Primary Criteria	Rank	Assessment
Representativeness	M	A depleted example of indigenous vegetation which is typical of that remaining in the ecological district.
Rarity	M	The area supports indigenous vegetation that is now rare in the ecological district.
Diversity and Pattern	L/M	A low diversity of species, habitats or communities.
Distinctiveness/Special Features	L	The area does not support species at distributional limits, and is not known to provide important habitat for indigenous fauna, or support any special features.
Other Criteria		
Size/Shape	L/M	The area is small, but partly buffered.
Connectivity	M	The area is isolated from other areas of indigenous vegetation/habitat but is part of a network of fauna habitat.
Sustainability	M	The area is modified, but the indigenous vegetation appears resilient.

Selecting boundaries for SNAs can be problematic, as vegetation boundaries are not precise (plant communities frequently grade from one type to another) and habitats of indigenous fauna are not easily determined through brief site surveys. In these assessments the SNA boundaries are drawn to encompass the main area of indigenous shrubland or treeland. The SNAs include areas of grassland and exclude isolated indigenous shrubs or trees.



Oakside Farm SNAs 974 and 975 (white-hatched areas).



Oakside Farm SNAs 976 and 977 (white-hatched areas).

TIMARU DISTRICT SNA SURVEY**SNA 974**

Ecological District: Waimate	Nearest Locality: Cave	
Map ref. (NZTM): 1441625E-5093090N	Size (ha): 1.09	Altitude (m): 160
Surveyor/Assessor: Mike Harding	Survey Time: ½ hour	Survey Date: 07-04-22

GENERAL DESCRIPTION:

This SNA comprises patches of indigenous shrubland and treeland alongside Robinsons Road Creek.



Indigenous shrubland and treeland at SNA 974.

VEGETATION/HABITAT TYPES:**Vegetation**

Indigenous woody species present at the site are ti/cabbage tree (*Cordyline australis*), mingimingi (*Coprosma propinqua*), native broom (*Carmichaelia australis*), matagouri (*Discaria toumatou*) and scrub pohuehue (*Muehlenbeckia complexa*). Other indigenous species are *Juncus distegus*, harebell (*Wahlenbergia gracilis*), silver tussock (*Poa cita*), bristle tussock (*Rytidosperma clavatum*), necklace fern (*Asplenium flabellifolium*), *Dichondra brevifolia* agg. and the moss *Hypnum cupressiforme*.

Other woody species present area a single North Island kowhai tree (*Sophora tetrapetala*), a single ash* tree (*Fraxinus excelsor*) and gorse* (*Ulex europaeus*) (mostly sprayed). Vegetation between the trees and shrubs is dominated by pasture grasses, except on the terrace edge where bristle tussock is common. Exotic species include nodding thistle* (*Carduus nutans*), Californian thistle* (*Cirsium arvense*), black nightshade* (*Solanum nigrum*), horehound* (*Marrubium vulgare*) and woolly mullein* (*Verbascum thapsus*).

Habitats of Indigenous Fauna

Native bird species observed at or adjacent to the SNA during this brief survey were grey warbler (*Gerygone igata*), harrier (*Circus approximans*) and spur-winged plover (*Vanellus miles*).

RARE/NOTABLE SPECIES, HABITATS OR COMMUNITIES:

The Level IV Land Environment (N3.1a) in which this SNA lies is an ‘acutely threatened’ land environment, with less than 10% of indigenous cover remaining nationally (Cieraad *et al*, 2015). Indigenous vegetation cover has been reduced to less than 20% of its former extent in Waimate Ecological District.

The following plant species listed as ‘at risk’ by de Lange *et al* (2018) are present at the site:

- *Discaria toumatou* (matagouri)at risk (declining)
- *Juncus distegus* (a rush).....at risk (naturally uncommon)

CONDITION AND MANAGEMENT:

This area of indigenous vegetation is in moderate condition. It is buffered by the steeper slopes of the small valley within which it is located. It does not appear to be intensively grazed and there is some regeneration of indigenous shrubs. Gorse is the only notable plant pest present, though most bushes are dead. The kowhai tree is a North Island kowhai, though it does not appear to be spreading at this site.

Management priorities are the continued careful control of gorse and avoidance of intensive grazing. However, if gorse was not controlled it may, over the long-term, assist with regeneration of indigenous vegetation. Palatable shrubs (notably native broom) and cabbage tree trunks would suffer if the area was intensively grazed, especially by cattle.



Native broom at SNA 974.

TIMARU DISTRICT SNA SURVEY**SNA 975**

Ecological District: Waimate	Nearest Locality: Cave	
Map ref. (NZTM): 1441565E-5092930N	Size (ha): 0.41	Altitude (m): 160
Surveyor/Assessor: Mike Harding	Survey Time: ½ hour	Survey Date: 07-04-22

GENERAL DESCRIPTION:

This SNA comprises a small area of indigenous treeland alongside Robinsons Road Creek, and just upstream from SNA 974.



Indigenous treeland at SNA 975.

VEGETATION/HABITAT TYPES:**Vegetation**

Indigenous woody species present at the site are ti/cabbage tree (*Cordyline australis*), mingimingi (*Coprosma propinqua*), native broom (*Carmichaelia australis*) and matagouri (*Discaria toumatou*). Silver tussock (*Poa cita*) is also present. Vegetation between the trees and shrubs is dominated by pasture grasses, with Californian thistle* (*Cirsium arvense*), a single crack willow* tree (*Salix fragilis*) and gorse* (*Ulex europaeus*) (mostly sprayed).

Habitats of Indigenous Fauna

Native bird species observed at or adjacent to the SNA during this brief survey were grey warbler (*Gerygone igata*), harrier (*Circus approximans*) and spur-winged plover (*Vanellus miles*).

RARE/NOTABLE SPECIES, HABITATS OR COMMUNITIES:

The Level IV Land Environment (N3.1a) in which this SNA lies is an ‘acutely threatened’ land environment, with less than 10% of indigenous cover remaining nationally (Cieraad *et al*, 2015). Indigenous vegetation cover has been reduced to less than 20% of its former extent in Waimate Ecological District.

The following plant species listed as ‘at risk’ by de Lange *et al* (2018) is present at the site:

- *Discaria toumatou* (matagouri)at risk (declining)

CONDITION AND MANAGEMENT:

This area of indigenous vegetation is in moderate condition. It is buffered by the steeper slopes of the small valley within which it is located. It does not appear to be intensively grazed and gorse is the only notable plant pest present.

Management priorities are the continued careful control of gorse and avoidance of intensive grazing. However, if gorse was not controlled it may, over the long-term, assist with regeneration of indigenous vegetation. Palatable shrubs (notably native broom) and cabbage tree trunks would suffer if the area was intensively grazed, especially by cattle.



Indigenous treeland at SNA 975.

TIMARU DISTRICT SNA SURVEY

SNA 976

Ecological District: Geraldine	Nearest Locality: Cave	
Map ref. (NZTM): 1439625-5092545N	Size (ha): 0.56	Altitude (m): 160
Surveyor/Assessor: Mike Harding	Survey Time: ½ hour	Survey Date: 07-04-22

GENERAL DESCRIPTION:

This SNA comprises a moderate-sized area of indigenous treeland on the valley floor and adjacent scarp near the property boundary at the Pleasant Point Cave Highway.



Indigenous treeland at SNA 976, viewed from the Pleasant Point Cave Highway.

VEGETATION/HABITAT TYPES:**Vegetation**

Indigenous woody species present at the site are ti/cabbage tree (*Cordyline australis*), matagouri (*Discaria toumatou*) and scrub pohuehue (*Muehlenbeckia complexa*). Other indigenous species are bristle tussock (*Rytidosperma clavatum*), harebell (*Wahlenbergia gracilis*), *Crassula* sp. and, at a small seepage, raupo (*Typha orientalis*) and rautahi (*Carex coriacea*).

Vegetation between the trees and shrubs is dominated by pasture grasses, with tall trees of Lombardy poplar (*Populus nigra*). Other exotic species are elder* (*Sambucus nigra*), Californian thistle* (*Cirsium arvense*), nodding thistle* (*Carduus nutans*), dwarf mallow* (*Malva neglecta*), woolly mullein* (*Verbascum thapsus*), black nightshade* (*Solanum nigrum*), yarrow* (*Achillea millefolium*) and stoncrop* (*Sedum acre*).

Habitats of Indigenous Fauna

Native bird species observed at or adjacent to the SNA during this brief survey were grey warbler (*Gerygone igata*), harrier (*Circus approximans*) and spur-winged plover (*Vanellus miles*).

RARE/NOTABLE SPECIES, HABITATS OR COMMUNITIES:

The Level IV Land Environment (N3.1a) in which this SNA lies is an ‘acutely threatened’ land environment, with less than 10% of indigenous cover remaining nationally (Cieraad *et al*, 2015). Indigenous vegetation cover has been reduced to less than 20% of its former extent in Geraldine Ecological District.

The following plant species listed as ‘at risk’ by de Lange *et al* (2018) is present at the site:

- *Discaria toumatou* (matagouri)at risk (declining)

CONDITION AND MANAGEMENT:

This area of indigenous vegetation is in moderate condition. It is buffered by the adjacent scarp and does not appear to be intensively grazed. It includes a very small seepage wetland. Lombardy poplar trees are dominant.

The management priority is the avoidance of intensive grazing. Cabbage tree trunks would suffer if the area was intensively grazed, especially by cattle. Removal of the Lombardy poplar trees would improve the ecological integrity of the site.



Cabbage tree treeland at SNA 976.

TIMARU DISTRICT SNA SURVEY**SNA 977**

Ecological District: Geraldine	Nearest Locality: Cave	
Map ref. (NZTM): 1439825E-5092635N	Size (ha): 0.08	Altitude (m): 160
Surveyor/Assessor: Mike Harding	Survey Time: ½ hour	Survey Date: 07-04-22

GENERAL DESCRIPTION:

This SNA comprises a very small area of indigenous shrubland in a small depression at the upper edge of a terrace riser (scarp), near the property boundary at the Pleasant Point Cave Highway.



Indigenous shrubland at SNA 977.

VEGETATION/HABITAT TYPES:**Vegetation**

Indigenous woody species present at the site are ti/cabbage tree (*Cordyline australis*), mingimingi (*Coprosma propinqua*), matagouri (*Discaria toumatou*) and native broom (*Carmichaelia australis*). Other species present are Lombardy poplar (*Populus nigra*) Californian thistle* (*Cirsium arvense*), nodding thistle* (*Carduus nutans*) and nettle* (*Urtica urens*). Vegetation between the trees and shrubs is dominated by pasture grasses.

Habitats of Indigenous Fauna

Native bird species observed at or adjacent to the SNA during this brief survey were grey warbler (*Gerygone igata*), harrier (*Circus approximans*) and spur-winged plover (*Vanellus miles*).

RARE/NOTABLE SPECIES, HABITATS OR COMMUNITIES:

The Level IV Land Environment (N3.1a) in which this SNA lies is an ‘acutely threatened’ land environment, with less than 10% of indigenous cover remaining nationally (Cieraad *et al*, 2015). Indigenous vegetation cover has been reduced to less than 20% of its former extent in Waimate Ecological District.

The following plant species listed as ‘at risk’ by de Lange *et al* (2018) is present at the site:

- *Discaria toumatou* (matagouri)at risk (declining)

CONDITION AND MANAGEMENT:

This area of indigenous vegetation is in moderate condition. It is buffered by its location in a small gully and does not appear to be intensively grazed. The management priority is the avoidance of intensive grazing. Native broom shrubs and cabbage tree trunks would suffer if the area was intensively grazed, especially by cattle. Removal of the Lombardy poplar trees would improve the ecological integrity of the site.



Indigenous shrubland at SNA 977.

Species List: SNAs 974, 975, 976 and 977

Species' scientific names are as listed in the Manaaki Whenua/Landcare Research Nga Tipu o Aotearoa New Zealand Plants database.

Indigenous Plant Species

Trees, shrubs, sub-shrubs, lianes (woody plants)

Carmichaelia australis	native broom	m
Coprosma propinqua	mingimingi	c
Cordyline australis	cabbage tree/ti rakau	c
Discaria toumatou	matagouri	m
Muehlenbeckia complexa	scrub pohuehue	o

Ferns and Fern Allies

Asplenium flabellifolium	necklace fern	r
--------------------------------	---------------------	---

Herbaceous (non-woody) plants

Carex coriacea	rautahi	lm
Crassula sp.	o
Dichondra brevifolia agg.	r
Juncus distegus	a rush	o
Poa cita	silver tussock	o
Rytidosperma clavatum	bristle tussock	lm
Typha orientalis	raupo	r
Wahlenbergia gracilis	harebell	o

Mosses and lichens

Hypnum cupressiforme	a moss	o
----------------------------	--------------	---

Naturalised (exotic) Plant Species

Achillea millefolium	yarrow	o
Carduus nutans	nodding thistle	o
Cirsium arvense	Californian thistle	lc
Malva neglecta	dwarf mallow	o
Marrubium vulgare	horehound	o
Populus nigra	Lombardy poplar	m
Salix fragilis	crack willow	r
Sambucus nigra	elderberry	r
Sedum acre	stonecrop	r
Solanum nigrum	black nightshade	o
Sophora tetrapetala	North Island kowhai	r
Ulex europaeus	gorse	m
Urtica urens	nettle	o
Verbascum thapsus	woolly mullein	o

Bird Species

Circus approximans	harrier	o
Gerygone igata	grey warbler	o
Vanellus miles	spur-winged plover	a

REFERENCES CITED:

Atkinson, I.E.A. 1985. Derivation of mapping units for an ecological survey of Tongariro National Park, North Island, New Zealand. *NZ Journal of Botany* 23: 361-378.

de Lange, P.J; Rolfe, J.R; Barkla, J.W; Courtney, S.P; Champion, P.D; Perrie, L.R.; Beadel, S.M.; Ford, K.A.; Breitweiser, I.; Schönberger, I.; Hindmarsh-Walls, R.; Heenan, P.B; Ladley, K. 2018. *Conservation status of New Zealand indigenous vascular plants, 2017*. Department of Conservation, Wellington, New Zealand.

Harding, M.A. 2012. Survey and assessment of significant natural areas (SNAs) Timaru District: Guidelines for application of the District Plan criteria. *Unpublished Report*, Timaru District Council. 10p.

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.

McEwen, W.M. (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.

Wildlands. 2013. Guidelines for the application of ecological significance criteria for indigenous vegetation and habitats of indigenous fauna in Canterbury Region. *Contract Report 2289i*. Environment Canterbury, Christchurch.