

TIMARU DISTRICT COUNCIL
SIGNIFICANT NATURAL AREAS
SURVEY
CURRIE PROPERTY



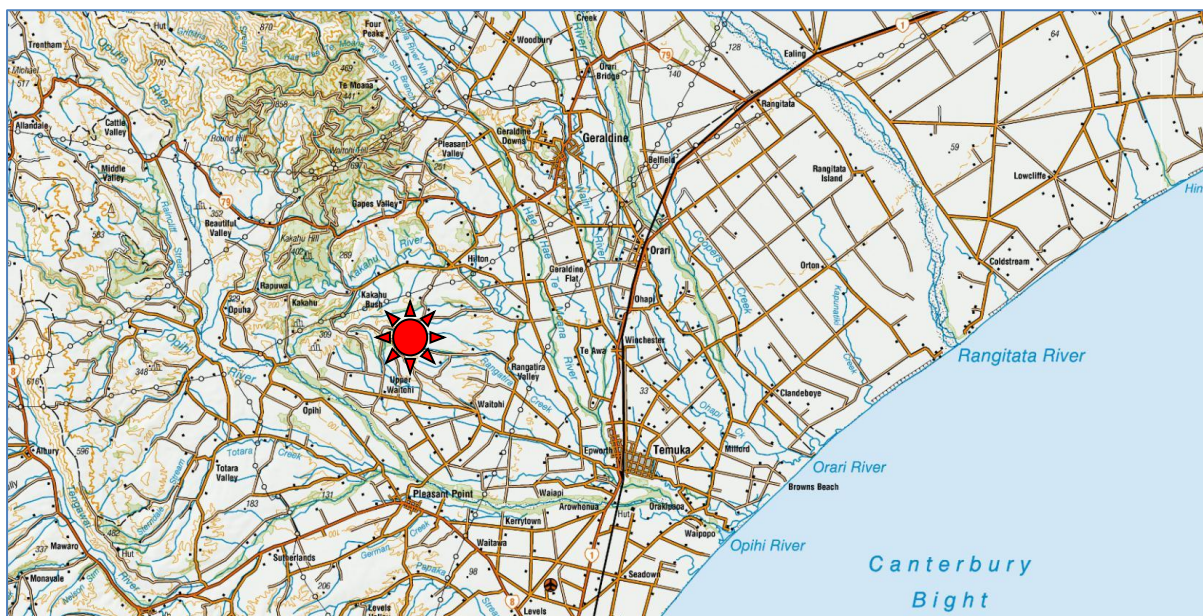
Report prepared for Timaru District Council
Mike Harding
April 2022

TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY PROPERTY REPORT

PROPERTY DETAILS:

Owner: Currie
Valuation Reference: ... 24680-00200
Location:..... Rangatira Valley Road, Waitohi
Ecological District:..... Geraldine
Land Environment: N3.1a

LOCATION AND DESCRIPTION:



Location of Oakside Property (red star).

The Currie property is located on low hill country between the Opihi and Te Moana rivers, between Pleasant Point and Geraldine. The property is at the west end of Rangatira Valley Road and near to Waitohi Reserve. Underlying geology is claystone, siltstone and sandstone at the west part of the property, and weathered gravel, sand and silt at the east part (GNS Science, NZ Geology Web Map.). The surface geology is predominantly silt (loess). Small streams on the property drain to Rangatira Creek, which is a tributary of the Temuka River.

ECOLOGICAL CONTEXT:

The property lies in the Geraldine Ecological District, within Pareora Ecological Region (McEwen, 1987), and within the N3.1a Level IV Land Environment 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 the ecological district 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 four hours on 8th 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:

Seven 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
978	1451380-5106450	0.55	kanuka forest
979	1451650-5106780	0.45	kanuka forest
980	1451925-5106835	3.34	kanuka forest
981	1451170-5106910	0.44	broadleaved forest
982	1450585-5106485	0.65	kanuka forest
983	1451210-5106145	0.41	broadleaved forest
984	1451775-5106055	1.72	kanuka forest

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 seven 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.

The Level IV Land Environment (N3.1a) in which the SNAs lie 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.

All seven SNAs support kanuka, which is a species listed as ‘threatened’ (nationally vulnerable) by de Lange *et al* (2018). However, this listing results from the threat posed by myrtle rust, and has the qualifiers DP (data poor) and/or De (taxon that does not fit within the criteria; designated to most appropriate listing). Other 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, although modified/degraded.
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 forest. The SNAs include small areas of grassland between forest patches but exclude isolated indigenous trees and shrubs.

Native bird species observed at or adjacent to these SNAs during this brief survey were bellbird (*Anthornis melanura*), fantail (*Rhipidura fuliginosa*), grey warbler (*Gerygone igata*), harrier (*Circus approximans*), paradise shelduck (*Tadorna variegata*) and spur-winged plover (*Vanellus miles*).



Currie Property SNAs 978, 983 and 984 (white-hatched areas).



Currie Property SNAs 979, 980 and 981 (white-hatched area).



Currie Property SNAs 978, 982 and 983 (white-hatched areas).

TIMARU DISTRICT SNA SURVEY**SNA 978**

Ecological District: Geraldine	Nearest Locality: Waitohi	
Map ref. (NZTM): 1451380E-5106450N	Size (ha): 0.55	Altitude (m): 180
Surveyor/Assessor: Mike Harding	Survey Time: ½ hour	Survey Date: 08-04-22

GENERAL DESCRIPTION:

This SNA comprises a patch of kanuka forest on the moderately-steep slope of a small gully.



SNA 978.

VEGETATION/HABITAT TYPES:

The canopy of this forest patch is kanuka (*Kunzea ericoides* agg.), with a single mahoe (*Meliccytus ramiflorus*). Other indigenous species are scrub pohuehue (*Muehlenbeckia complexa*), poroporo (*Solanum laciniatum*) and necklace fern (*Asplenium flabellifolium*).

Vegetation between the trees is dominated by pasture grasses. Other exotic species include gorse* (*Ulex europaeus*), black nightshade* (*Solanum nigrum*), foxglove* (*Digitalis purpurea*), Californian thistle* (*Cirsium arvense*), creeping buttercup* (*Ranunculus repens*) and broad-leaved dock* (*Rumex obtusifolius*).

CONDITION AND MANAGEMENT:

Canopy trees in this forest patch appear in good condition. Understorey vegetation is affected by cattle grazing. The forest-floor is grassland.

Recommended management for protection of ecological values is exclusion of grazing animals, especially cattle, and continued control of gorse.

TIMARU DISTRICT SNA SURVEY**SNA 979**

Ecological District: Geraldine	Nearest Locality: Waitohi	
Map ref. (NZTM): 1451650E-5106780N	Size (ha): 0.45	Altitude (m): 150
Surveyor/Assessor: Mike Harding	Survey Time: ½ hour	Survey Date: 08-04-22

GENERAL DESCRIPTION:

This SNA comprises a small patch of kanuka forest alongside a stream on the valley floor.



SNA 979.

VEGETATION/HABITAT TYPES:

The canopy of this forest patch is kanuka (*Kunzea ericoides* agg.), with ti/cabbage tree (*Cordyline australis*). Other indigenous species are kohuhu (*Pittosporum tenuifolium*), pohuehue (*Muehlenbeckia australis*) and the moss *Hypnum cupressiforme*.

Vegetation between the trees and shrubs is dominated by pasture grasses. Other exotic species are gorse* (*Ulex europaeus*), black nightshade* (*Solanum nigrum*), Californian thistle* (*Cirsium arvense*), shepherd's purse* (*Capsella bursa-pastoris*) and creeping buttercup* (*Ranunculus repens*). A patch of soft rush* (*Juncus effusus*) is present on adjacent damp slopes.

CONDITION AND MANAGEMENT:

Canopy trees in this forest patch are in good condition. Understorey and forest-floor vegetation is affected by cattle grazing and trampling. A small stream flows through the site.

Recommended management for protection of ecological values is exclusion of grazing animals, especially cattle, and continued control of gorse.

TIMARU DISTRICT SNA SURVEY

SNA 980

Ecological District: Geraldine	Nearest Locality: Waitohi	
Map ref. (NZTM): 1451925E-5106835N	Size (ha): 3.34	Altitude (m): 140-160
Surveyor/Assessor: Mike Harding	Survey Time: ½ hour	Survey Date: 08-04-22

GENERAL DESCRIPTION:

This SNA comprises a moderate-sized patch of kanuka-broadleaved forest, on a moderately-steep slope.



SNA 980.

VEGETATION/HABITAT TYPES:

The forest canopy is dominated by kanuka (*Kunzea ericoides* agg.). Other canopy or sub-canopy species are mahoe (*Melicactus ramiflorus*), lemonwood (*Pittosporum eugenioides*), kohuhu (*Pittosporum tenuifolium*), five-finger (*Pseudopanax arboreus*), lancewood (*Pseudopanax crassifolius*), ti/cabbage tree (*Cordyline australis*), mapou (*Myrsine australis*), fuchsia (*Fuchsia excorticata*), wineberry (*Aristotelia serrata*), Himalayan honeysuckle* (*Leycesteria formosa*), hawthorn* (*Crataegus monogyna*), pohuehue (*Muehlenbeckia australis*) and native jasmine (*Parsonsia heterophylla*).

The understorey and forest floor are open and bare. Species present are *Coprosma rhamnoides*, mapou, elder* (*Sambucus nigra*), black nightshade* (*Solanum nigrum*), prickly shield fern (*Polystichum vestitum*), necklace fern (*Asplenium flabellifolium*), *Asplenium bookerianum* and male fern* (*Dryopteris filix-mas*).

Additional species at the forest margin are mingimingi (*Coprosma propinqua*), *Coprosma crassifolia*, *Coprosma areolata*, shrubby mahoe (*Melicactus micranthus*), broom* (*Cytisus scoparius*), gorse* (*Ulex europaeus*), poroporo (*Solanum laciniatum*), leafless lawyer (*Rubus squarrosus*), lawyer (*Rubus schmidelioides*), blackberry* (*Rubus fruticosus* agg.), foxglove* (*Digitalis purpurea*), Californian thistle* (*Cirsium arvense*), nodding thistle* (*Carduus nutans*), soft rush* (*Juncus effusus*), bracken (*Pteridium esculentum*), *Hypolepis ambigua*, *Blechnum penna-marina*, *Blechnum fluviatile* and pennywort (*Hydrocotyle heteromeria*).

CONDITION AND MANAGEMENT:

Canopy trees in this forest patch appear in good condition. Understorey and forest-floor vegetation is substantially depleted by cattle grazing and trampling. This SNA has very good potential for restoration. This could be achieved by fencing to exclude grazing animals, and control of woody weeds such as hawthorn.



Depleted forest understorey at SNA 980.



Necklace fern and Asplenium bookerianum at SNA 980.

TIMARU DISTRICT SNA SURVEY**SNA 981**

Ecological District: Geraldine	Nearest Locality: Waitohi	
Map ref. (NZTM): 1451170E-5106910N	Size (ha): 0.44	Altitude (m): 160
Surveyor/Assessor: Mike Harding	Survey Time: ½ hour	Survey Date: 08-04-22

GENERAL DESCRIPTION:

This SNA comprises a small patch of broadleaved-kanuka forest on a moderately-steep slope.



SNA 981.

VEGETATION/HABITAT TYPES:

Canopy species are mahoe (*Melicytus ramiflorus*), lemonwood (*Pittosporum eugenioides*), kanuka (*Kunzea ericoides* agg.), mapou (*Myrsine australis*), ti/cabbage tree (*Cordyline australis*), five-finger (*Pseudopanax arboreus*), *Coprosma areolata* and pohuehue (*Muehlenbeckia australis*). Other species present are *Coprosma crassifolia*, lawyer (*Rubus schmidelioides*), foxglove* (*Digitalis purpurea*), Scotch thistle* (*Cirsium vulgare*), black nightshade* (*Solanum nigrum*) and pennywort (*Hydrocotyle heteromeria*).

CONDITION AND MANAGEMENT:

Canopy trees in this forest patch appear in good condition. Understorey and forest-floor vegetation is depleted by cattle grazing and trampling. Recommended management for protection of ecological values is exclusion of grazing animals, especially cattle.

TIMARU DISTRICT SNA SURVEY**SNA 982**

Ecological District: Geraldine	Nearest Locality: Waitohi	
Map ref. (NZTM): 1450585E-5106485N	Size (ha): 0.65	Altitude (m): 170
Surveyor/Assessor: Mike Harding	Survey Time: ½ hour	Survey Date: 08-04-22

GENERAL DESCRIPTION:

This SNA comprises small patches of kanuka forest on the side of a small valley.



SNA 982.

VEGETATION/HABITAT TYPES:

The forest canopy comprises tall trees of kanuka (*Kunzea ericoides* agg.). Ti/cabbage tree (*Cordyline australis*) is present at the forest margins. Vegetation between the trees and shrubs is dominated by pasture grasses, with poroporo (*Solanum laciniatum*), black nightshade* (*Solanum nigrum*), broom* (*Cytisus scoparius*), gorse* (*Ulex europaeus*), Californian thistle* (*Cirsium arvense*) and soft rush* (*Juncus effusus*).

CONDITION AND MANAGEMENT:

Canopy trees in this forest patch appear in good condition. Understorey vegetation is affected by cattle grazing. The forest-floor is grassland. Recommended management for protection of ecological values is exclusion of grazing animals, especially cattle, and continued control of gorse.

TIMARU DISTRICT SNA SURVEY

SNA 983

Ecological District: Geraldine	Nearest Locality: Waitohi	
Map ref. (NZTM): 1451210E-5106145N	Size (ha): 0.41	Altitude (m): 190
Surveyor/Assessor: Mike Harding	Survey Time: ½ hour	Survey Date: 08-04-22

GENERAL DESCRIPTION:

This SNA comprises a small narrow strip of broadleaved forest, with kanuka at its east end, on a steep slope just south of the farm homestead.



SNA 983.

VEGETATION/HABITAT TYPES:

Canopy species present at the site are ti/cabbage tree (*Cordyline australis*), mahoe (*Melicytus ramiflorus*), kanuka (*Kunzea ericoides* agg.) and pohuehue (*Muehlenbeckia australis*). Vegetation between the trees and shrubs is dominated by pasture grasses.

Other species present are elder* (*Sambucus nigra*), lawyer (*Rubus schmidelioides*), Californian thistle* (*Cirsium arvense*), burdock* (*Arctium minus*), black nightshade* (*Solanum nigrum*), foxglove* (*Digitalis purpureus*), *Hypolepis ambigua*, necklace fern (*Asplenium flabellifolium*) and hairy pennywort (*Hydrocotyle moschata*).

There is a macrocarpa* (*Cupressus macrocarpa*) shelterbelt above the forest patch.

CONDITION AND MANAGEMENT:

Canopy trees in this forest patch appear in good condition. Understorey vegetation is affected by cattle grazing. The forest-floor is grassland. Recommended management for protection of ecological values is exclusion of grazing animals, especially cattle, and continued control of elder.

TIMARU DISTRICT SNA SURVEY**SNA 984**

Ecological District: Geraldine	Nearest Locality: Waitohi	
Map ref. (NZTM): 1451775E-5106055N	Size (ha): 1.72	Altitude (m): 180
Surveyor/Assessor: Mike Harding	Survey Time: ½ hour	Survey Date: 08-04-22

GENERAL DESCRIPTION:

This SNA comprises a moderate-sized patch of kanuka forest on the valley side east of the farm homestead.



SNA 984.

VEGETATION/HABITAT TYPES:

Canopy species present at the site are kanuka (*Kunzea ericoides* agg.), mahoe (*Melicactus ramiflorus*), ti/cabbage tree (*Cordyline australis*) and five-finger (*Pseudopanax arboreus*). Additional species at the forest margin are lawyer (*Rubus schmidelioides*), elder* (*Sambucus nigra*) and barberry* (*Berberis glaucocarpa*). The forest understorey is open and bare. Elsewhere, vegetation between the trees and shrubs is dominated by pasture grasses.

Other species present are poroporo (*Solanum laciniatum*), gorse* (*Ulex europaeus*), foxglove* (*Digitalis purpureus*), black nightshade* (*Solanum nigrum*), Californian thistle* (*Cirsium arvense*), nodding thistle* (*Carduus nutans*), creeping buttercup* (*Ranunculus repens*), common shield fern (*Polystichum neozelandicum*) and hairy pennywort (*Hydrocotyle moschata*).

CONDITION AND MANAGEMENT:

Canopy trees in this forest patch appear in good condition. Understorey and forest-floor vegetation is depleted by cattle grazing and trampling. Recommended management for protection of ecological values is exclusion of grazing animals, especially cattle, and control of woody weeds. Control of barberry is especially important, as this species has fleshy fruits dispersed by birds, thereby threatening other nearby areas of indigenous vegetation.

Species List: SNAs 978 to 984

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

Indigenous Plant Species

Scientific name	Common name	Abundance
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Trees, shrubs, sub-shrubs, lianes (woody plants)

Aristotelia serrata	wineberry	r
Coprosma areolata		lm
Coprosma crassifolia		lc
Coprosma propinqua	mingimingi	o
Coprosma rhamnoides		lm
Cordyline australis	cabbage tree/ti rakau	c
Fuchsia excorticata	fuchsia	lm
Kunzea ericoides agg.	kanuka	lf
Melicytus micranthus	shrubby mahoe.....	r
Melicytus ramiflorus	mahoe/whiteywood.....	lc
Muehlenbeckia australis	pohuehue	o
Muehlenbeckia complexa	scrub pohuehue.....	o
Myrsine australis	mapou.....	lc
Parsonsia heterophylla	native jasmine.....	o
Pittosporum eugenioides	lemonwood.....	o
Pittosporum tenuifolium	matipo/kohuhu.....	r
Pseudopanax arboreus	five-finger.....	o
Pseudopanax crassifolius	lancewood.....	o
Rubus schmidelioides	lawyer.....	o
Rubus squarrosus	leafless lawyer.....	o
Solanum laciniatum	poroporo.....	m

Ferns and Fern Allies

Asplenium flabellifolium	necklace fern.....	o
Asplenium hookerianum.....		lm
Blechnum fluviatile		o
Blechnum penna-marina.....	little hard fern.....	o
Hypolepis ambigua		lc
Polystichum neozelandicum.....	common shield fern	r
Polystichum vestitum	prickly shield fern	r
Pteridium esculentum	bracken	o

Herbaceous (non-woody) plants

Hydrocotyle heteromeria.....	pennywort.....	lm
Hydrocotyle moschata	hairy pennywort.....	o
Lemna minor	duckweed	r

Naturalised (exotic) Plant Species

Arctium minus	burdock	r
Berberis glaucocarpa	barberry	lm
Capsella bursa-pastoris	shepherd's purse	o
Carduus nutans	nodding thistle	o
Cirsium arvense	Californian thistle	lm

Crataegus monogyna	hawthorn.....	r
Cytisus scoparius	broom.....	r
Digitalis purpurea	foxglove.....	o
Dryopteris filix-mas	male fern	r
Juncus effusus	soft rush	lm
Leycesteria formosa	Himalayan honeysuckle	o
Ranunculus repens	creeping buttercup.....	lm
Rumex obtusifolius	broad-leaved dock	o
Sambucus nigra	elderberry	o
Ulex europaeus	gorse.....	m

Bird Species

Anthornis melanura	bellbird	o
Circus approximans	harrier	o
Gerygone igata	grey warbler	o
Rhipidura fuliginosa	fantail	o
Tadorna variegata	paradise shelduck	
Vanellus miles	spur-winged plover.....	a

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