

**TIMARU DISTRICT**  
**SIGNIFICANT NATURAL AREAS**  
**SURVEY**

**STEELE PROPERTY**



**Report prepared for Timaru District Council by Mike Harding**  
**August 2012**

# TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

## PROPERTY REPORT

### PROPERTY DETAILS:

**Owner:** ..... Duncan Steele  
**Valuation References:** .... 24810/021.00  
**Address:** ..... Langley Downs Road, RD, Pleasant Point  
**Location:** ..... On eastern slopes of the Brothers Range.  
**Ecological District:** ..... Geraldine/Fairlie Ecological District.  
**TDC Land Type:** ..... Hard Rock Hills and Downs.  
**Land Environment:** ..... E3.1a (Central Dry Foothills).

### ECOLOGICAL CONTEXT:

The property lies on the eastern slopes of the Brothers Range and on the boundary between Geraldine and Fairlie ecological districts. 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 incised steep-sided valleys. It comprises core areas of indigenous hardwood forest with podocarps (totara and matai) and surrounding areas of regenerating hardwood and kanuka forest. These areas of forest lie near to other native forest on adjacent properties and make a valuable 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 June 2012. Five areas of native forest, totalling approximately 43 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
360a	Steele lower gully forest	J38: 439-670	4.55	Podocarp-hardwood forest
361a	Steele southern gully forest	J38: 430-657	4.8	Hardwood forest
361b	Steele upper valley forest	J38: 423-662	16.0	Hardwood forest
361c	Steele main gully forest	J38: 433-664	17.1	Podocarp-hardwood forest
576b	Steele northern gully forest	J38: 431-678	0.92	Hardwood (podocarp) 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.

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**OTHER AREAS INSPECTED ON THE PROPERTY:**

Other vegetation inspected on the property was the gorse-dominated scrub that is present in the upper reaches of the main valleys. There is some indigenous vegetation and habitat at these sites, but it does not presently meet the significance criteria in the Timaru District Plan. This does not mean that these areas are not important for the protection of indigenous biodiversity; it simply means that they do not (as assessed at this time) meet the criteria in the Timaru District Plan. If left undisturbed, native forest is likely to regenerate through the gorse scrub.



*Gorse-dominated scrub in the valley above SNA 361a.*

Steele Property  
24810/021.00

N

1:12,500



Brothers Road

Langley Downs Road

360a

361c

361b

361a1

361a2

576b

# TIMARU DISTRICT SNA SURVEY

SNA 360a

**Area Name:** Steele Lower Gully Forest  
**Location (central map reference):** J38: 439-670  
**Ecological District:** Geraldine/Fairlie  
**Surveyors:** Mike Harding and Cathy Mountier

**Property:** Duncan Steele  
**Nearest Locality:** Totara Valley  
**Area Size (ha):** 4.55      **Altitude (m):** 320-360  
**Survey Time:** 1½ hours      **Survey Date:** 26-06-12

## General Description:

This SNA lies on the slopes of a steep-sided gully at the northwest corner of the property. It is part of a larger area of forest that extends down-valley onto the adjoining property and lies close to another area of native forest (SNA 361c) up-valley.

## Plant Communities:

The main plant communities present are hardwood forest with podocarps and kanuka forest. These plant communities are described separately below. Naturalized (exotic) species are indicated with an asterisk\*.

### Hardwood (podocarp) forest:

The diverse range of species that form the canopy of this forest are totara, narrow-leaved lacebark, mapou, mahoe, broadleaf, matipo, five-finger, kowhai, lancewood, marbleleaf, wineberry, native jasmine, pohuehue, and bush lawyer. Less commonly present are cabbage tree and one emergent matai (with a trunk diameter of 75cm).

Kanuka is the dominant canopy species at the upper forest margin. Trunk diameters (at breast height) of the kanuka trees range between 10 and 25cm.

The forest understorey is relatively open. Species present are *Coprosma rotundifolia*, *Coprosma rhamnoides*, *Coprosma crassifolia*, poataniwha, weeping mapou, mahoe, lancewood and mapou.

Ground-cover species are prickly shield fern, common shield fern, necklace fern, *Asplenium richardii*, *Asplenium hookerianum*, *Asplenium appendiculatum*, button fern, bidibid and hairy pennywort. Additional species present at damper sites are fuchsia, pate, bush lily, male fern\*, prickly shield fern, *Blechnum fluviatile*, *Blechnum penna-marina*, swamp kiokio, hanging spleenwort, hookgrass, *Carex* sp. and creeping buttercup\*.

Species present on the forest margin or in forest openings are *Coprosma crassifolia*, *Coprosma tayloriae*, yellowwood, *Helichrysum lanceolatum*, korokio, matipo, horopito, manuka, mountain flax, weeping mapou, *Rubus australis*, *Clematis foetida*, native jasmine, gorse\*, broom\* (uncommon), koromiko, *Hypolepis ambigua*, foxglove\*, bracken and blackberry\*. Also present at one location is dwarf mistletoe (*Korthalsella clavata*) on bushes of *Coprosma crassifolia* and *Coprosma tayloriae*.

### Kanuka forest:

The canopy of this forest is, in most areas, dominated by kanuka. Trunk diameters (at breast height) of the canopy trees range between 15 and 20cm. In places, young totara trees (with trunk diameters between 45 and 55cm) are emergent from the forest canopy. Other canopy species are lancewood, yellowwood, matipo, lemonwood, narrow-leaved lacebark, native jasmine and pohuehue.

The forest understorey is dominated by *Coprosma rhamnoides*, *Helichrysum lanceolatum* and weeping mapou. Other understorey species are poataniwha, korokio, *Coprosma crassifolia*, *Coprosma rotundifolia*, mapou, five-finger, matipo, bush lawyer, lawyer and occasionally gorse\*.

Ground-cover species are button fern, hound's tongue fern, *Asplenium richardii*, necklace fern, *Blechnum procerum*, common shield fern, *Lagenifera* sp., pennywort, hairy pennywort, *Dichondra repens*, bidibid, foxglove\*, black nightshade\* and blackberry\*. Seedlings present on the forest floor are mahoe, mapou, matipo, five-finger, cabbage tree, native jasmine and *Coprosma* species.

**Birds/Fauna Observed:**

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

**Notable Flora, Fauna and Habitats:**

Important features of this area are: the diversity of plant species present, especially in the forest canopy; the presence of podocarp trees (totara and matai); locally-uncommon plant species (*Korthalsella clavata* and *Rubus australis*); the habitat the area provides for forest birds, including an at-risk (declining) species (rifleman) and the location of the area adjacent to other large areas of native forest.

**Notable Plant and Animal Pests:**

Gorse, broom and blackberry are the main plant pests present, though these species do not pose a significant threat to the intact forest. Animal pests were not surveyed, though possum sign was observed.

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

Most boundaries of the area are securely fenced. The area is well buffered by its location on steeper slopes. It adjoins a larger area of indigenous forest downstream (SNA 360b) and lies quite close to another large area of indigenous forest upstream (SNA 361c).

**Condition and Management Issues:**

The forest canopy is in good condition. The forest understorey is open in places though still supports a good range of understorey shrubs. Protection from animal browse is the main management issue.

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**ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:**

Primary Criteria	Rank	Notes
Representativeness	H	A good example of indigenous forest typical of the ecological district, with a good range of canopy species present, including podocarps (matai and totara).
Rarity	M	Provides habitat for an at-risk (declining) bird species (rifleman); supports populations of two locally uncommon plant species.
Diversity and pattern	M/H	Plant species diversity is high for this area.
Distinctiveness/special features	M	The presence of older podocarp trees (notably matai) is a special feature.
<b>Other Criteria</b>		
Size/shape	M/H	A moderate-sized area that is well buffered.
Connectivity	M/H	Adjoins a larger area of indigenous forest and helps link that forest with other areas of forest upstream.
Long-term Sustainability	M/H	Some animal pest control 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):**

This SNA occupies steep slopes that have very limited potential for farm development. It lies at the corner of the property and does not hinder access across the property.

**Discussion:**

This area easily meets the District Plan criteria for a Significant Natural Area. Important features of the area are the diversity of plant species present; the presence of podocarp trees (totara and matai) and locally-uncommon plant species; the habitat the area provides for forest birds, including an at-risk (declining) species (rifleman) and the location of the area adjacent to other large areas of native forest.

## TIMARU DISTRICT SNA SURVEY

SNA 361a

**Area Name:** Steele Southern Gully Forest  
**Location (central map reference):** J38: 430-657  
**Ecological District:** Geraldine/Fairlie  
**Surveyors:** Mike Harding and Cathy Mountier

**Property:** Duncan Steele  
**Nearest Locality:** Totara Valley  
**Area Size (ha):** 4.8      **Altitude (m):** 420-460  
**Survey Time:** 1½ hours      **Survey Date:** 25-06-12

### General Description:

This SNA lies on the south-facing slopes of a small valley on the eastern slopes of the Brothers Range. Larger and more significant areas of indigenous forest are present further down the valley on this and an adjoining property.

### Plant Communities:

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

The canopy of this regenerating forest comprises fuchsia, broadleaf, lancewood, wineberry, five-finger, pohuehue, bush lawyer, *Coprosma propinqua* and kowhai with emergent trees of cabbage tree, matipo and elderberry\*. Lower-stature vegetation at the forest margins and between stands of native trees is dominated by gorse\*, Himalayan honeysuckle\*, pohuehue and prickly shield fern. Occasionally present are mountain akeake, lemonwood and mountain flax.

Species present in the forest understorey are mapou, five-finger, mahoe, marbleleaf, matipo, wineberry, lancewood, *Coprosma rhamnoides*, *Coprosma rotundifolia* and bush lily. Forest floor species are hen and chickens fern, *Asplenium hookerianum*, *A. gracillimum* x *hookerianum*, necklace fern, hanging spleenwort, mountain kiokio, *Blechnum penna marina*, soft tree fern, hound's tongue fern, bidibid and seedlings of broadleaf and mahoe.



Shaded slopes at the upper part of SNA 361a

Species present at damper sites, notably along the stream are koromiko, prickly shield fern, kiokio, swamp kiokio, *Blechnum fluviatile*, *Blechnum procerum*, *Hypolepis ambigua*, water fern, male fern\*, *Carex geminata*, soft rush\*, tutu, *Cardamine debilis* and pennywort.

Species commonly present at the forest margin are bracken, cocksfoot\*, Californian thistle\*, blackberry\*, prickly shield fern, foxglove\* and pohuehue. Other species present are koromiko, *Coprosma tayloriae*, broom\*, hard fern, burdock\* and bittersweet\*.

One shrub of a hybrid tree daisy (*Olearia bullata* x) is present on the forest margin near the stream at the upper (western) end of the area.

#### **Birds/Fauna Observed:**

Native birds observed during this brief survey were bellbird, silvereve, fantail and harrier. A pair of paradise shelducks was observed nearby and black-backed gulls were flying overhead.

#### **Notable Flora, Fauna and Habitats:**

Important features of this area are the presence of a relatively extensive area of regenerating indigenous vegetation in a part of the District where native forest is substantially depleted. A diverse range of plant species is present, including three locally-uncommon species (soft tree fern, tutu and *Olearia bullata*). The location of this area near to larger areas of indigenous forest enhances its significance as habitat for native birds.



*The Olearia bullata hybrid at the upper end of SNA 361a*

#### **Notable Plant and Animal Pests:**

Gorse, broom and elderberry are the most important woody weeds present though these species do not pose a significant threat to the native forest at the site. In fact, the dense stands of gorse are enabling regeneration of native trees. Other plant pests are mostly confined to the forest margins. Animal pests were not surveyed though possum sign was observed.



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

This area of regenerating native forest adjoins pasture along its northern boundary, gorse scrub on north-facing slopes of the valley along its southern boundary, gorse scrub in the upper valley and plantation forest (across a farm track) at its down-valley (eastern) boundary. It is securely fenced along its northern boundary and well buffered by gorse scrub on its southern boundary. Larger stands of older indigenous forest are present further down the valley.

**Condition and Management Issues:**

This regenerating forest is in good condition. It supports a diverse range of species and appears to be regenerating fast. The main management issues are protection of the forested area from clearance and control of grazing (especially cattle).

**Property Owner Comment:**

Duncan Steele advises that gorse was once far more extensive on the property and that regeneration of native trees at these areas has been rapid.

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**ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:**

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<b>Primary Criteria</b>	<b>Rank</b>	<b>Notes</b>
Representativeness	M	An example of regenerating indigenous forest typical of the ecological district.
Rarity	M	The area supports three plant species which are locally uncommon: soft tree fern, tutu and tree daisy.
Diversity and pattern	M	A good range of plant species is present, though diversity is probably reduced from that formerly present.
Distinctiveness/special features	L/M	The apparent rate of regeneration and presence of nearby seed sources are notable features.
<b>Other Criteria</b>		
Size/shape	M	A moderate sized area that is narrow but well buffered by its location in a small valley.
Connectivity	M	The area lies close to another larger area of indigenous forest and is connected to that area by plantation forest.
Long-term Sustainability	M/H	Regeneration of native species is likely to continue. Some plant and animal pest control may be necessary for protection of ecological values in the long term.

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

Duncan Steele advises that gorse was formerly much more extensive on the property and that native trees have regenerated rapidly in those areas remaining in gorse. The moderately steep face occupied by this SNA has limited potential for farm development.

**Discussion:**

This area meets the District Plan criteria for a Significant Natural Area. Important features of the area are the presence of a relatively extensive area of regenerating indigenous vegetation in a part of the District where native forest is substantially depleted, the presence of locally-uncommon species (soft tree fern, tutu and tree daisy), and the location of the area near to larger areas of indigenous forest.

<b>Area Name:</b> Steele Upper Valley Forest	<b>Property:</b> Duncan Steele
<b>Location (central map reference):</b> J38: 423-662	<b>Nearest Locality:</b> Totara Valley
<b>Ecological District:</b> Geraldine/Fairlie	<b>Area Size (ha):</b> 16 <b>Altitude (m):</b> 450-550
<b>Surveyors:</b> Mike Harding and Cathy Mountier	<b>Survey Time:</b> 2 hours <b>Survey Date:</b> 25-06-12

**General Description:**

This SNA lies at the head of a larger valley on the upper eastern slopes of the Brothers Range. It covers moderately steep north- and south-facing slopes and is part of a larger area of indigenous vegetation that continues down-valley (SNA 361c).

**Plant Communities:**

Two main plant communities are present: low-stature gorse scrub/matipo forest on drier slopes; and taller mixed hardwood forest on shaded slopes. These plant communities are described separately below. Naturalized (exotic) species are indicated with an asterisk\*.

Dry slope matipo forest:

The canopy of this regenerating forest is dominated by matipo. Other canopy species occasionally present are broadleaf, cabbage tree, elderberry\* and pohuehue. This forest forms larger patches amongst dense gorse\* scrub, with occasional Himalayan honeysuckle\*.

The forest understorey is open. Species commonly present are gorse\*, *Coprosma tayloriae*, *Coprosma crassifolia*, *Coprosma rhamnoides* and blackberry\*.

Ground-cover species are foxglove\*, *Hypolepis ambigua*, necklace fern, *Blechnum chambersii*, prickly shield fern, pennywort, hairy pennywort and seedlings of pohuehue and *Coprosma* species.

Species present on the forest margin or in forest openings are gorse\*, *Coprosma tayloriae*, *Coprosma crassifolia*, bracken, blackberry\*, foxglove\*, Californian thistle\* and scrub pohuehue.



*Dense matipo forest on north-facing slopes of SNA 361b.*

### Shaded slope hardwood forest:

On damper slopes the stands of regenerating hardwood forest are also dominated by matipo. Other canopy species present are broadleaf, wineberry and occasionally five-finger, lancewood, lemonwood and cabbage tree. Around these forest patches are lower-stature vegetation dominated by gorse\*, Himalayan honeysuckle\* and prickly shield fern. The understorey of this shaded slope forest was not inspected.

### **Birds/Fauna Observed:**

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

### **Notable Flora, Fauna and Habitats:**

Important features of this area are the presence of a relatively extensive area of regenerating indigenous vegetation in a part of the District where native forest is substantially depleted, and that the area lies adjacent to a larger area of older indigenous forest down valley.

### **Notable Plant and Animal Pests:**

Gorse and Himalayan honeysuckle are the most important woody weeds present though these species do not pose a significant threat to native forest at the site. The gorse is providing suitable habitat for regeneration of native vegetation. Other plant pests are mostly confined to the forest margins. Animal pests were not surveyed though possum sign was observed.



*The open understorey of matipo forest on drier slopes of SNA 361b.*

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

The area adjoins developed pasture on its northern and southern boundaries, both of which are securely fenced. The up-valley (west) end of the area adjoins gorse scrub at the head of the valley; the down-valley (east) end of the area adjoins older denser native forest described separately as SNA 361c.

**Condition and Management Issues:**

This regenerating forest is in relatively good condition, although the understorey of the matipo-dominated forest is open. The main management issues are protection of the forested area from clearance and control of grazing (especially cattle).

**Property Owner Comment:**

Duncan Steele advises that gorse was once far more extensive on the property and that regeneration of native trees at these areas has been rapid.

**ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:**

<b>Primary Criteria</b>	<b>Rank</b>	<b>Notes</b>
Representativeness	M	A good example of young regenerating native forest typical of this part of the ecological district.
Rarity	L/M	No rare or locally uncommon species were observed at this site.
Diversity and pattern	L/M	Diversity is low, though typical for regenerating forest.
Distinctiveness/special features	M	The health and density of the matipo forest canopy is notable.
<b>Other Criteria</b>		
Size/shape	H	A large area that is well buffered.
Connectivity	M/H	Adjoins a large area of indigenous forest at its down-valley boundary.
Long-term Sustainability	M/H	Regeneration of native forest is likely to continue at this site with little management.

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

Duncan Steele advises that gorse was formerly much more extensive on the property and that native trees have regenerated rapidly in those areas remaining in gorse. The moderately steep slopes occupied by this SNA have limited potential for farm development.

**Discussion:**

This area meets the District Plan criteria for a Significant Natural Area. Important features of the area are the presence of a relatively extensive area of regenerating indigenous vegetation and that the area lies adjacent to a large area of older indigenous forest down valley.

# TIMARU DISTRICT SNA SURVEY

SNA 361c

**Area Name:** Steele Main Gully Forest  
**Location (central map reference):** J38: 433-664  
**Ecological District:** Geraldine/Fairlie  
**Surveyors:** Mike Harding and Cathy Mountier

**Property:** Duncan Steele  
**Nearest Locality:** Totara Valley  
**Area Size (ha):** 17.1      **Altitude (m):** 350-450  
**Survey Time:** 3 hours      **Survey Date:** 25-06-12

## General Description:

This SNA lies on moderately steep slopes of a large incised valley on the eastern flank of the Brothers Range. It supports podocarp-hardwood forest at its centre and younger hardwood forest on other slopes. It adjoins SNA 361b at its up-valley (west) end and lies close to another large area of indigenous forest (SNA 360) at its down-valley (northeast) end.

## Plant Communities:

Three main plant communities are present: hardwood forest on shaded slopes; hardwood forest on sunny slopes; and, kanuka forest. These plant communities are described separately below. Naturalized (exotic) species are indicated with an asterisk\*.

### Shaded slope forest:

The canopy of this forest is dominated by broadleaf, five-finger and matipo. Other canopy species are wineberry, cabbage tree, lancewood, lemonwood, kanuka, kowhai, mapou, mahoe, yellowwood, fuchsia, marbleleaf, bush lawyer, lawyer, pohuehue and native jasmine. Additional emergent species at areas of older forest are matai, narrow-leaved lacebark, lowland ribbonwood and pokaka.

The forest understorey is dominated by mahoe and poataniwha. Other understorey species are mapou, *Coprosma rhamnoides*, *Coprosma rotundifolia*, *Coprosma crassifolia*, yellowwood, lancewood, koromiko, poroporo and bush lawyer.



*The central part of SNA 361c, with kanuka forest at left, shaded-slope forest at right, and emergent podocarps in the valley bottom (centre).*

Ground-cover species are bush lily, prickly shield fern, hound's tongue fern, hen and chickens fern, *Asplenium appendiculatum*, *Asplenium richardii*, *Asplenium hookerianum*, necklace fern, *Asplenium* fern hybrids (e.g. *flaccidum* x *appendiculatum*), mountain kiokio, hookgrass, hairy pennywort and cardamine. Seedlings present are broadleaf, five-finger, matipo, mahoe, mapou, kowhai, cabbage tree, wineberry and native jasmine.

Species present on the forest margin or at forest openings are *Coprosma propinqua*, bush lawyer, *Clematis foetida*, Himalayan honeysuckle\*, poroporo and *Senecio dunedinensis*.

Additional species present at damper sites are pate, horopito, kiokio, *Blechnum chambersii*, *Blechnum fluviatile*, *Leptopteris hymenophylloides*, creeping buttercup\* and cleavers\*.



*Younger forest on sunny slopes at SNA 361c.*

#### Sunny slope forest:

The canopy of this forest is dominated by matipo, lemonwood and five-finger. Other canopy species are broadleaf, mahoe, kowhai, mapou, wineberry, yellowwood, kanuka, bush lawyer, pohuehue and native jasmine. Additional emergent species at areas of older forest are totara and narrow-leaved lacebark.

The forest understorey is dominated by mapou and *Coprosma rhamnoides*. Other understorey species are mahoe, five-finger, lancewood, yellowwood, *Coprosma rotundifolia*, *Coprosma crassifolia*, poataniwha, matipo, native jasmine and bush lawyer.

Ground-cover species are prickly shield fern, common shield fern, hound's tongue fern, necklace fern, button fern, *Libertia ixioides*, hookgrass, hairy pennywort, *Dichondra repens* and occasionally *Asplenium lyallii*, *Blechnum procerum* and *Blechnum vulcanicum*. Also present are seedlings of matipo, poroporo and *Coprosma* species.

Species commonly present on the forest margin or at forest openings are *Coprosma tayloriae*, gorse\*, Himalayan honeysuckle\*, elderberry\*, blackberry\*, bracken, *Hypolepis ambigua*, thousand-leaved fern, water fern, male fern\*, foxglove\* and pennywort.

### Kanuka forest:

This forest is present at the margins of the area. Its canopy is dominated by kanuka. Typical understorey species are *Helichrysum lanceolatum*, *Coprosma rhamnoides*, *Coprosma crassifolia*, mapou, bush lawyer and native jasmine. Ground-cover species are necklace fern, button fern, cardamine, foxglove\* and pennywort.

This forest community grades to mixed hardwood forest and in many places contains plant species also present in those forests.

### **Birds/Fauna Observed:**

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

### **Notable Flora, Fauna and Habitats:**

Important features of this area are the diversity of plant species, the presence of podocarp trees (matai and totara), the central part of the area which supports a good range of representative canopy and emergent species (narrow-leaved lacebark, lowland ribbonwood and pokaka), the presence of three locally uncommon plant species (pokaka, *Leptopteris hymemophylloides* and *Libertia ixioides*), the habitat the area provides for forest birds including an at-risk (declining) species (rifleman) and the size of the area.

### **Notable Plant and Animal Pests:**

Gorse, Himalayan honeysuckle, elderberry and blackberry are the most common plant pests present. However, these species do not pose a significant threat to the intact forest. A large sycamore tree is present at the eastern margin of the forest. This species does pose a threat as its seedlings are shade tolerant and it can easily overtop native forest. Animal pests were not surveyed.



*Forest at the down-valley (northeast) end of SNA 361c.*

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

This area of forest is securely fenced along most of its boundaries. It is buffered by its location in a steep-sided valley and by plantation forest at its southeast edge. The forest is contiguous with younger regenerating native forest in the upper valley (SNA 361b) and lies close to another important area of native forest lower in the valley (SNA 360). It makes a valuable contribution to forest bird habitat in the wider area.

**Condition and Management Issues:**

The forest is in good condition. At most parts the forest understorey is healthy and there is good regeneration of canopy species. The most important management issues are maintenance of boundary fences to restrict grazing animals, and ensuring wild animals (especially possums and wallabies) are controlled. It would be prudent to remove the large sycamore tree from the forest margin, to reduce the risk of sycamore becoming established in the forest.

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**ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:**

<b>Primary Criteria</b>	<b>Rank</b>	<b>Notes</b>
Representativeness	<b>H</b>	A good example of forest typical of the ecological district, with a good range of original canopy species, including podocarps.
Rarity	<b>M</b>	Provides habitat for an at-risk (declining) bird species (rifleman). Supports three locally uncommon plant species.
Diversity and pattern	<b>M/H</b>	A diverse range of plants species is present; species diversity is high compared with most other remnants in this area.
Distinctiveness/special features	<b>M</b>	The presence of large old emergent trees, notably matai, narrow-leaved lacebark and lowland ribbonwood, is notable.
<b>Other Criteria</b>		
Size/shape	<b>H</b>	A relatively large area for this part of the ecological district that is well buffered and well fenced.
Connectivity	<b>M/H</b>	Forms an important and ecologically viable link between other areas of native forest.
Long-term Sustainability	<b>M/H</b>	Some animal pest control may be required to maintain ecological values of the area in the long term.

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

This SNA occupies steep slopes that have very limited potential for farm development. Access tracks for farm management are already formed across the gully. Continued regeneration at the forest margins and at the up-valley end of the area (SNA 361b) will increase the ecological value of this area over time.

**Discussion:**

This area easily meets the District Plan criteria for a Significant Natural Area. Important features of the area are the diversity of plant species, the presence of older forest (with matai, totara, narrow-leaved lacebark and lowland ribbonwood) at the central part of the area, the presence of three locally uncommon plant species, the habitat the area provides for forest birds including an at-risk (declining) species (rifleman) and the size of the area.



## TIMARU DISTRICT SNA SURVEY

SNA 576b

**Area Name:** Steele Northern Gully Forest  
**Location (central map reference):** J38: 431-678  
**Ecological District:** Geraldine/Fairlie  
**Surveyors:** Mike Harding and Cathy Mountier

**Property:** Duncan Steele  
**Nearest Locality:** Totara Valley  
**Area Size (ha):** 0.92      **Altitude (m):** 380-410  
**Survey Time:** 1 hour      **Survey Date:** 27-06-12

### General Description:

This SNA lies on moderately steep south-facing slopes of a small upper gully on the eastern flank of the Brothers Range. It lies close to a much larger area of indigenous forest (SNA 576a) at its down-valley (northeast) boundary.

### Plant Communities:

The main plant community present is hardwood forest, with dense gorse scrub at its boundary, described below. Naturalized (exotic) species are indicated with an asterisk\*.

The forest canopy is dominated by broadleaf and five-finger. Other canopy species are kowhai, wineberry, lemonwood, lancewood, cabbage tree, matipo, kanuka, pohuehue, bush lawyer and, nearer the stream, fuchsia. Cabbage trees and totara are emergent from the forest at its lower margin.

Gorse\* dominates at the forest margin and on adjacent north-facing slopes. Other species present at the forest margin are Himalayan honeysuckle\*, fuchsia and bracken. A single deciduous tree (elm?) is present beside the stream at the upstream end of the area.



*SNA 576b*

### Birds/Fauna Observed:

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

### Notable Flora, Fauna and Habitats:

Important features of this area are the presence of podocarp trees (totara), the habitat the area provides for forest birds and its proximity to a much larger area of indigenous forest downstream.

**Notable Plant and Animal Pests:**

Gorse and Himalayan honeysuckle are the most important plant pests present. However, these species do not pose a significant threat to the forest. Gorse provides favourable habitat for regeneration of indigenous forest. Animal pests were not surveyed.

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

The boundaries of this area, including adjacent gorse scrub, are securely fenced. The area is buffered by its location on a south-facing slope and lies close to a larger area of indigenous forest.

**Condition and Management Issues:**

The area is in good condition for young native forest. The main management issues are continued exclusion of stock and ongoing animal pest control.

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**ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:**

<b>Primary Criteria</b>	<b>Rank</b>	<b>Notes</b>
Representativeness	M/H	A good example of regenerating forest, including podocarp (totara) trees in the forest canopy.
Rarity	L/M	No rare species were observed, though the area may provide habitat for an at-risk (declining) bird species (rifleman), which is present nearby.
Diversity and pattern	L	Species diversity is low.
Distinctiveness/special features	M	The presence of totara is a special feature.
<b>Other Criteria</b>		
Size/shape	M	A small area, but well fenced and well buffered.
Connectivity	M	Lies very close to a larger area of indigenous forest downstream.
Long-term Sustainability	M/H	This forest is likely to continue to regenerate and improve with little intervention.

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

The steep slopes occupied by this SNA have limited potential for farm development. The area has been informally protected by a secure fence.

**Discussion:**

This area only just meets the District Plan criteria for a Significant Natural Area. Important features of the area are the presence of podocarp trees (totara), the habitat the area provides for forest birds and its proximity to a much larger area of indigenous forest downstream.

## 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.
bittersweet* .....	<i>Solanum dulcamara</i>
blackberry* .....	<i>Rubus fruticosus</i>
black nightshade* .....	<i>Solanum nigrum</i>
bracken .....	<i>Pteridium esculentum</i>
broadleaf .....	<i>Griselinia littoralis</i>
broom* .....	<i>Cytisus scoparius</i>
burdock* .....	<i>Arctium minus</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>
Californian thistle* .....	<i>Cirsium arvense</i>
cardamine .....	<i>Cardamine debilis</i>
cleavers* .....	<i>Galium aparine</i>
cocksfoot* .....	<i>Dactylis glomerata</i>
common shield fern .....	<i>Polystichum richardii</i>
creeping buttercup* .....	<i>Ranunculus repens</i>
dwarf mistletoe .....	<i>Korthalsella clavata</i>
elderberry* .....	<i>Sambucus nigra</i>
elm* .....	<i>Ulmus x hollandica</i>
five-finger .....	<i>Pseudopanax arboreus</i>
foxglove* .....	<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>
hard fern .....	<i>Paesia scaberula</i>
hen and chickens fern .....	<i>Asplenium gracillimum</i>
Himalayan honeysuckle* .....	<i>Leycesteria formosa</i>
hookgrass .....	<i>Uncinia</i> sp.
horopito/pepperwood .....	<i>Pseudowintera colorata</i>
hound's tongue fern .....	<i>Microsorium pustulatum</i>
kanuka .....	<i>Kunzea ericoides</i>
kiokio .....	<i>Blechnum novae-zelandiae</i>
korokio .....	<i>Corokia cotoneaster</i>
koromiko .....	<i>Hebe salicifolia</i>
kowhai .....	<i>Sophora microphylla</i>
lancewood .....	<i>Pseudopanax crassifolius</i>
lawyer .....	<i>Rubus schmidelioides</i>
lemonwood .....	<i>Pittosporum eugenioides</i>
lowland ribbonwood .....	<i>Plagianthus regius</i>
mahoe/whiteywood .....	<i>Melicytus ramiflorus</i>
male fern* .....	<i>Dryopteris filix-mas</i>
manuka .....	<i>Leptospermum scoparium</i>
mapou .....	<i>Myrsine australis</i>
marbleleaf/putaputaweta .....	<i>Carpodetus serratus</i>
matai/black pine .....	<i>Prumnopitys taxifolia</i>
matipo/kohuhu .....	<i>Pittosporum tenuifolium</i>
mountain akeake .....	<i>Olearia avicenniifolia</i>
mountain flax .....	<i>Phormium cookianum</i>
mountain kiokio .....	<i>Blechnum montanum</i>
narrow-leaved lacebark .....	<i>Hoheria angustifolia</i>

narrow-leaved mahoe.....	<i>Melicytus lanceolatus</i>
native jasmine .....	<i>Parsonsia</i> sp.
necklace fern.....	<i>Asplenium flabellifolium</i>
pate.....	<i>Schefflera digitata</i>
pennywort .....	<i>Hydrocotyle</i> sp.
poataniwha .....	<i>Melicope simplex</i>
pohuehue.....	<i>Muehlenbeckia australis</i>
pokaka.....	<i>Elaeocarpus hookerianus</i>
poroporo.....	<i>Solanum laciniatum</i>
prickly shield fern .....	<i>Polystichum vestitum</i>
scrub pohuehue .....	<i>Muehlenbeckia complexa</i>
soft rush*.....	<i>Juncus effusus</i>
soft tree fern .....	<i>Cyathea smithii</i>
swamp kiokio.....	<i>Blechnum minus</i>
thousand-leaved fern.....	<i>Hypolepis millefolium</i>
totara .....	<i>Podocarpus totara</i>
tutu .....	<i>Coriaria sarmentosa</i>
water fern .....	<i>Histiopteris incisa</i>
weeping mapou .....	<i>Myrsine divaricata</i>
wineberry .....	<i>Aristolelia serrata</i>
yellowwood.....	<i>Coprosma linariifolia</i>