

TIMARU DISTRICT
SIGNIFICANT NATURAL AREAS
SURVEY

WESTGARTH PROPERTY



Report prepared for Timaru District Council by Mike Harding
July 2014

TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

PROPERTY REPORT

PROPERTY DETAILS:

Owner:Bruce, Rosa and Hamish Westgarth
Valuation References: ..24810/035.00
Address:910 Brothers Road, Cave 7957
Location:.....On the east slopes of the Brothers Range.
Ecological District:.....Fairlie.
TDC Land Type:.....Hard Rock Hills and Downs.
Land Environment:mostly Q2.1c.

ECOLOGICAL CONTEXT:

The property lies on the eastern slopes of the Brothers Range at the eastern edge of Fairlie Ecological District. The original vegetation of this area would have been predominantly podocarp-hardwood forest, with localized areas of kowhai-kanuka forest on rocky slopes and at disturbed sites. The indigenous fauna would probably have been significantly more numerous and diverse, with a greater range of birds, lizards and invertebrates than is presently found in the area.

Indigenous vegetation on the property is confined to small steep-sided valleys at the lower-altitude (eastern) side of the property. Vegetation comprises hardwood forest with occasional podocarps (totara) and surrounding areas of shrubland and gorse scrub. These areas of forest adjoin a much larger area of forest on an adjacent property and make a useful contribution to forest bird habitat in the wider area.

SIGNIFICANT AREAS ON THE PROPERTY:

The property was surveyed as part of the District-wide survey of Significant Natural Areas during May 2014. Four areas of native forest, totalling approximately 23 hectares, are regarded as Significant Natural Areas (SNAs) when assessed against the District Plan criteria. These SNAs are listed in the table below.

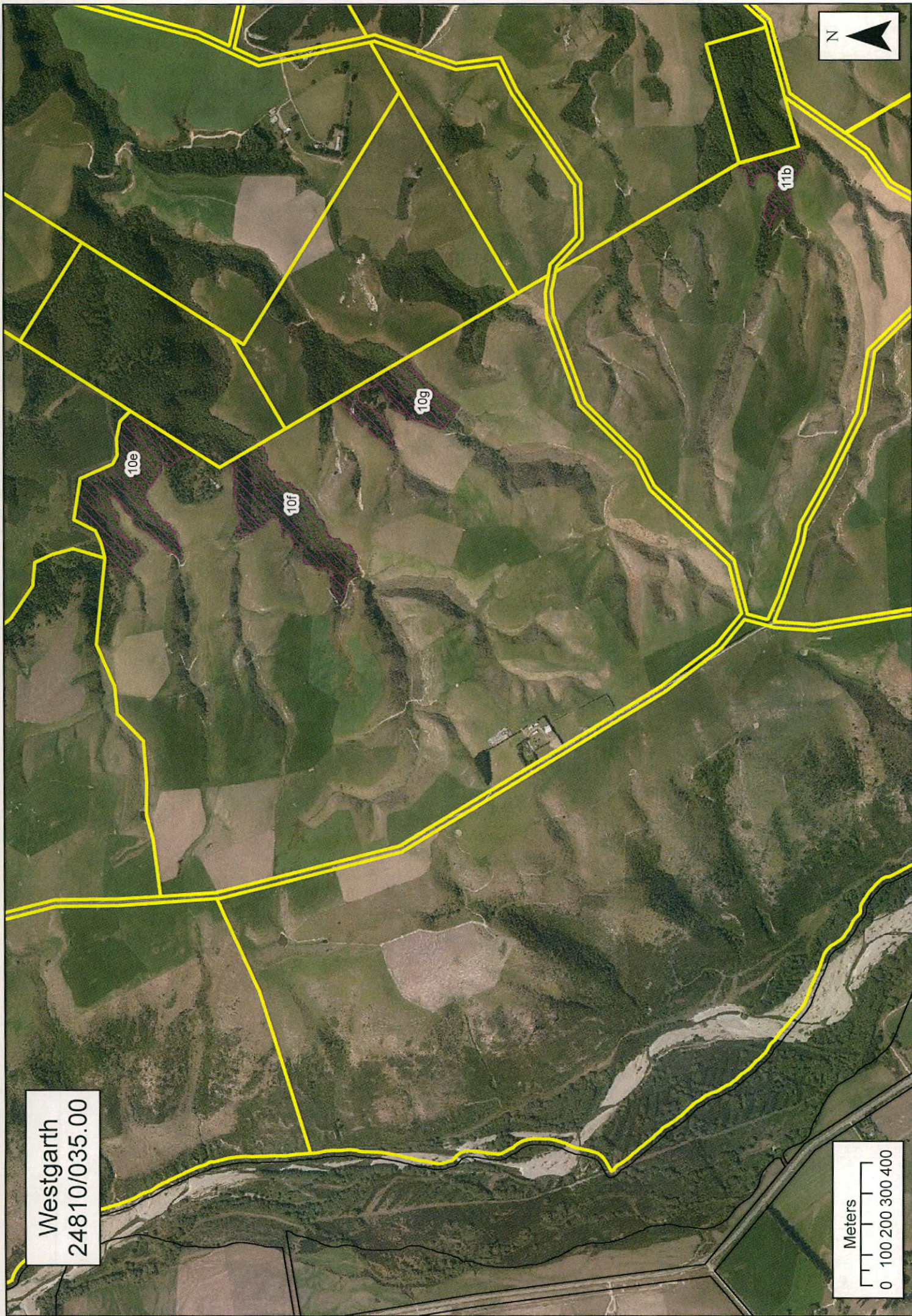
Area No.	Area Name	Map reference (NZTM)	Aprox. size (ha)	Vegetation/habitat type
10e	Westgarth northern gully	1434255-5099035	9.43	hardwood forest
10f	Westgarth middle gully	1434250-5098475	7.58	hardwood forest
10g	Westgarth middle gully	1434610-5098060	4.35	hardwood forest
11b	Westgarth southern gully	1435350-5096830	2.23	hardwood forest

These SNAs are illustrated on the attached aerial photograph and described in greater detail on the SNA Survey 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 with appropriate management (criterion vii, page B19). SNAs are subject to confirmation by

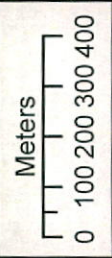
Council after regarding the matters listed in the District Plan (pages B19-B20). It is expected that SNAs will eventually be listed in the District Plan by way of a notified plan change.

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.



Westgarth
24810/035.00



Area Name: Westgarth north gully
Map ref. (NZTM): 1434255E-5099035W
Ecological District: Fairlie
Surveyors: Mike Harding

Property: Westgarth
Nearest Locality: Totara Valley
Area Size (ha): 9.43 **Altitude (m):** 380-450
Survey Time: 1½ hours **Survey Date:** 20-05-14

General Description:

This SNA lies on moderately-steep slopes in a small valley at the northeast corner of the property. It is part of a larger area of forest which extends onto adjoining properties, including an area protected by a QEII covenant.

Plant Communities:

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

The forest canopy over most of the area is dominated by broadleaf and five-finger, with matipo and mapou dominant on dry slopes. Other canopy species are lancewood, cabbage tree, fuchsia, marbleleaf, wineberry, kowhai, mahoe, lemonwood, yellowwood, pohuehue and bush lawyer. Rising above the forest canopy are single trees of totara and radiata pine*. The trunk diameter (at breast height) of the totara is 65cm.

The forest understorey is relatively open. Most commonly present are *Coprosma rhamnoides* and *Coprosma crassifolia*. Other understorey species are poataniwha, lemonwood, bush lawyer and, on tree trunks, hound's tongue fern.



Ground-cover species are *Asplenium appendiculatum*, *Asplenium hookerianum*, *Asplenium richardii*, necklace fern, hen and chickens fern, hanging spleenwort, *Blechnum procerum*, *Blechnum fluviatile*, *Blechnum penna-marina*, prickly shield fern, common shield fern, button fern, water fern, *Hypolepis ambigua*, velvety nightshade*, hookgrass, *Carex forsteri*, pennywort, buttercup, *Dichondra repens*, cardamine and seedlings of mahoe, five-finger, mapou, marbleleaf, poataniwha, clematis, native jasmine and *Coprosma* species. Additional species present near the stream are pate, bush lily, *Blechnum chambersii* and *Blechnum montanum*.

Species commonly present at the forest margin or at forest openings are mingimingi, *Coprosma dumosa*, *Coprosma crassifolia*, dwarf mistletoe, bush lawyer, scrub pohuehue, native bindweed, gorse*, elderberry*, bracken, foxglove*, *Hypolepis ambigua*, *Blechnum penna-marina*, necklace fern, bidibid and less commonly tree daisy.

Birds/Fauna Observed:

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

Notable Flora, Fauna and Habitats:

Important features of this area are: the dominance of older regenerating indigenous forest; presence of totara; the diversity of plant species, notably ferns; the habitat the area provides for birds, including an 'at risk' (declining) species (rifleman); and, that it is part of a larger area of forest.

Notable Plant and Animal Pests:

Gorse is common at the forest margin and is serving a useful buffering role by restricting stock access and providing favourable habitat for forest regeneration. Other naturalized plants present are radiata pine, elderberry, velvety nightshade and foxglove, though these species do not pose a significant threat to the forest. Animal pests were not surveyed, though wallabies were seen, possum sign observed and goats heard.

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

This SNA is buffered to some extent by its location on the steeper slopes of an incised gully and the presence of gorse scrub at the forest margin. It is not fenced. Forest at the SNA is contiguous with a much larger area of protected forest on the adjoining property.

Condition and Management Issues:

The forest canopy is in good condition. The forest understorey is relatively open, presumably depleted by wild animal browse (notably wallabies) and grazing. The most important management issue is wild animal control. If wild animals are controlled, the forest would also benefit from exclusion of grazing animals.

Property Owner Comment:

The landowners have no intention of removing vegetation from the gullies, as it provides important shelter for stock.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M/H	A good example of regenerating indigenous forest typical of this part of the ecological district and with a good range of canopy species, including totara.
Rarity	M	Provides good habitat for an 'at risk' (declining) bird species (rifleman).
Diversity and pattern	M/H	Contains a relatively high number of indigenous plant species (c.56), though species diversity is probably lower than originally present.
Distinctiveness/special features	M	Kowhai provides an important seasonal food source for birds.
Other Criteria		
Size/shape	M/H	A moderate-sized area that is well buffered by its location in an incised gully.
Connectivity	M/H	Adjoins an area of protected forest at its down-valley boundary.
Long-term Sustainability	M/H	Continued wild animal will 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 forest has been deliberately set aside from farm development by the landowners, because it occupies steep rocky country and provides useful shelter for stock.

Discussion:

This area meets the District Plan criteria for a Significant Natural Area. Important features of the area are the extent and diversity of the forest, the presence of totara and the habitat it provides for forest birds, including rifleman.

TIMARU DISTRICT SNA SURVEY

SNAs 10f and 10g

Area Name: Westgarth middle gullies
Ecological District: Fairlie
10f: map ref. (NZTM): 1434250E-5098475N
10g: map ref. (NZTM): 1434610E-5098060N
Surveyors: Mike Harding

Property: Westgarth
Nearest Locality: Totara Valley
Area Size (ha): 7.58 **Altitude (m):** 380-460
Area Size (ha): 4.35 **Altitude (m):** 380-420
Survey Time: 2 hours **Survey Date:** 20-05-14

General Description:

These two SNAs lie on moderately-steep slopes at the heads of small valleys on the eastern boundary of the property. Both areas adjoin a larger area of forest down-valley. They are described here together as they support similar plant communities.

Plant Communities:

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

The forest canopy at both sites is dominated by broadleaf and/or matipo, depending on aspect. Other canopy species are lancewood, marbleleaf, mapou, five-finger, fuchsia, wineberry, mahoe, kowhai, cabbage tree, mountain akeake, bush lawyer, pohuehue, native jasmine and native bindweed. One tall radiata pine* tree is present at SNA 10f and there is a patch of tall pines adjacent to SNA 10g. Two sycamore* trees are present: one at the margin of each area.



Plant species present in the very open understorey are mingimingi, *Coprosma rhamnoides*, *Coprosma crassifolia*, *Coprosma dumosa*, pate and poataniwha.

Plant species present on the forest floor are prickly shield fern, hen and chickens fern, *Asplenium richardii*, *Asplenium hookerianum*, necklace fern, hanging spleenwort, hound's tongue fern, *Blechnum procerum*, *Blechnum fluviale*, *Blechnum chambersii*, thousand-leaved fern, hookgrass, star lily, *Libertia ixioides*, (uncommon), bush lily, cardamine and seedlings of mahoe, pate and native jasmine.

Plant species present at the forest margin and in forest openings are mingimingi, *Coprosma dumosa*, tree daisy, poroporo, gorse*, foxglove*, *Hypolepis ambigua*, water fern, bracken, pennywort and hairy pennywort.

Birds/Fauna Observed:

Native birds observed during this brief survey were bellbird, grey warbler, fantail (including black individuals) and rifleman. Silvereye, kereru and harrier are also likely to be present.

Notable Flora, Fauna and Habitats:

Important features of these areas are: the presence of regenerating indigenous forest; the habitat the areas provide for birds, including an 'at risk' (declining) species (rifleman); and, they are part of a larger area of forest.

Notable Plant and Animal Pests:

Gorse and sycamore are the most important plant pests present. Gorse is playing a useful role, buffering the forest and providing suitable conditions for forest regeneration. Sycamore poses a significant threat to the forest as seedlings of this species are shade-tolerant and sycamore trees can over-top and replace native forest. Animal pests were not surveyed, though wallabies and possum sign were observed.

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

These two areas are protected by their locations in sheltered gullies. Both adjoin a larger area of forest on the adjacent property.

Condition and Management Issues:

The understorey vegetation at both sites is substantially depleted, presumably due to the presence of wallabies and domestic stock. Continued control of wild animals and containment of domestic stock would benefit the forest. The other main management issue is removal of the isolated sycamore trees, especially if grazing pressure is reduced, though there is a large stand of sycamore trees nearby.

Property Owner Comment:

The landowners have no intention of removing vegetation from the gullies, as it provides important shelter for stock.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M	Good examples of young regenerating indigenous forest, typical of that remaining in this part of the ecological district.
Rarity	M	Provides useful habitat for an 'at risk' (declining) bird species (rifleman).
Diversity and pattern	M	Plant species diversity is moderate.
Distinctiveness/special features	M	Kowhai provides an important seasonal food source for birds.
Other Criteria		
Size/shape	M/H	Small to moderate-sized areas that are well buffered by their locations in an incised gully.
Connectivity	M/H	Adjoin an area of protected forest at the down-valley boundary.
Long-term Sustainability	M	Continued control of wild animals, containment of grazing animals, and removal of sycamore may be necessary to maintain ecological values in the long term.

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

These areas of forest have been deliberately set aside from farm development by the landowners. They occupy steep gullies and provide useful shelter for stock.

Discussion:

These areas just meet the District Plan criteria for Significant Natural Areas. Important features of the areas are the presence of young indigenous forest, the habitat they provide for forest birds, including rifleman, and that they are part of a larger area of forest.

Area Name: Westgarth southern gully
Map reference (NZTM): 1435350E-5096830N
Ecological District: Fairlie
Surveyors: Mike Harding

Property: Westgarth
Nearest Locality: Totara Valley
Area Size (ha): 2.23 **Altitude (m):** 340-360
Survey Time: 1 hour **Survey Date:** 20-05-14

General Description:

This SNA lies on moderately-steep slopes at the head of a small valley at the southeast corner of the property. Forest at this site is part of a larger area that extends east onto the adjoining property.

Plant Communities:

The main plant community present is young hardwood forest, with podocarps (totara). This plant community is described below. Naturalized (exotic) species are indicated with an asterisk*.

The forest canopy comprises kowhai, matipo, mapou, broadleaf, mahoe, lancewood, marbleleaf, wineberry, cabbage tree, fuchsia, pate, pohuehue, bush lawyer and native bindweed. One totara tree is present on a steep slope. A small grove of five young totara trees is present near the valley floor. The largest of these trees has a trunk diameter (at breast height) of 57cm.

The forest understorey and ground-cover are very open, with few plants present. These are mostly ferns, including prickly shield fern, common shield fern, *Blechnum fluviatile*, *Blechnum chambersii*, hen and chickens fern, *Asplenium hookerianum*, button fern and pennywort. A few young (sapling) totara are present.



SNA 11b, with totara tree at right-centre

Plant species present at the forest margin and in forest openings are gorse*, mingimingi, mountain akeake, poroporo, black nightshade*, foxglove*, *Hypolepis ambigua* and bracken.

Birds/Fauna Observed:

Native birds observed during this brief survey were fantail and bellbird. Other bird species likely to be present are silvereye, grey warbler, kereru, rifleman and harrier.

Notable Flora, Fauna and Habitats:

Important features of this area are the presence of podocarp (totara) trees, including young trees, and that it is part of a larger area of forest.

Notable Plant and Animal Pests:

Gorse is present at the forest margin, though this does not pose a significant threat to the forest. Animal pests were not surveyed, though wallabies were seen.

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

This SNA encompasses the main area of forest adjacent to the property boundary, centred on the area where totara is present. The forest here is protected to some extent by its location on steeper slopes in a sheltered gully. The SNA does not include the area of forest just north of the gully, as that forest does not meet the significance criteria.

Condition and Management Issues:

The main management issue is encouragement of regeneration of understorey vegetation. This would presumably require a reduction in grazing/browsing pressure.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M	A depleted example of indigenous forest representative of this part of the ecological district, though with podocarp (totara) trees.
Rarity	L/M	May provide habitat for an 'at risk' bird species (rifleman) that is present nearby.
Diversity and pattern	L/M	Plant species diversity is low.
Distinctiveness/special features	M	The grove of totara and presence of totara saplings are notable features.
Other Criteria		
Size/shape	M	A relatively small area that is reasonably well buffered by its location in a sheltered gully.
Connectivity	M/H	Is effectively part of a much larger area of forest on the adjacent property.
Long-term Sustainability	M	Management of browsing/grazing will be necessary to maintain ecological values in the long term.

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

This area has been informally protected by the landowners. It has limited potential for development and provides useful shelter for stock.

Discussion:

This area just meets the District Plan criteria for a Significant Natural Area. Important features of the area are the presence of podocarp (totara) trees and that the area is part of a much larger area of indigenous forest.

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 anseriniifolia</i>
black nightshade*	<i>Solanum nigrum</i>
bracken	<i>Pteridium esculentum</i>
broadleaf	<i>Griselinia littoralis</i>
bush lawyer	<i>Rubus cissoides</i>
bush lily	<i>Astelia fragrans</i>
buttercup.....	<i>Ranunculus</i> sp.
button fern.....	<i>Pellaea rotundifolia</i>
cabbage tree/ti rakau	<i>Cordyline australis</i>
cardamine.....	<i>Cardamine debilis</i>
clematis.....	<i>Clematis paniculata</i>
common shield fern	<i>Polystichum richardii</i>
dwarf mistletoe.....	<i>Korthalsella lindsayi</i>
elderberry*	<i>Sambucus nigra</i>
five-finger.....	<i>Pseudopanax arboreus</i>
foxtail*.....	<i>Digitalis purpurea</i>
fuchsia	<i>Fuchsia excorticata</i>
gorse*.....	<i>Ulex europaeus</i>
hairy pennywort.....	<i>Hydrocotyle moschata</i>
hanging spleenwort	<i>Asplenium flaccidum</i>
hen and chickens fern	<i>Asplenium gracillimum</i>
hookgrass	<i>Uncinia</i> sp.
kanuka	<i>Kunzea ericoides</i>
kowhai	<i>Sophora microphylla</i>
lancewood.....	<i>Pseudopanax crassifolius</i>
lemonwood.....	<i>Pittosporum eugenoides</i>
mahoe/whiteywood	<i>Melicope ramiflora</i>
mapou.....	<i>Myrsine australis</i>
marbleleaf/putaputaweta	<i>Carpodetus serratus</i>
matipo/kohuhu.....	<i>Pittosporum tenuifolium</i>
mingimingi.....	<i>Coprosma propinqua</i>
mountain akeake.....	<i>Olearia avicenniifolia</i>
native bindweed.....	<i>Calystegia tuguriorum</i>
native jasmine.....	<i>Parsonsia</i> sp.
necklace fern.....	<i>Asplenium flabellifolium</i>
patc.....	<i>Schefflera digitata</i>
pennywort.....	<i>Hydrocotyle</i> sp.
poataniwha.....	<i>Melicope simplex</i>
pohuehue	<i>Muehlenbeckia australis</i>
poroporo.....	<i>Solanum laciniatum</i>
prickly shield fern	<i>Polystichum vestitum</i>
radiata pine*	<i>Pinus radiata</i>
scrub pohuehue.....	<i>Muehlenbeckia complexa</i>
star lily	<i>Arthropodium candidum</i>
sycamore*	<i>Acer pseudoplatanus</i>
thousand-leaved fern.....	<i>Hypolepis millefolium</i>
totara.....	<i>Podocarpus totara</i>
tree daisy	<i>Olearia bullata</i>
velvety nightshade*	<i>Solanum chenopodioides</i>
water fern.....	<i>Histioglossis incisa</i>
wineberry	<i>Aristotelia serrata</i>
yellowwood.....	<i>Coprosma linariifolia</i>