

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

**HAYDEN ROBERTS PROPERTY**  
**(WOODSIDE and GLENFIELD)**



**Report prepared for the Timaru District Council by Mike Harding**  
**February 2010**

# TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

## PROPERTY REPORT

### PROPERTY DETAILS:

**Owners:** ..... Hayden Roberts  
**Valuation Reference:** ..... 24670/044.00 (Woodside) and 24670/171.00 (Glenfield)  
**Address:** ..... Gapes Valley  
**Location:** ..... On the lower southeast slopes of Waitohi Hill, near Gapes Valley.  
**Ecological Districts:** ..... Orari, but close to the Geraldine Ecological District.  
**TDC Land Type:** ..... Hard Rock Hills and Downs.  
**Land Environment:** ..... Q2 (Southeastern Hill Country).

### ECOLOGICAL CONTEXT:

The property lies at the eastern (lower-altitude) boundary of the Orari Ecological District. The original vegetation of this area would have been predominantly podocarp-hardwood forest, possibly with areas of mountain beech forest. Dense podocarp-hardwood (matai-totara-kahikatea-lowland ribbonwood) forest would have occupied the lower hill country and the older terraces and flats. Kanuka forest or shrubland/scrub would have been present at recently disturbed sites, such as along the slips and streams. Wetland vegetation would have been present in poorly drained areas.

The indigenous fauna would have been significantly more numerous and diverse, with a greater range of birds, lizards and invertebrates than is presently found in the area. Long-tailed bats would also have been present.

Other areas of indigenous vegetation are present on nearby properties. The property lies close to the known range of the South Canterbury population of long-tailed bat, a nationally endangered species.

### SIGNIFICANT AREAS ON THE PROPERTY:

Indigenous vegetation of the property was surveyed as part of the District-wide survey of Significant Natural Areas in December 2009. Four areas 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
61a		J38: 605-782	2.39	hardwood forest; podocarp forest
62a		J38: 602-776	13.77	hardwood forest; podocarp forest
72d		J38: 600-766	1.66	hardwood forest; podocarp forest
159b		J38: 590-764	5.8	kanuka-hardwood forest

These SNAs are illustrated on the attached aerial photograph and described in greater detail on the Area Inspection 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 (criterion vii, page B19), though will require some management. SNAs are subject to confirmation by Council after regarding the matters listed under Final Considerations (pages B19-B20). It is expected that SNAs will eventually be listed in the District Plan by way of a 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 areas of indigenous vegetation and habitat on the property were inspected. These comprise modified wetland vegetation along some streams and one area of younger regenerating indigenous vegetation. These areas have some value as indigenous vegetation and habitat, but do not meet the significance criteria in the Timaru District Plan. Failure of these areas to meet the significance criteria does not mean that they are not important for nature conservation or the protection of indigenous biodiversity; it simply means that the areas (as assessed at this time) do not meet the criteria in the Timaru District Plan.



Hayden Roberts  
24670/044.00



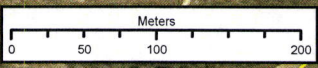
Wobding Road

61a

62a

Pansy Road

Bush Road



1:5,000





Hayden Roberts  
24670/171.00

Parish Road

Bush Road

Trig Road

Stalker Road

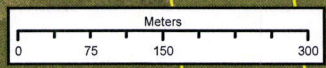
Townsend Road



726



159b



1:7,500



# TIMARU DISTRICT SNA SURVEY

AREA 61a

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**Area Name:**

**Location (central map reference):** J38: 605-782

**Ecological District:** Orari

**Surveyors:** Mike Harding

**Property:** Hayden Roberts (Woodside)

**Nearest Locality:** Gapes Valley

**Area Size (ha):** 2.39

**Altitude (m):** 250-280

**Survey Time:** 1½ hours

**Survey Date:** 18-12-09

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**General Description:**

This SNA lies on a moderately-steep south-facing slope at the northwest corner of the property, adjacent to areas of plantation forest on the property and on Waitohi Hill.

**Plant Communities:**

Two main plant communities are present: hardwood forest on the hill slope; and a small stand of podocarp (kahikatea) forest alongside the stream. These plant communities are described separately below. Naturalized (exotic) species are indicated with an asterisk\*.

**Hardwood forest:**

The canopy of the hardwood forest is dominated by mahoe. Other canopy species are fuchsia, mapou, broadleaf, kowhai, five-finger, cabbage tree, marbleleaf, Himalayan honeysuckle\*, pohuehue, clematis, *Calystegia tuguriorum* and bush lawyer.

Understorey species are *Coprosma rotundifolia*, *Coprosma rhamnoides*, *Coprosma tayloriae*, *Coprosma crassifolia*, marbleleaf, five-finger, wineberry, broadleaf, kowhai, lemonwood, horopito, wheki-ponga, supplejack, pohuehue, bush lawyer and occasional saplings of kahikatea.

Important ground-cover species are common shield fern, hen and chickens fern, *Asplenium richardii* and hound's tongue fern. Other ground-cover species present are prickly shield fern, *Pellaea rotundifolia*, necklace fern, hanging spleenwort, *Asplenium hookerianum*, *Leptopteris hymenophylloides*, mountain kiokio, crown fern, *Blechnum fluviatile*, *Blechnum procerum*, *Libertia ixioides*, male fern\*, bittersweet\*, foxglove\* and seedlings of mapou, pate, kowhai, five-finger, *Coprosma* species, elderberry\*, supplejack, native jasmine, clematis and pohuehue.

Species commonly present along the stream are wineberry, pate, *Hypolepis ambigua*, *Hypolepis rufobarbata*, prickly shield fern, *Carex* sp., *Blechnum fluviatile*, hen and chickens fern, pennywort and male fern\*.

Species commonly present on the forest margin or in forest openings are gorse\*, foxglove\*, pate, *Coprosma rotundifolia*, matipo, poroporo, koromiko, blackberry\*, *Urtica urens*\*, bracken, broom\*, pohuehue and elderberry\*.

**Streamside podocarp forest:**

This small stand of podocarp forest is dominated by kahikatea. Trunk diameters (cm at breast height) of some of the trees are 9, 52, 53, 54, 80 and 110. This forest grades upslope to the forest described above.

**Birds/Fauna Observed:**

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

**Notable Flora, Fauna and Habitats:**

Important features of this area are the presence of podocarp (kahikatea) trees and regeneration, locally-uncommon plant species (wheki-ponga, supplejack, *Libertia ixioides* and *Hypolepis rufobarbata*), an at-risk bird species (rifleman) and the contribution the area makes to the network of fauna habitat in the wider area.

**Notable Plant and Animal Pests:**

No significant plant pests were observed. The introduced nettle (*Urtica urens*) is common along the lower margin but does not pose a threat to the forest. Animal pests were not surveyed, though one deer was observed.

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

The forest is bordered on its upper boundary by plantation forestry. Its lower boundary is fenced, though a strip of grazed pasture is included within this fence. Other indigenous forest (including kahikatea trees) is present on the western boundary.

**Condition and Management Issues:**

The forest is in relatively good condition with a good diversity of plant species. The forest understorey is quite open on the drier spurs. The main management issue is ongoing animal pest control.

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**ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:**

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<b>Primary Criteria</b>	<b>Rank</b>	<b>Notes</b>
Representativeness	<b>M/H</b>	A good example of indigenous forest typical of this part of the ecological district and including podocarp regeneration.
Rarity	<b>M</b>	Provides habitat for an at-risk bird species (rifleman) and several locally-uncommon plant species.
Diversity and pattern	<b>M</b>	Relatively diverse, though species diversity is probably less than that originally present.
Distinctiveness/special features	<b>M</b>	The presence of a stand of kahikatea, including one large old tree, is a special feature.
<hr/> <b>Other Criteria</b>		
Size/shape	<b>M</b>	A relatively small area with a good shape and well buffered.
Connectivity	<b>M</b>	Adjoins indigenous forest on one boundary and is part of a network of fauna habitat in the area.
Long-term Sustainability	<b>M/H</b>	Some animal pest control will probably be required to maintain ecological values in the long term.

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

This area has been informally protected by the landowner. It occupies steeper slopes that 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 podocarps (kahikatea) trees and regeneration, four locally-uncommon plant species, an at-risk bird species (rifleman) and the contribution the area makes to the network of fauna habitat in the wider area.

# TIMARU DISTRICT SNA SURVEY

AREA 62a

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**Area Name:**

**Location (central map reference):** J38: 602-776

**Ecological District:** Orari

**Surveyors:** Mike Harding

**Property:** Hayden Roberts (Woodside)

**Nearest Locality:** Gapes Valley

**Area Size (ha):** 13.77      **Altitude (m):** 220-300

**Survey Time:** 3½ hours      **Survey Date:** 18-12-09

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**General Description:**

This SNA lies on two moderately-steep south-facing slopes and an intervening spur, at the western boundary of the property on the lower slopes of Waitohi Hill.

**Plant Communities:**

Two main plant communities are present: kanuka-hardwood-podocarp forest on the slopes and podocarp-hardwood forest on the stream terrace. These plant communities are described separately below. Naturalized (exotic) species are indicated with an asterisk\*.

Kanuka-hardwood forest:

The forest canopy over most of this area is dominated by scattered large kanuka trees emergent over a hardwood canopy. Trunk diameters (at breast height) of the larger kanuka trees are mostly between 35 and 40 cm, though one large kanuka tree has a trunk diameter of 80 cm. Scattered large totara trees are emergent over the forest canopy in the western part of the forest. One large totara tree has a trunk diameter of approximately 180 cm. Canopy species are mapou, mahoe, lemonwood, broadleaf, fuchsia, lancewood, marbleleaf, five-finger, kowhai, bush lawyer, pohuehue and clematis.

Understorey species are mahoe, mapou, marbleleaf, fuchsia, lemonwood, *Coprosma rhamnoides*, *Coprosma rotundifolia*, *Coprosma crassifolia*, yellowwood, pate, wineberry, lancewood, five-finger, matipo, bush lawyer, supplejack, silver fern, bittersweet\* and rarely toatoa, turepo, horopito, rohutu, karamu, white-climbing rata and hawthorn\* (one sapling, cut and treated with herbicide).

Ground-cover species are hen and chickens fern, *Asplenium hookerianum*, *Hypolepis ambigua*, prickly shield fern, common shield fern, *Leptopteris hymenophylloides*, crown fern, mountain kiokio, *Blechnum fluviatile*, *Blechnum procerum*, hound's tongue fern, *Pellaea rotundifolia*, *Leptolepia novae-zelandiae* (rare), bush lily, *Libertia ixioides*, *Carex* sp., hookgrass, *Uncinia* sp., pennywort, hairy pennywort, bidibid and seedlings of marbleleaf, fuchsia, broadleaf, lemonwood, mahoe, *Coprosma* species, supplejack, native jasmine and clematis.

Additional species present on the forest margin or in forest openings are poroporo, Himalayan honeysuckle\*, foxglove\* and male fern\*.

Terrace podocarp-hardwood forest:

The forest canopy on this gentle terrace along the southern boundary of the SNA is dominated by mahoe, and fuchsia with emergent trees of kahikatea, kaikomako and narrow-leaved lacebark. Trunk diameters (cm at breast height) of some of the kahikatea trees are 11, 30, 50 and 81. Other canopy species are wineberry, pate, kanuka, lancewood, pokaka, lawyer and pohuehue.

The forest understorey is dominated by mahoe, pate and *Coprosma rotundifolia*. Other understorey species are poataniwha, lemonwood, horopito, pokaka, rohutu, *Neomyrtus pedunculata*, *Coprosma propinqua*, soft tree fern, *Calystegia tuguriorum* and saplings of narrow-leaved lacebark and kahikatea (abundant in places). Ground-cover species are prickly shield fern, *Blechnum chambersii*, *Blechnum fluviatile*, mountain kiokio, crown fern, *Leptopteris hymenophylloides*, hen and chickens fern, hound's tongue fern, filmy fern, spikemoss\* and seedlings of supplejack, horopito and kahikatea.

Sycamore\* and ash\* trees are present in and adjacent to the forest at the lower southeast corner of the SNA. One large kahikatea tree (with a trunk diameter of 150 cm) is also present here. The introduced nettle (*Urtica urens*\*) is abundant here. Burdock\* is also present.

**Birds/Fauna Observed:**

Native birds observed during this survey were brown creeper, kereru (NZ pigeon), bellbird, fantail, rifleman, shining cuckoo and grey warbler. One kereru was observed on a nest in a tangle of pohuehue vines at the northern edge of the forest.



**Notable Flora, Fauna and Habitats:**

Important features of this area are the diversity and condition of the forest, the presence and dominance (in places) of podocarps (kahikatea and totara), a high number of locally-uncommon plant species (karamu, silver fern, soft tree fern, *Leptolepia novae-zelandiae*, rohutu, *Libertia ixioides*, *Neomyrtus pedunculata* and supplejack), habitat for an at-risk bird species (rifleman), the size of the area and the habitat it provides for forest birds.

**Notable Plant and Animal Pests:**

The most notable plant pests present are sycamore and ash. Trees of these invasive species are present at the southeast corner of the SNA and are colonising the forest there. Other plant pests observed do not pose a significant threat to the forest. Animal pests were not surveyed.

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

The SNA adjoins other indigenous forest and plantation forest on its western boundary. All other boundaries adjoin pasture, but are securely fenced.

**Condition and Management Issues:**

The forest is mostly in very good condition with remnant emergent podocarps, podocarp regeneration and a healthy forest understorey. The main management issue is control (preferably removal) of the sycamore and ash trees.

**ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:**

<b>Primary Criteria</b>	<b>Rank</b>	<b>Notes</b>
Representativeness	M/H	A very good example of indigenous forest typical of this part of the ecological district and supporting a very good range of species representative of the original forest.
Rarity	M/H	Provides very good habitat for an at-risk bird species (rifleman) and supports a large number (eight) of locally-uncommon plant species.
Diversity and pattern	M/H	A relatively diverse forest with a high number (68) of indigenous plant species.
Distinctiveness/special features	M/H	The area of terrace podocarp-hardwood forest, and number of emergent old podocarp trees are special features.
<b>Other Criteria</b>		
Size/shape	M/H	A moderate sized area with a reasonable shape and well buffered.
Connectivity	M	Adjoins other areas of indigenous forest and makes an important contribution to the network of forest bird habitat in the wider area.
Long-term Sustainability	M/H	Ecological values are likely to persist and improve in the long term, provided sycamore and ash are removed and wild animals controlled.

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

This area has been informally protected by the landowner. Most parts of the area lie on steeper slopes that 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 diversity and condition of the forest, the presence and dominance (in places) of podocarps (kahikatea and totara), eight locally-uncommon plant species, habitat for an at-risk bird species (rifleman), the size of the area and the habitat it provides for forest birds.

# TIMARU DISTRICT SNA SURVEY

AREA 72d

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**Area Name:**

**Location (central map reference):** J38: 600-766

**Ecological District:** Orari

**Surveyors:** Mike Harding

**Property:** Hayden Roberts (Glenfield)

**Nearest Locality:** Gapes Valley

**Area Size (ha):** 1.66

**Altitude (m):** 240-290

**Survey Time:** 2½ hours

**Survey Date:** 14-12-09

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**General Description:**

This SNA lies on a moderately-steep south-facing slope at the western boundary of the property. It adjoins a much larger area of indigenous forest on the adjoining property.

**Plant Communities:**

Two main plant communities are present: kanuka-hardwood forest over most of the area and a small patch of terrace podocarp forest beside the stream at the base of the area. These plant communities are described separately below. Naturalized (exotic) species are indicated with an asterisk\*.

Kanuka-hardwood forest:

The canopy of this forest comprises kanuka, mahoe, broadleaf, mapou, matipo, lancewood, marbleleaf, lemonwood, five-finger, bush lawyer, native jasmine, pohuehue, clematis and rarely cabbage tree. Also present on the upper slopes are pokaka and a small grove of young kahikatea. Trunk diameters (cm at breast height) of the larger trees are: pokaka, 21 and 30; and kanuka, 25 to 35 with occasional larger trees.

Understorey species are mapou, yellowwood, *Coprosma rotundifolia*, *Coprosma rhamnoides*, *Coprosma crassifolia*, *Coprosma rigida*, mahoe, matipo, *Neomyrtus pedunculata*, fuchsia, native jasmine, bush lawyer, and saplings of kahikatea and rarely matai. Additional understorey species on lower slopes are silver fern, supplejack, rohutu, turepo, pate and white-climbing rata.

Ground-cover species present are hen and chickens fern, necklace fern, *Asplenium hookerianum*, *Asplenium richardii*, prickly shield fern, thousand-leaved fern, *Hypolepis ambigua*, *Blechnum fluviatile*, *Blechnum procerum*, *Blechnum chambersii*, *Blechnum penna-marina*, *Leptopteris hymenophylloides*, hound's tongue fern, hard fern, male fern\*, pennywort, bidibid, *Cardamine* sp., hookgrass, *Carex* sp., nettle, wall lettuce\* and seedlings of matipo, mapou, mahoe, five-finger, broadleaf, lemonwood, marbleleaf, wineberry, pohuehue, supplejack and *Coprosma* species.

Other species present in forest openings are fuchsia, poroporo, bittersweet\*, Himalayan honeysuckle\*, elderberry\*, koromiko, water fern, crown fern, scrub pohuehue, *Calystegia tuguriorum*, lawyer, *Senecio* sp., foxglove\*, broom\* and rarely hawthorn\* seedlings (removed).

Additional species present on or near the lower forest margin are narrow-leaved lacebark, *Coprosma propinqua*, hawthorn\*, common shield fern, *Hypolepis rufobarbata*, mountain kiokio, swamp kiokio, blackberry\*, crack willow\* and wire moss.

Terrace podocarp forest:

This small patch of forest occupies a low terrace and is dominated by young kahikatea tree, one matai tree, several narrow-leaved lacebark trees and one kaikomako tree. Trunk diameters (cm at breast height) of the larger trees are: kahikatea, 31 to 57; narrow-leaved lacebark, 40; kaikomako, 29; and matai, 44. Other species present are elderberry\*, horopito and the introduced nettle (*Urtica urens*\*).

**Birds/Fauna Observed:**

Native birds observed during this brief survey were bellbird, rifleman, kereru, fantail, shining cuckoo, brown creeper and grey warbler.

**Notable Flora, Fauna and Habitats:**

Important features of this area are the presence of podocarps (kahikatea and matai), the diversity of the plant species present, the presence of locally uncommon plant species (silver fern, *Hypolepis rufobarbata*, rohutu, *Neomyrtus pedunculata* and supplejack), the presence of at an-risk bird species (rifleman), the quality of the forest bird habitat and the contribution the area makes to fauna habitat in the wider area.



**Notable Plant and Animal Pests:**

The area is relatively free of invasive plant pests. Elderberry is present though not too common. A few hawthorn seedlings were observed (and removed) and some larger hawthorn bushes are present on the lower forest margin. Other naturalized plant species, such as blackberry and Himalayan honeysuckle do not pose a significant threat to the forest. Animal pests were not surveyed, though possum sign was observed.

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

The SNA is well buffered by its location on a relatively steep south-facing slope. It is fenced along its upper boundary and close to its lower boundary. It adjoins an extensive area of similar forest on the western (property) boundary. This boundary is fenced though the fence is in disrepair.

**Condition and Management Issues:**

The forest is in good condition. There are few weeds and little wild animal sign (except for possums). It appears that cattle venture into the lower edge of the forest but with little obvious impact. The main management issue is continued animal pest control (especially possums and feral pigs).

**ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:**

<b>Primary Criteria</b>	<b>Rank</b>	<b>Notes</b>
Representativeness	<b>M/H</b>	A good example of indigenous vegetation typical of the ecological district and containing species that are representative of the original vegetation, notably podocarps (kahikatea and matai).
Rarity	<b>M</b>	Provides good habitat for an at-risk bird species and supports several locally-uncommon plant species.
Diversity and pattern	<b>M/H</b>	A very diverse range of plant species is present.
Distinctiveness/special features	<b>M</b>	The presence of kahikatea, including healthy regeneration is a special feature.
<b>Other Criteria</b>		
Size/shape	<b>M</b>	A relatively small area but with a good shape and well buffered.
Connectivity	<b>M</b>	Adjoins other indigenous forest on one boundary.
Long-term Sustainability	<b>M/H</b>	Some plant and animal pest control is likely to be necessary to retain the ecological values of the area 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 landowner. The diversity of species present and density of the forest understorey indicate that the area has been sympathetically managed for some time. The steepness of the slope limits the potential of the area 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 podocarps (kahikatea and matai), the diversity of the plant species present, the presence of five locally uncommon plant species, the presence of an at-risk bird species (rifleman), the quality of the forest bird habitat and the contribution the area makes to fauna habitat in the wider area.

# TIMARU DISTRICT SNA SURVEY

AREA 159b

**Area Name:**  
**Location (central map reference):** J38: 590-764  
**Ecological District:** Orari  
**Surveyors:** Mike Harding

**Property:** Hayden Roberts (Glenfield)  
**Nearest Locality:** Gapes Valley  
**Area Size (ha):** 5.8      **Altitude (m):** 300-350  
**Survey Time:** 1½ hours      **Survey Date:** 14-12-09

## General Description:

This SNA lies on the upper part of a moderately-steep south-facing slope at the western corner of the property. It adjoins other areas of indigenous vegetation on adjoining properties, including SNA 159a on the lower slopes.

## Plant Communities:

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

The forest canopy is mostly dominated by kanuka and lemonwood. Trunk diameters (at breast height) of the larger kanuka trees range between 25 and 35 cm. Other canopy species are mahoe, fuchsia, marbleleaf, wineberry, mapou, broadleaf, kowhai, five-finger, lancewood, native jasmine, clematis, bush lawyer and pohuehue.

Understorey species are lemonwood, mahoe, five-finger, matipo, mapou, *Coprosma rotundifolia*, *Coprosma rhamnoides*, *Coprosma tayloriae*, *Coprosma rigida*, *Coprosma crassifolia*, wheki-ponga, silver fern, soft tree fern, pate, horopito, supplejack, blackberry\*, tutsan\*, clematis, bush lawyer, *Calystegia tuguriorum* and saplings of kahikatea.

Ground-cover species are hen and chickens fern, *Asplenium hookerianum*, prickly shield fern, common shield fern, mountain kiokio, crown fern, *Blechnum procerum*, *Blechnum fluviatile*, *Blechnum chambersii*, *Hypolepis ambigua*, *Lastreopsis glabella*, *Leptopteris hymenophylloides*, hound's tongue fern, *Libertia ixioides*, hairy pennywort, bidibid, *Uncinia* sp. and seedlings of wineberry, five-finger, lemonwood, pate, mahoe, marbleleaf, fuchsia, matipo, kahikatea, *Coprosma* species, clematis and native jasmine.

Species present in forest openings are wineberry, fuchsia, Himalayan honeysuckle\*, manuka, koromiko, bracken, water fern, gorse\*, poroporo and black nightshade\*. Species present on the forest margin are pohuehue, Himalayan honeysuckle\*, bracken, prickly shield fern, gorse\*, blackberry\*, foxglove\* and pennywort. Common alder\* trees are present in the forest canopy at the lower forest edge.

## Birds/Fauna Observed:

Native birds observed during this brief survey were bellbird, rifleman, kereru (NZ pigeon), grey warbler, fantail, shining cuckoo and brown creeper.

## Notable Flora, Fauna and Habitats:

Important features of this area are the diversity of plant species present, the presence of podocarp (kahikatea) saplings and seedlings, locally uncommon plant species (silver fern, soft tree fern, wheki-ponga, *Lastreopsis glabella*, *Libertia ixioides* and supplejack), the habitat the area provides for an at-risk bird species (rifleman) and the contribution the area makes to the network of fauna habitat in the wider area.

## Notable Plant and Animal Pests:

The forest is relatively free of invasive plant pests. Species present, such as elderberry and Himalayan honeysuckle, do not pose a significant threat to the forest. The common alder trees at the lower forest margin do not appear to be spreading. Animal pests were not surveyed.

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

The area adjoins indigenous forest along its western and most of its lower boundary and pine plantation on its eastern boundary. The upper boundary and remaining parts of the lower boundary adjoin pasture and are securely fenced.



**Condition and Management Issues:**

The forest in this area is in good condition. It is in an advanced state of regeneration, with young kahikatea present. The main management issue is monitoring of the common alder trees and continued animal pest control.

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**ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:**


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<b>Primary Criteria</b>	<b>Rank</b>	<b>Notes</b>
Representativeness	<b>M/H</b>	A good example of indigenous forest typical of this part of the ecological district and including species representative of the original forest canopy.
Rarity	<b>M</b>	Provides good habitat for an at-risk bird species (rifleman) and supports several locally-uncommon plant species.
Diversity and pattern	<b>M</b>	A relatively diverse range of species present.
Distinctiveness/special features	<b>M</b>	The presence of three species of tree ferns and regenerating kahikatea are notable features.
<b>Other Criteria</b>		
Size/shape	<b>M</b>	A small- to moderate-sized area with a good shape and well buffered.
Connectivity	<b>M</b>	Adjoins other indigenous forest and contributes to the network of fauna habitat in the wider area.
Long-term Sustainability	<b>M/H</b>	Some plant and animal pest control will probably be necessary to maintain the ecological values of the area in the long term.

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

This area of forest has been informally protected by the landowner. It is well fenced and in good condition. It occupies steep slopes that are generally unsuitable for farm development.

**Discussion:**

This area 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 (kahikatea) saplings and seedlings, six locally uncommon plant species (including tree ferns and supplejack), the habitat the area provides for an at-risk bird species (rifleman) and the contribution the area makes to the network of fauna habitat in the wider area.

## 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)	
ash*	<i>Fraxinus excelsior</i>
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</i> sp.
cabbage tree/ti rakau .....	<i>Cordyline australis</i>
clematis .....	<i>Clematis paniculata</i>
common alder*	<i>Alnus glutinosa</i>
common shield fern .....	<i>Polystichum richardii</i>
crack willow*	<i>Salix fragilis</i>
crown fern .....	<i>Blechnum discolor</i>
elderberry*	<i>Sambucus nigra</i>
filmy fern .....	<i>Hymenophyllum</i> sp.
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>
hawthorn*	<i>Crataegus monogyna</i>
hen and chickens fern .....	<i>Asplenium bulbiferum</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>
kahikatea/white pine .....	<i>Dacrycarpus dacrydioides</i>
kaikomako .....	<i>Pennantia corymbosa</i>
kanuka .....	<i>Kunzea ericoides</i>
karamu .....	<i>Coprosma lucida</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 beech .....	<i>Nothofagus solandri</i> var. <i>cliffortioides</i>
mountain kiokio .....	<i>Blechnum montanum</i>
narrow-leaved lacebark .....	<i>Hoheria angustifolia</i>
native jasmine .....	<i>Parsonsia</i> sp.



necklace fern .....	<i>Asplenium flabellifolium</i>
nettle* .....	<i>Urtica</i> sp.
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>
rohutu .....	<i>Lophomyrtus obcordata</i>
scrub pohuehue .....	<i>Muehlenbeckia complexa</i>
silver fern/ponga .....	<i>Cyathea dealbata</i>
soft tree fern .....	<i>Cyathea smithii</i>
spikemoss* .....	<i>Selaginella kraussiana</i>
supplejack .....	<i>Ripogonum scandens</i>
swamp kiokio .....	<i>Blechnum minus</i>
sycamore* .....	<i>Acer pseudoplatanus</i>
thousand-leaved fern .....	<i>Hypolepis millefolium</i>
toatoa .....	<i>Haloragis erecta</i>
totara .....	<i>Podocarpus totara</i>
turepo .....	<i>Streblus heterophyllus</i>
tutsan* .....	<i>Hypericum androsaemum</i>
wall lettuce* .....	<i>Mycelis muralis</i>
water fern .....	<i>Hystiopteris incisa</i>
wheki-ponga .....	<i>Dicksonia fibrosa</i>
white climbing rata .....	<i>Metrosideros diffusa</i>
wineberry .....	<i>Aristotelia serrata</i>
wire moss .....	<i>Polytrichum juniperinum</i>
yellowwood .....	<i>Coprosma linariifolia</i>