

TIMARU DISTRICT
SIGNIFICANT NATURAL AREAS
SURVEY

EM DEANS PROPERTY



**Report prepared for Timaru District Council by Mike Harding
September 2010**

TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

PROPERTY REPORT

PROPERTY DETAILS:

Owner: Austen Deans
Valuation References: 24640/036.00
Address: Evans Flat, Blandswood
Location:..... On hill slopes between the Kowhai and Scotsburn streams,
Blandswood.
Ecological District:..... Orari Ecological District.
TDC Land Type:..... Hard Rock Hills and Downs.
Land Environment: Q2 (Southeastern Hill Country).

ECOLOGICAL CONTEXT:

The property lies on moderately-steep slopes on the foothills between Kowhai and Scotsburn streams near Peel Forest Park Scenic Reserve at Blandswood. It lies in the Orari Ecological District, though is close to the Geraldine and High Plains ecological districts. The original vegetation of this area would have been predominantly podocarp-hardwood forest, with localized areas of kowhai-kanuka forest and shrubland alongside active stream channels. 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.

Indigenous vegetation on the property comprises hardwood forest with remnant and regenerating podocarps (kahikatea). This vegetation lies near to other indigenous vegetation on adjacent properties and that protected within the regionally-important Peel Forest Park Scenic Reserve. The property lies within the known distribution of the South Canterbury population of long-tailed bat (a nationally endangered species).

SIGNIFICANT AREAS ON THE PROPERTY:

The property was surveyed as part of the District-wide survey of Significant Natural Areas during August 2010. Two areas, totalling approximately five hectares, are regarded as a 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
662	Deans Gully Forest	J37: 678-983	4.98	Podocarp-hardwood forest
657e		J37: 677-977	0.32	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.

OTHER AREAS INSPECTED ON THE PROPERTY:

Other areas of indigenous vegetation and habitat on the property were inspected: the small patch of young forest (including planted trees) in the gully by the house and an area of regenerating forest at the head of a gully at the southwest corner of the property. However, these areas do not meet the significance criteria in the Timaru District Plan. Failure of these trees 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 they do not (as assessed at this time) quite meet the criteria in the Timaru District Plan. The area of forest in the gully near the house is described below.

Gully forest near house:

Canopy species along the gully are kanuka, mahoe, five-finger, fuchsia, wineberry, marbleleaf, lancewood, narrow-leaved lacebark, lemonwood, pohuehue, native jasmine and bush lawyer.

Understorey species present are mapou, *Coprosma rotundifolia*, *Coprosma rhamnoides*, horopito, pate, five-finger, marbleleaf, rohutu, lancewood, matipo, bush lawyer and saplings of totara and matai.

Ground-cover species are prickly shield fern, hen and chickens fern, *Blechnum fluviatile*, *Blechnum chambersii*, mountain kiokio, *Blechnum minus*, hound's tongue fern, male fern* and seedlings of mahoe, broadleaf, lemonwood, mapou, totara, kahikatea and *Coprosma* species.

Additional species planted at the forest margin include kauri, rimu, celery pine, mountain holly, southern rata, red beech, Douglas fir and *Eucalyptus* sp. Other forest margin species are *Coprosma rigida*, bracken, blackberry*, Himalayan honeysuckle* and gorse*.

While this area of forest is relatively diverse and supports podocarp regeneration, it is too small to meet the District Plan's significance criteria.

EM Deans Property
24640/036.00

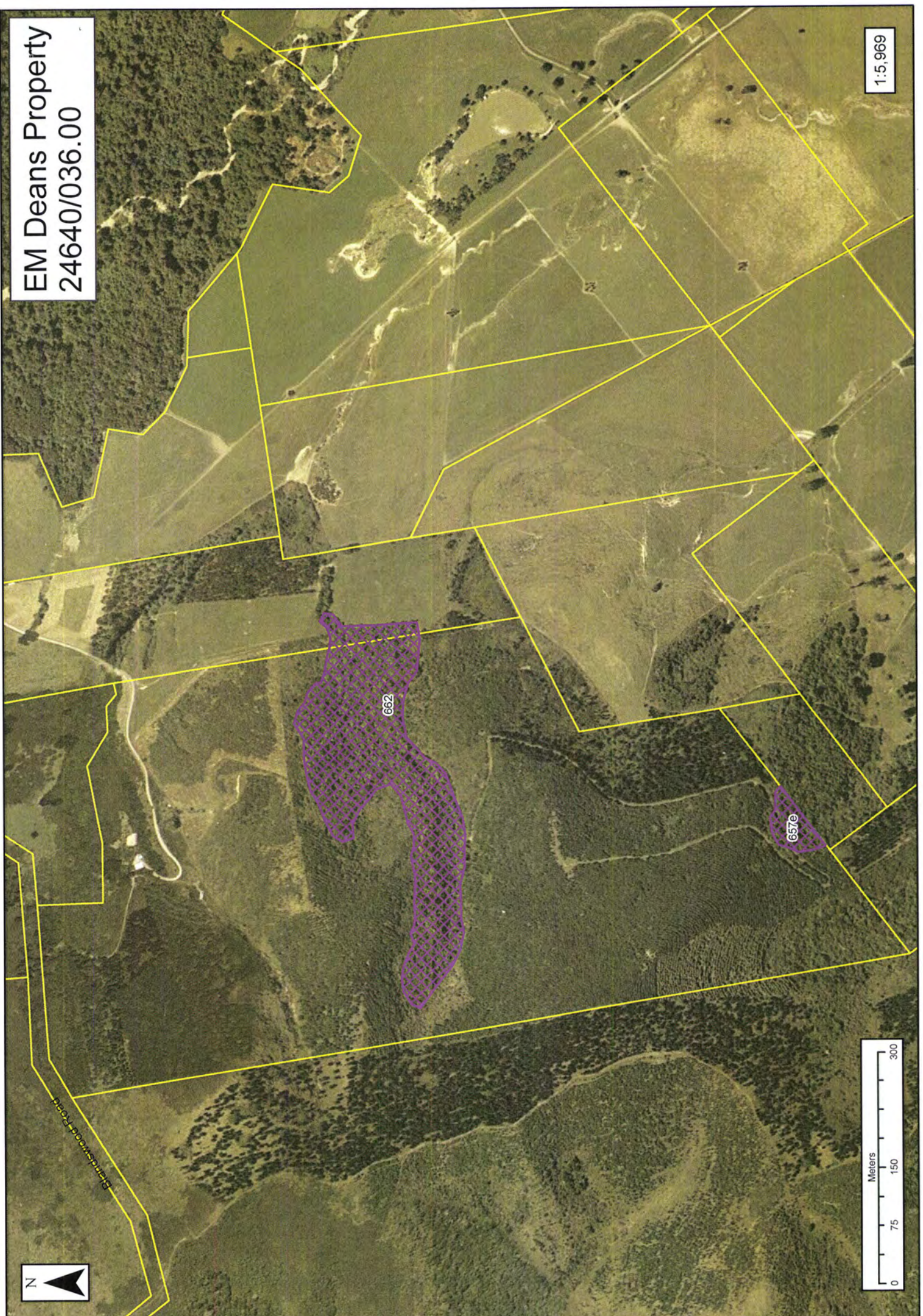
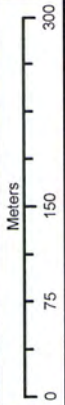
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662

657e



Blindwood Crp



TIMARU DISTRICT SNA SURVEY

SNA 657e

Area Name:	Property: EM Deans (Austen Deans)		
Location (central map reference): J37: 677-977	Nearest Locality: Blandswood		
Ecological District: Orari	Area Size (ha): 0.32	Altitude (m): 450	
Surveyors: Mike Harding	Survey Time: ½ hour	Survey Date: 17-08-10	

General Description:

This SNA lies on moderately-steep east-facing slopes between Kowhai and Scotsburn streams near Blandswood. This relatively small area is part of a larger area of forest down-slope that lies mostly on the adjacent property.

Plant Communities:

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

The forest canopy comprises broadleaf, marbleleaf, mahoe, five-finger, fuchsia, mapou and wineberry.

The forest understorey is dominated by mahoe and *Coprosma rotundifolia*. Other understorey species are horopito, lancewood, pate, bush lawyer and, on the tree trunks, leather-leaf fern and hanging spleenwort.

The forest-floor is dominated by prickly shield fern. Other ground-cover species present are hen and chickens fern, *Blechnum fluviatile*, hound's tongue fern, bidibid, bush lily and seedlings of mahoe, cabbage tree, broadleaf, wineberry, lemonwood, pate, five-finger and native jasmine.

Additional species present on the forest margin, beside the vehicle track, are koromiko, Himalayan honeysuckle*, mountain akeake, *Coprosma tayloriae*, *Asplenium richardii*, bracken, mountain kiokio, *Blechnum chambersii*, *Blechnum penna-marina*, *Leptopteris hymenophylloides*, water fern, hard fern, *Lycopodium scariosum*, *Lycopodium fastigiatum*, broom*, gorse* and foxglove*.

Birds/Fauna Observed:

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

Notable Flora, Fauna and Habitats:

Important features of this area are the habitat the area provides for forest birds including an 'at-risk' species (rifleman), the presence of a locally-uncommon plant species (*Lycopodium scariosum*) and that it is part of a larger area of podocarp-hardwood forest.

Notable Plant and Animal Pests:

No significant plant pests were observed; those present do not pose a significant threat to the forest. Animal pests were not surveyed, though a possum was seen and possum sign was common.

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

This SNA comprises the upper part of a much larger area of forest. It is buffered on its lower boundary by that forest and is surrounded on all other boundaries by plantation forest. It lies close to other areas of indigenous forest, including that protected within the regionally-important Dennistoun Bush and Peel Forest Park Scenic Reserve.

Condition and Management Issues:

The forest is in relatively good condition. The main management issue is continued control of animal pests, notably possums and feral pigs.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M	An example of forest typical of the ecological district. Effectively part of a larger area of podocarp-hardwood forest.
Rarity	M	Provides habitat for an 'at-risk' bird species (rifleman) and supports a locally-uncommon plant species.
Diversity and pattern	M	Diversity is typical, though overall diversity of the larger area of forest is high.
Distinctiveness/special features	L	
Other Criteria		
Size/shape	M	A small area, though part of a relatively large area.
Connectivity	M	Lies close to a number of other areas of indigenous forest and is part of a network of fauna habitat in the area.
Long-term Sustainability	M/H	Ongoing animal pest control will probably be required to maintain ecological values in the long term.

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

This is a small area that is part of a much larger area of forest on the adjacent property. It has been informally protected by the landowners. The steepness of the slope limits its potential for farm development or forestry.

Discussion:

This area just meets the District Plan criteria for a Significant Natural Area. Important features of the area are the habitat it provides for forest birds including an 'at-risk' species (rifleman), the presence of a locally-uncommon plant species (*Lycopodium scariosum*) and that it is part of a larger area of podocarp-hardwood forest.

Area Name: Deans Gully Forest

Location (central map reference): J37: 678-983

Ecological District: Orari

Surveyors: Mike Harding

Property: EM Deans (Austen Deans)

Nearest Locality: Blandswood

Area Size (ha): 4.98

Altitude (m): 340-460

Survey Time: 1½ hours

Survey Date: 17-08-10

General Description:

This SNA lies in a moderately steep, though broad, gully and on gentler river terraces below the gully, on east facing slopes between Kowhai and Scotsburn streams near Blandswood. It is surrounded on three sides by plantation forest and at its lower boundary by pasture.

Plant Communities:

Two main plant communities are present: hardwood forest in the upper gully and on steeper slopes; and podocarp-hardwood forest on gentler lower slopes. These plant communities are described separately below. Naturalized (exotic) species are indicated with an asterisk*.

Hardwood forest on upper slopes:

The forest canopy is dominated by mahoe, lemonwood and lancewood on the hill slopes and by fuchsia and pohuehue or kowhai along the stream. Other canopy species are kanuka, wineberry, mapou, broadleaf, marbleleaf, pate, cabbage tree, five-finger and, along the stream, lowland ribbonwood. Trunk diameters (at breast height) of the larger kowhai trees range between 45 and 55cm.

The forest understorey is dominated by mahoe and *Coprosma rotundifolia*. Other understorey species are marbleleaf, pate, lowland ribbonwood, mountain ribbonwood, mapou, horopito, kowhai, bush lawyer, pohuehue and, on tree trunks, leather-leaf fern, hanging spleenwort and hound's tongue fern.

The forest floor is dominated in most places by prickly shield fern. Other ground-cover species are bidibid, pennywort, *Carex forsteri*, *Blechnum chambersii*, *Blechnum fluviatile*, hen and chickens fern, *Asplenium hookerianum*, *Asplenium richardii*, hanging spleenwort, necklace fern, hound's tongue fern, *Lastreopsis glabella*, male fern* and seedlings of mahoe, broadleaf, kowhai, five-finger, native jasmine and *Coprosma rotundifolia*.

The forest is surrounded by plantation forest or low-stature woody vegetation dominated by fuchsia and gorse*. Additional species present on the forest margin or in forest openings are *Coprosma propinqua*, *Hypolepis ambigua*, koromiko, Himalayan honeysuckle*, black nightshade*, blackberry*, foxglove*, native convolvulus and pohuehue.

Podocarp-hardwood forest on lower terraces:

The forest canopy on the gently sloping river terraces at the lower (eastern) end of the area is dominated by *Coprosma rotundifolia* and fuchsia with emergent trees of lowland ribbonwood, narrow-leaved lacebark, wineberry, broadleaf, lancewood, mapou and kaikomako. Other canopy species present are bush lawyer and pohuehue. A single tall kahikatea tree, with a trunk diameter (at breast height) of 68cm, is present near the lower edge of the site. Young (pole) kahikatea trees are also occasionally present. One large fallen matai tree is present at the stream (Austen Deans, *pers. comm.*). One small (planted) totara tree is present beside the track.

Species present in the relatively open understorey are mahoe, *Coprosma rotundifolia*, *Coprosma rhamnoides*, turepo, horopito, kowhai, marbleleaf, poataniwha, kahikatea, wheki-ponga, bush lawyer, *Clematis marata* and old man's beard* (vines at three locations were cut and treated with herbicide). Also present, on the tree trunks, are white climbing rata, hound's tongue fern, hanging spleenwort, leather-leaf fern and *Lycopodium varium*.

The stony forest floor is dominated by prickly shield fern. Other ground-cover species are the herb, *Schizeilema trifoliolatum* (abundant in places), hen and chickens fern, bidibid and seedlings of mahoe,

kowhai, lemonwood, *Coprosma rotundifolia*, wineberry, pate, cabbage tree, native jasmine and occasionally kahikatea.

Additional species present near the incised stream are crown fern, bush lily and water fern. Pohuehue is common at the lower forest margin.

Birds/Fauna Observed:

Native birds observed during this brief survey were kereru (NZ pigeon), rifleman, grey warbler, brown creeper, fantail, bellbird and harrier. Several kereru were observed during the survey, feeding on kowhai.

Notable Flora, Fauna and Habitats:

Important features of this area are the presence of kahikatea (one old tree and regeneration), the above-average diversity of plant species, the presence of three locally-uncommon plant species (*Lastreopsis glabella*, *Lycopodium varium* and *Schizeilema trifoliolatum*), the presence of an 'at-risk' bird species (rifleman), the habitat the area provides for forest birds and the contribution it makes to fauna habitat in the wider area.

Notable Plant and Animal Pests:

The most important plant pest observed was old man's beard. Vines observed at three locations at the lower part of the site were cut and treated with herbicide. However, other vines of this invasive species are likely to be present elsewhere in the forest. Other plant pests present do not pose a significant threat to the forest. Animal pests were not surveyed, but possum sign and pig sign were observed.

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

This area of forest is well buffered by its location in a gully and by plantation forest on three sides. The lower boundary is fenced from the adjacent farmland. The area lies close to other areas of indigenous forest, including regionally-important areas of forest at Dennistoun Bush and Peel Forest Park Scenic Reserve.

Condition and Management Issues:

The forest is in relatively good condition, though the understorey and forest-floor appear to be affected by animal browse, especially in the lower terrace forest. Removal of old man's beard, continued control of animal pests and protection of the forest understorey from grazing animals are the most important management issues.

Property Owner Comment:

Karearea (NZ falcon) are present in the area. A small-leaved fuchsia is present on slopes above the forest (probably *Fuchsia excorticata* x *perscandens*). Keen to re-introduce morepork to the area.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M/H	A good example of indigenous forest typical of the ecological district and containing species representative of the original forest canopy, notably kahikatea, kowhai and lowland ribbonwood.
Rarity	M	Provides habitat for an 'at-risk' bird species: rifleman (declining); and supports three locally-uncommon plant species.
Diversity and pattern	M	A relatively diverse range of plant species is present in two main habitats: hill-slope and river terrace.
Distinctiveness/special features	M	The relatively extensive stony river terrace is a notable feature.
Other Criteria		
Size/shape	H	A moderate-sized area for the Orari Ecological District, with a good shape and well buffered.
Connectivity	M	Does not adjoin other areas of indigenous vegetation but lies relatively close to extensive areas of protected forest.
Long-term Sustainability	M/H	Some plant and animal pest control 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 informally protected by the landowners. It has only limited potential for farm development.

Discussion:

This area easily meets the District Plan criteria for a Significant Natural Area. Important features of the area are the presence of kahikatea (one old tree and regeneration), the above-average diversity of plant species, the presence of three locally-uncommon plant species (*Lastreopsis glabella*, *Lycopodium varium* and *Schizeilema trifoliolatum*), the presence of an 'at-risk' bird species (rifleman), the habitat the area provides for forest birds and the contribution it makes to fauna habitat in the wider area.



Upper part of SNA 662

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.
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>
bush lawyer	<i>Rubus cissoides</i>
bush lily	<i>Astelia</i> sp.
cabbage tree/ti rakau	<i>Cordyline australis</i>
crown fern	<i>Blechnum discolor</i>
five-finger	<i>Pseudopanax arboreus</i>
foxglove*	<i>Digitalis purpurea</i>
fuchsia	<i>Fuchsia excorticata</i>
gorse*	<i>Ulex europaeus</i>
hanging spleenwort	<i>Asplenium flaccidum</i>
hard fern	<i>Paesia scaberula</i>
hen and chickens fern	<i>Asplenium bulbiferum</i>
Himalayan honeysuckle*	<i>Leycesteria formosa</i>
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>
koromiko	<i>Hebe salicifolia</i>
kowhai	<i>Sophora microphylla</i>
lancewood	<i>Pseudopanax crassifolius</i>
leather-leaf fern	<i>Pyrrhosia eleagnifolia</i>
lemonwood	<i>Pittosporum eugenioides</i>
lowland ribbonwood	<i>Plagianthus regius</i>
mahoe/whiteywood	<i>Meliccytus ramiflorus</i>
male fern*	<i>Dryopteris filix-mas</i>
mapou	<i>Myrsine australis</i>
marbleleaf/putaputaweta	<i>Carpodetus serratus</i>
matai	<i>Prumnopitys taxifolia</i>
mountain akeake	<i>Olearia avicenniifolia</i>
mountain kiokio	<i>Blechnum montanum</i>
mountain ribbonwood	<i>Hoheria lyallii</i>
narrow-leaved lacebark	<i>Hoheria angustifolia</i>
native convolvulus	<i>Calystegia tuguriorum</i>
native jasmine	<i>Parsonsia</i> sp.
necklace fern	<i>Asplenium flabellifolium</i>
old man's beard*	<i>Clematis vitalba</i>
pate	<i>Schefflera digitata</i>
pennywort	<i>Hydrocotyle</i> sp.
poataniwha	<i>Melicope simplex</i>
pohuehue	<i>Muehlenbeckia australis</i>
prickly shield fern	<i>Polystichum vestitum</i>
rohutu	<i>Lophomyrtus obcordata</i>
totara	<i>Podocarpus totara</i>
turepo	<i>Streblus heterophyllus</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>