

**TIMARU DISTRICT
SIGNIFICANT NATURAL AREAS
SURVEY**

LOOMES PROPERTY



**Report prepared for Timaru District Council by Mike Harding
August 2011**

TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

PROPERTY REPORT

PROPERTY DETAILS:

Owner: GR and K Loomes
Valuation References: 24820/103.00
Address: Limestone Valley Road.
Location: On the southwest side of Limestone Valley, west of Taiko Flat.
Ecological District: Waimate Ecological District.
TDC Land Type: 'Hard Rock Hills and Downs'
Land Environment: N3 (eastern South Island undulating plains and hills).

ECOLOGICAL CONTEXT:

The property covers moderately steep slopes between 200 and 500m on the range northwest of Cave Hill, on the southwest flanks of Limestone Valley. The property lies in Waimate Ecological District.

It is likely that the original vegetation of this area was predominantly podocarp-hardwood forest, dominated by matai and totara. Shrubland, treeland and tussockland may have occupied steeper slopes and disturbed sites. Rock bluffs supported specialised flora, and riparian areas supported wetland vegetation and mixed hardwood forest dominated by kowhai.

Today the original forest cover of Waimate Ecological District, within Timaru District, is largely confined to remnants in gullies on Cave Hill and Mt Horrible (including Claremont Scenic Reserve), and on basalt and limestone slopes in the Taiko and Limestone valleys. 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 hardwood forest, shrubland/scrub and sparse rockland vegetation on steeper slopes. The property lies near to areas of forest and shrubland on adjoining properties, contributing to the network of fauna habitat in the wider area.

The property was surveyed as part of the District-wide survey of Significant Natural Areas during August 2011. Most parts of the property were surveyed. Four areas, comprising approximately 13 hectares, are regarded as Significant Natural Areas (SNAs) when assessed against the District Plan criteria. These SNAs are listed in the table below.

Area No.	Area Name	Central grid reference	Aprox. size (ha)	Vegetation/habitat type
477a	Middle Tussock	J39: 506-493	3.07	Scrub and treeland
477b	Last Tussock Face	J39: 509-490	5.99	Scrub and treeland
477c	Goose Pond	J39: 511-497	2.72	Hardwood forest and scrub
477d	Bush Gully	J38: 505-510	1.64	Hardwood forest and scrub

These SNAs are illustrated on the attached aerial photograph and described in greater detail on the SNA Forms in this report. Note that the boundaries of the SNAs are indicative, rather than precise. These areas meet the ecological criteria in the Timaru District Plan (criteria i-vi, pages B18-B19) and are 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, spraying with herbicides and over-planting. SNAs encompass most, but not necessarily all, areas of vegetation and habitat which meet the Interim Definitions.

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.

OTHER AREAS INSPECTED ON THE PROPERTY:

Other areas on the property were inspected but are not significant when assessed against the District Plan criteria. Areas worth noting are the relatively extensive areas of indigenous scrub and shrubland, often with scattered emergent hardwood trees, on the steeper slopes adjacent to the SNAs. These areas will eventually regenerate, and perhaps become more important for nature conservation and biodiversity protection, if protected from clearance and other disturbance.



Loomes Property
24820/103.00

477d

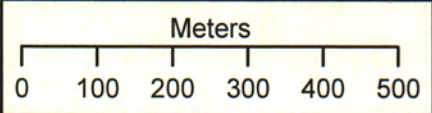
477c

477a

477b

Wisely Road

WINDYBUSH ROAD



1:10,000

Area Name: Middle Tussock

Location (central map reference): J39: 506-493

Ecological District: Waimate

Surveyors: Mike Harding

Property: GR and K Loomes

Nearest Locality: Taiko Flat

Area Size (ha): 3.07

Altitude (m): 400-450

Survey Time: 1½ hours **Survey Date:** 02-08-11

General Description:

This SNA lies on steep rocky northeast-facing slopes at the head of a small valley near the southern corner of the property. Part of the area occupies rocky outcrops.

Plant Communities:

Two main plant communities are present: scrub/low forest and rockland. These plant communities are described below. Naturalized (exotic) species are indicated with an asterisk*.

Most parts of the area are dominated by scrub with emergent hardwood trees. The scrub canopy is dominated by *Coprosma crassifolia* and *Coprosma propinqua*. Other canopy species are matagouri, native broom, kowhai saplings, gorse* (uncommon), pohuehue, scrub pohuehue, lawyer, bush lawyer and native convolvulus.

Trees emergent from the scrub canopy are kowhai, cabbage tree and occasionally mahoe and broadleaf.

Understorey and ground-cover species present within the scrub are necklace fern, button fern, *Einadia allanii*, *Dichondra repens*, *Leptinella* sp., black nightshade* and seedlings of *Coprosma* species.

Species present at the scrub margin are *Coprosma virescens*, mapou, *Clematis marata*, silver tussock, blue tussock, bracken, Scotch thistle*, woolly mullein* and occasionally narrow-leaved snow-tussock.

Plant species present at rocky sites are patotara, *Einadia allanii*, toatoa, *Vittadinia australis*, woolly mullein*, mouse-ear chickweed*, hawksbeard*, toatoa, *Dichondra repens*, *Crassula* sp., necklace fern, *Asplenium appendiculatum*, common shield fern, hound's tongue fern, *Cheilanthes humilis*, cocksfoot*, plume grass and danthonia (*Rytidosperma* sp).

Birds/Fauna Observed:

Native birds observed during this brief survey were grey warbler, silvereye, bellbird, spur-winged plover and paradise shelduck.

Notable Flora, Fauna and Habitats:

Important features of this area are the presence of representative indigenous vegetation on rocky outcrops, three locally uncommon plant species (*Cheilanthes humilis*, *Coprosma virescens* and *Vittadinia australis*), emergent hardwood trees, the habitat the area provides for forest birds and the extent of the area.

Notable Plant and Animal Pests:

Gorse was the only woody plant pest observed. It is not common and does not pose a significant threat to the scrub, though does threaten rock-bluff vegetation. Animal pests were not surveyed.

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

This area is part of a larger grazed paddock. It is buffered to some extent by its location on steep rocky slopes. It lies near to other stands of scrub and hardwood trees and is connected to those areas by scattered shrubland.

Condition and Management Issues:

The rock-bluff vegetation is in relatively good condition. The surrounding scrub communities represent indigenous vegetation that is regenerating following earlier disturbance. However, this regeneration is relatively advanced and supports emergent hardwood trees, notably kowhai. The condition of this indigenous plant community will improve if protected from clearance and intensive grazing.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	L/M	Regenerating indigenous vegetation representative of seral plant communities in the ecological district.
Rarity	L/M	Three locally-uncommon plant species are present.
Diversity and pattern	M	Rockland plant communities make this area more diverse than other indigenous plant communities in the area.
Distinctiveness/special features	M	The abundance of kowhai, including kowhai saplings, is a special feature and provides an important seasonal food resource for native birds.
Other Criteria		
Size/shape	M	A relatively small area but with a good shape and well buffered.
Connectivity		Linked to other areas by scattered shrubland and lies close to other areas, providing a network of forest bird habitat.
Long-term Sustainability	M	Ecological values of the area are likely to continue to improve, provided the area is protected from plant and animal pests and intensive grazing.

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

This area of regenerating indigenous vegetation occupies steep slopes that have limited potential for further farm development.

Discussion:

This area just meets the District Plan criteria for a Significant Natural Area. Important features of the area are the presence of representative indigenous vegetation on rocky outcrops, locally uncommon plant species, emergent hardwood trees, the habitat the area provides for forest birds and the extent of the area.



SNA 477a

TIMARU DISTRICT SNA SURVEY

SNA 477b

Area Name: Last Tussock Face

Location (central map reference): J39: 509-490

Ecological District: Waimate

Surveyors: Mike Harding

Property: GR and K Loomes

Nearest Locality: Taiko Flat

Area Size (ha): 5.99

Altitude (m): 360-440

Survey Time: 1 hour

Survey Date: 02-08-11

General Description:

This SNA lies on steep slopes at the head of a small valley on northeast-facing slopes at the southern edge of the property.

Plant Communities:

The main plant community present is scrub with emergent hardwood trees, described below. Naturalized (exotic) species are indicated with an asterisk*.

The scrub canopy is dominated by *Coprosma propinqua* and *Coprosma crassifolia*. Other canopy species are native broom, matagouri, hybrid fuchsia, kowhai saplings, lawyer, leafless lawyer, native convolvulus, scrub pohuehue, pohuehue, mistletoe (on *Coprosma crassifolia*) and, at the centre of the SNA, a large (c.50 plants) population of the at-risk (declining) shrub *Teucrium parvifolium*.

Trees emergent from the scrub canopy are kowhai, cabbage tree, broadleaf and mahoe.

Understorey and ground-cover species are blue tussock, silver tussock, blue wheatgrass, woolly mullein*, vetch*, mouse-ear chickweed*, nodding thistle*, *Geranium microphyllum*, *Leptinella* sp., *Dichondra repens*, bracken, *Asplenium appendiculatum*, button fern, common shield fern and pasture grasses.

Additional species present near the stream are *Blechnum fluviatile*, *Asplenium hookerianum*, *Hydrocotyle heteromeria*, black nightshade*, soft rush*, *Juncus gregiflorus* and *Carex coriacea*.



A view upstream to SNA 477b

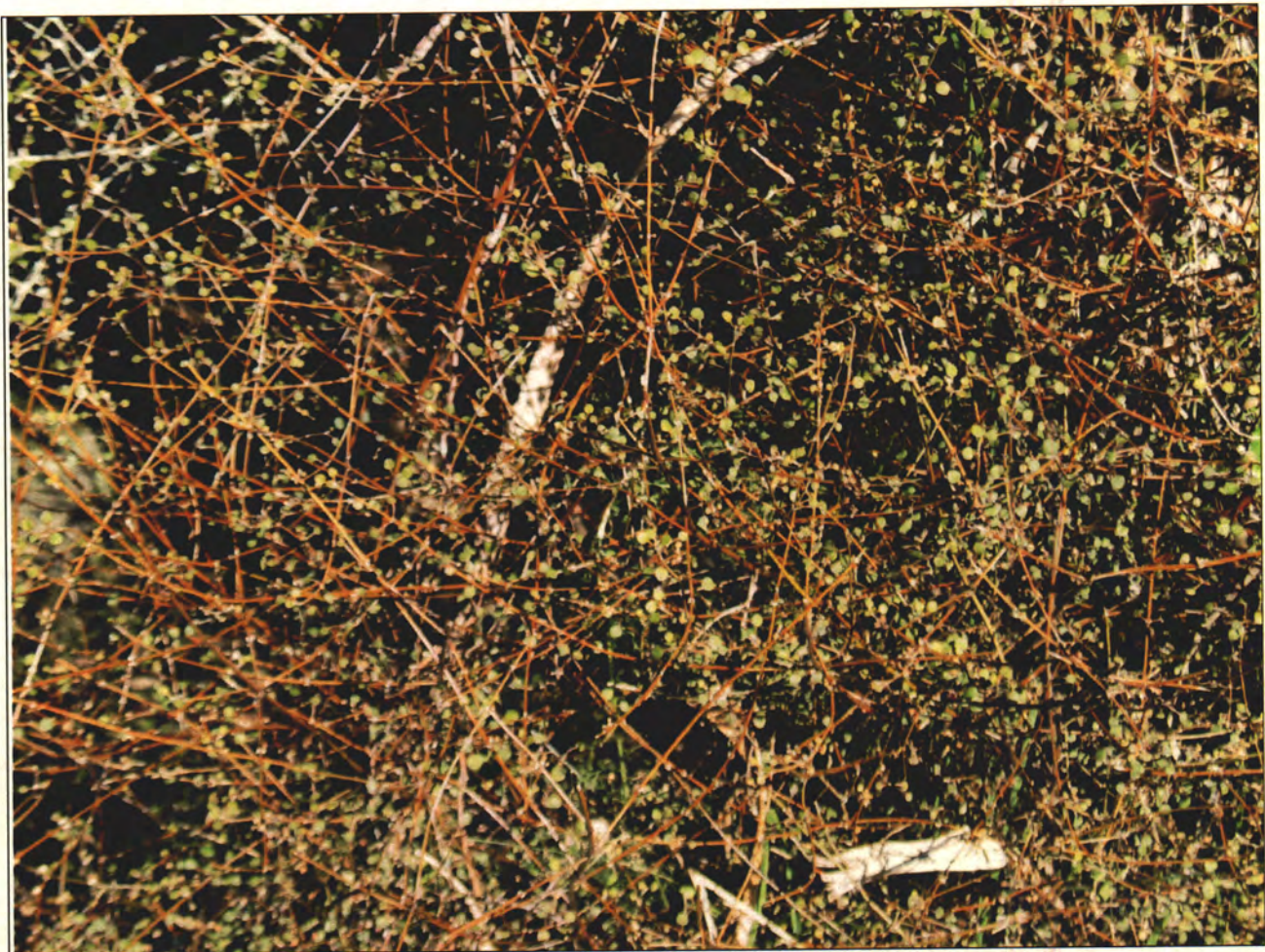
A more open shrubland is present on damper south-facing slopes in the upper gully. Important species in this community are *Coprosma propinqua*, *Coprosma crassifolia*, matagouri, hybrid fuchsia, *Helichrysum lanceolatum*, native jasmine, leafless lawyer, scrub pohuehue, golden speargrass, narrow-leaved snow-tussock, blue tussock, silver tussock, fescue tussock, blue wheatgrass, prickly shield fern, common shield fern and a single large broadleaf tree.

Birds/Fauna Observed:

Native birds observed during this brief survey were silvereye, grey warbler, bellbird, fantail and harrier.

Notable Flora, Fauna and Habitats:

Important features of this area are the presence of representative indigenous vegetation on rocky slopes, a large population of the at-risk (declining) shrub *Teuclidium parvifolium*, one locally-uncommon plant species (golden speargrass/*Aciphylla aurea*), emergent hardwood trees, the habitat the area provides for forest birds (especially the kowhai trees), the extent of the area and the protection it provides to this small stream.



The at-risk (declining) shrub, Teuclidium parvifolium

Notable Plant and Animal Pests:

No significant woody plant pests were observed, though gorse is present nearby. Animal pests were not surveyed, though one dead possum was observed.

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

This area is part of a larger grazed paddock. It is buffered by its location on steep slopes in an incised gully. It lies near to other stands of scrub and hardwood trees and is connected to those areas by scattered shrubland.

Condition and Management Issues:

The vegetation at the centre of this SNA is in relatively good condition. The surrounding scrub communities represent indigenous vegetation that is regenerating following earlier disturbance. However, this regeneration is relatively advanced and supports emergent hardwood trees, notably kowhai. The condition of this indigenous plant community will improve if protected from clearance and intensive grazing.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	L/M	Regenerating indigenous vegetation representative of seral plant communities in the ecological district.
Rarity	M/H	Supports the largest population of an at-risk (declining) shrub (<i>Teucrium parvifolium</i>) recorded in this part of Waimate Ecological District.
Diversity and pattern	L/M	Plant species diversity is relatively low and reduced from that originally present.
Distinctiveness/special features	M	The presence of emergent hardwood trees, especially kowhai, and the food these trees provide for forest birds.
Other Criteria		
Size/shape	M/H	A moderate-sized area that has a good shape and is very well buffered.
Connectivity	M	Linked to other areas by scattered shrubland and is part of a network of forest bird habitat in the wider area.
Long-term Sustainability		

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

This area of regenerating indigenous vegetation occupies steep slopes that have limited potential for further farm development. The vegetation in this SNA helps protect the headwaters of this small stream.

Discussion:

This area meets the District Plan criteria for a Significant Natural Area. Important features of the area are the presence of representative indigenous vegetation on rocky slopes, a large population of the at-risk (declining) shrub *Teucrium parvifolium*, one locally-uncommon plant species (golden speargrass/*Aciphylla aurea*), emergent hardwood trees, the habitat the area provides for forest birds (especially the kowhai trees), the extent of the area and the protection it provides to this small stream.

TIMARU DISTRICT SNA SURVEY

SNA 477c

Area Name: Goose Pond

Location (central map reference): J39: 511-497

Ecological District: Waimate

Surveyors: Mike Harding

Property: GR and K Loomes

Nearest Locality: Taiko Flat

Area Size (ha): 2.72

Altitude (m): 260-300

Survey Time: 1 hour

Survey Date: 02-08-11

General Description:

This SNA lies in a small valley on the lower slopes of the property. It includes the confluence of two stream tributaries, one of which has a water-storage pond and small wetland just upstream from the SNA.

Plant Communities:

Two main plant communities are present: shrubland/scrub with emergent hardwoods and a small patch of hardwood forest. These plant communities are described separately below. Naturalized (exotic) species are indicated with an asterisk*.

The small patch of hardwood forest is dominated by kowhai, cabbage tree and mahoe. Also present in the canopy are broadleaf and five-finger.

The canopy of the surrounding scrub is dominated by *Coprosma crassifolia*, *Coprosma propinqua* and matagouri. Other canopy species are native broom, hybrid fuchsia, mahoe, broom* (one bush), leafless lawyer, lawyer, scrub pohuehue, pohuehue, native convolvulus, mistletoe (on *Coprosma crassifolia*), emergent trees of kowhai and, at the margin, patches of gorse*.

Other species present within the scrub are bracken, vetch*, *Asplenium appendiculatum*, necklace fern, common shield fern, patotara, *Crassula* sp., blue tussock, danthonia (*Rytidosperma* sp.) and, along the stream, *Carex secta*, creeping buttercup* and mountain kiokio.



SNA 477c

Birds/Fauna Observed:

Native birds observed during this brief survey were grey warbler, fantail and bellbird.

Notable Flora, Fauna and Habitats:

Important features of this area are that it supports a patch of taller hardwood forest, habitat for forest birds (especially the kowhai trees) and the protection it provides to a small stream.

Notable Plant and Animal Pests:

Gorse is the main woody plant pest present, though it is largely confined to the margins of the area. One broom bush was observed. Animal pests were not surveyed.

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

This area is within a larger grazed paddock. It is buffered to some extent by its location in a gully. It lies near to other stands of scrub and hardwood trees and is connected to those areas by scattered shrubland. A water storage pond and small area of (induced) wetland vegetation lie at the upper boundary of the area.

Condition and Management Issues:

The vegetation at the centre of this SNA is in relatively good condition. The surrounding scrub communities represent indigenous vegetation that is regenerating following earlier disturbance. The condition of this indigenous plant community will improve if protected from clearance, plant pests and intensive grazing.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M	Supports indigenous vegetation typical of that remaining in the ecological district, including hardwood canopy trees that are representative of the original vegetation.
Rarity	L	No rare or locally-uncommon species were observed.
Diversity and pattern	L/M	The hardwood trees, surrounding scrub and stream provide a diversity of habitats, though species diversity is reduced from that formerly present.
Distinctiveness/special features	M	The presence of large kowhai trees and the habitat they provide for forest birds is a special feature.
Other Criteria		
Size/shape	M	A small area with a good shape and partially buffered.
Connectivity	M	Lies close to other areas of indigenous vegetation and contributes to the network of forest bird habitat in the area.
Long-term Sustainability	M	Some plant and animal pest control will probably be required to maintain ecological values in the long term.

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

This area of regenerating indigenous vegetation occupies steep slopes that have limited potential for further farm development.

Discussion:

This area just meets the District Plan criteria for a Significant Natural Area. Important features of the area are that it supports a patch of taller hardwood forest, habitat for forest birds (especially the kowhai trees) and provides protection to a small stream.

TIMARU DISTRICT SNA SURVEY

SNA 477d

Area Name: Bush Gully

Location (central map reference): J38: 505-510

Ecological District: Waimate

Surveyors: Mike Harding

Property: GR and K Loomes

Nearest Locality: Taiko Flat

Area Size (ha): 1.64

Altitude (m): 260-300

Survey Time: ½ hour

Survey Date: 02-08-11

General Description:

This SNA lies in a small gully and on the steep gully sides on lower slopes near the northern boundary of the property. It is a small area but supports relatively diverse indigenous vegetation.

Plant Communities:

The main plant community present is hardwood forest, with surrounding areas of scrub. These plant communities are described below. Naturalized (exotic) species are indicated with an asterisk*.

The forest canopy is dominated by mahoe, cabbage tree, kowhai, five-finger and broadleaf. Large radiata pine* and *Eucalyptus** trees are present adjacent to the forest patch.

Understorey and ground-cover species are *Coprosma crassifolia*, toatoa, poroporo, bush lily, common shield fern, button fern, hound's tongue fern, necklace fern, hanging spleenwort, *Asplenium hookerianum*, *Asplenium appendiculatum* and seedlings of broadleaf, mahoe and *Coprosma* species.

The surrounding scrub community is dominated by *Coprosma propinqua* and *Coprosma crassifolia*. Other scrub canopy species are matagouri, native broom, koromiko, lawyer, leafless lawyer and native convolvulus. Other species present are bracken, button fern, common shield fern, necklace fern, nodding thistle*, *Leptinella* sp. and blue wheatgrass.

Additional species present near the stream are fuchsia, *Hypolepis ambigua*, *Hydrocotyle heteromeria*, bidibid, *Cardamine* sp., *Carex secta* and *Juncus gregiflorus*.



Patch of hardwood trees at the centre of SNA 477d

Birds/Fauna Observed:

Native birds observed during this brief survey were bellbird, grey warbler and fantail.

Notable Flora, Fauna and Habitats:

Important features of this area are that it supports an area of taller hardwood forest, provides useful habitat for forest birds (especially the kowhai trees) and some protection to the stream.

Notable Plant and Animal Pests:

No significant woody plant pests were observed. Animal pests were not surveyed.

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

This area is buffered by its location in a gully. It is grazed as part of a larger paddock, though parts of the area are probably inaccessible to stock. It lies near to other stands of scrub and hardwood trees and is connected to those areas by scattered shrubland.

Condition and Management Issues:

The vegetation at the centre of this SNA is in relatively good condition. The surrounding scrub communities represent indigenous vegetation that is regenerating following earlier disturbance. The condition of this indigenous plant community will improve if protected from clearance and intensive grazing.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M	Supports indigenous vegetation typical of that remaining in the ecological district, including hardwood canopy trees that are representative of the original vegetation.
Rarity	L	No rare or locally-uncommon species were observed.
Diversity and pattern	L/M	The hardwood trees, surrounding scrub and stream provide a diversity of habitats, though species diversity is reduced.
Distinctiveness/special features	M	The presence of large kowhai trees and the habitat they provide for forest birds is a special feature.
Other Criteria		
Size/shape	M	A small area, but with a good shape and very well buffered.
Connectivity	M	Lies close to other areas of indigenous vegetation and contributes to the network of forest bird habitat in the area.
Long-term Sustainability	M/H	Ecological values of this area will probably continue to improve if protected from plant and animal pests.

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

This area of indigenous vegetation occupies a gorged section of the gully and has very limited potential for further farm development.

Discussion:

This area just meets the District Plan criteria for a Significant Natural Area. Important features of the area are that it supports an area of taller hardwood forest, provides useful habitat for forest birds (especially the kowhai trees) and some protection to the stream.

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)	
bidibid	<i>Acaena</i> sp.
black nightshade*	<i>Solanum nigrum</i>
blue tussock	<i>Poa colensoi</i>
blue wheat grass	<i>Elymus solandri</i>
bracken	<i>Pteridium esculentum</i>
broadleaf	<i>Griselinia littoralis</i>
broom*	<i>Cytisus scoparius</i>
bush lawyer	<i>Rubus cissoides</i>
bush lily	<i>Astelia fragrans</i>
button fern	<i>Pellaea rotundifolia</i>
cabbage tree/ti rakau	<i>Cordyline australis</i>
cocksfoot*	<i>Dactylis glomerata</i>
common shield fern	<i>Polystichum richardii</i>
creeping buttercup*	<i>Ranunculus repens</i>
fescue tussock	<i>Festuca novae-zelandiae</i>
five-finger	<i>Pseudopanax arboreus</i>
fuchsia	<i>Fuchsia excorticata</i>
golden speargrass	<i>Aciphylla aurea</i>
gorse*	<i>Ulex europaeus</i>
hanging spleenwort	<i>Asplenium flaccidum</i>
hawksbeard*	<i>Crepis capillaris</i>
hound's tongue fern	<i>Microsorium pustulatum</i>
hybrid fuchsia	<i>Fuchsia perscandens x excorticata</i>
koromiko	<i>Hebe salicifolia</i>
kowhai	<i>Sophora microphylla</i>
lawyer	<i>Rubus schmidelioides</i>
leafless lawyer	<i>Rubus squarrosus</i>
mahoe/whiteywood	<i>Melicytus ramiflorus</i>
mapou	<i>Myrsine australis</i>
matagouri	<i>Discaria toumatou</i>
matai/black pine	<i>Prumnopitys taxifolia</i>
mistletoe	<i>Ileostylis micranthus</i>
mountain kiokio	<i>Blechnum montanum</i>
mouse-ear chickweed*	<i>Cerastium fontanum</i>
narrow-leaved snow-tussock	<i>Chionochloa rigida</i>
native broom	<i>Carmichaelia</i> aff. <i>australis</i>
native convolvulus	<i>Calystegia tuguriorum</i>
native jasmine	<i>Parsonsia</i> sp.
necklace fern	<i>Asplenium flabellifolium</i>
nodding thistle*	<i>Carduus nutans</i>
patotara	<i>Leucopogon fraseri</i>
plume grass	<i>Dichelachne crinita</i>
pohuehue	<i>Muehlenbeckia australis</i>
poroporo	<i>Solanum laciniatum</i>
prickly shield fern	<i>Polystichum vestitum</i>
radiata pine*	<i>Pinus radiata</i>
Scotch thistle*	<i>Cirsium vulgare</i>
scrub pohuehue	<i>Muehlenbeckia complexa</i>
silver tussock	<i>Poa cita</i>
soft rush*	<i>Juncus effusus</i>
toatoa	<i>Haloragis erecta</i>
totara	<i>Podocarpus totara</i>
vetch*	<i>Vicia sativa</i>
woolly mullein*	<i>Verbascum thapsus</i>