

TIMARU DISTRICT
SIGNIFICANT NATURAL AREAS
SURVEY

KOWHAI RESERVE (RES 2360)
TIMARU DISTRICT COUNCIL



Report prepared for Timaru District Council by Mike Harding
June 2011

TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

PROPERTY REPORT

PROPERTY DETAILS:

Owners: Timaru District Council
Valuation References: 24640/050.00
Address: Blair Road, Peel Forest
Location: On a recent terrace of Scotsburn Stream, just below the lower gorge.
Ecological District: Boundary of Geraldine, High Plains and Orari ecological districts.
TDC Land Types: Plains and Hard Rock Hills and Downs.
Land Environments: N2 (eastern South Island plains) and Q2 (south-eastern hill country).

ECOLOGICAL CONTEXT:

The property lies on a recent alluvial terrace adjacent to Scotsburn Stream, just below where the stream flows from its lower gorge. It lies on the boundary of the High Plains and Orari ecological districts, though is also close to the Geraldine Ecological District.

The original vegetation of this area would have been predominantly podocarp-hardwood forest, probably with localized areas of kowhai-kanuka forest and shrubland alongside the active stream channel. 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.

SIGNIFICANT AREAS ON THE PROPERTY:

The property was surveyed as part of the District-wide survey of Significant Natural Areas during June 2011. One area, comprising the whole reserve, is regarded as a Significant Natural Area (SNA) when assessed against the District Plan criteria.

This SNA is illustrated on the attached aerial photograph and described in greater detail on the SNA Survey Form in this report. This area meets the ecological criteria in the Timaru District Plan (criteria i-vi, pages B18-B19) and is considered to be sustainable with appropriate management (criterion vii, page B19), primarily plant pest control. 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.

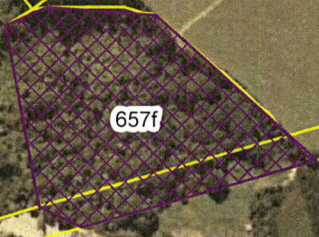
Scientific names of species cited by common name in this report

(Note: this is not a complete species list; it is a list only of species cited by common name in this report)

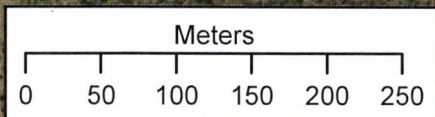
Common Name	Scientific name
(* = naturalised species)	
ash*	<i>Fraxinus excelsior</i>
blackberry*	<i>Rubus fruticosus</i>
broadleaf	<i>Griselinia littoralis</i>
broom*	<i>Cytisus scoparius</i>
cabbage tree/ti rakau	<i>Cordyline australis</i>
Chilean flame creeper*	<i>Tropaeolum speciosum</i>
crack willow*	<i>Salix fragilis</i>
creeping buttercup*	<i>Ranunculus repens</i>
elderberry*	<i>Sambucus nigra</i>
fuchsia	<i>Fuchsia excorticata</i>
gorse*	<i>Ulex europaeus</i>
hen and chickens fern	<i>Asplenium gracillimum</i>
Himalayan honeysuckle*	<i>Leycesteria formosa</i>
holly*	<i>Ilex aquifolium</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>
kowhai	<i>Sophora microphylla</i>
lancewood	<i>Pseudopanax crassifolius</i>
leather-leaf fern	<i>Pyrrosia eleagnifolia</i>
lemonwood	<i>Pittosporum eugenioides</i>
mahoe/whiteywood	<i>Melicytus ramiflorus</i>
male fern*	<i>Dryopteris filix-mas</i>
mapou	<i>Myrsine australis</i>
marbleleaf/putaputaweta	<i>Carpodetus serratus</i>
narrow-leaved lacebark	<i>Hoheria angustifolia</i>
native jasmine	<i>Parsonsia</i> sp.
old man's beard*	<i>Clematis vitalba</i>
pate	<i>Schefflera digitata</i>
pohuehue	<i>Muehlenbeckia australis</i>
prickly shield fern	<i>Polystichum vestitum</i>
sycamore*	<i>Acer pseudoplatanus</i>
totara	<i>Podocarpus totara</i>
turepo	<i>Streblus heterophyllus</i>
tutu	<i>Coriaria sarmentosa</i>
wineberry	<i>Aristotelia serrata</i>



Kowhai Reserve
Res 2360 (TDC)
24640/050.00



657f



Horstall Road

1:5,000

TIMARU DISTRICT SNA SURVEY

SNA 657f

Area Name: Kowhai Reserve

Location (central map reference): J37: 678-971

Ecological District: Geraldine/Orari

Surveyors: Mike Harding and Bruce Allan

Property: Timaru District Council (RES 2360)

Nearest Locality: Evans Flat

Area Size (ha): 1.87

Altitude (m): 300

Survey Time: 1 hour

Survey Date: 17-06-11

General Description:

This SNA lies on a small low terrace of Scotsburn Stream just below the point the stream emerges from its lower gorge. It adjoins other indigenous forest further upstream on the terrace and on the adjacent hill slope.

Plant Communities:

The main plant community present is sycamore-ash-podocarp forest. This plant community is described below. Naturalized (exotic) species are indicated with an asterisk*.

The forest canopy of most parts of the forest is dominated by sycamore*, ash* and old man's beard*. At the inland (northern) part of the reserve, indigenous trees, including kahikatea, are co-dominant. Other canopy species are totara, broadleaf, marbleleaf, cabbage tree, narrow-leaved lacebark, kaikomako, mahoe, lancewood, kowhai, fuchsia, wineberry, native jasmine and pohuehue. Horopito, marbleleaf, kaikomako, mahoe and turepo are present as sub-canopy trees. Trunk diameters (at breast height) of the larger canopy trees are: kahikatea, 78cm; and kaikomako, 30cm.

The forest understorey is relatively open. Important plant species are kaikomako and turepo. Other understorey species are *Coprosma rotundifolia*, mapou, mahoe, elderberry*, horopito, pate, lemonwood, holly*, native jasmine and saplings of narrow-leaved lacebark, totara, kahikatea and sycamore*. Present on tree trunks are hound's tongue fern, leather-leaf fern, *Asplenium richardii*, *Asplenium hookerianum* and one plant of the locally-uncommon *Huperzia varia*.

The forest floor was, at the time of survey, carpeted with a layer of fallen sycamore leaves. Commonly present are prickly shield fern and moss. Other ground-cover species are creeping buttercup*, blackberry*, hen and chickens fern, male fern* and seedlings of mahoe, lancewood, kowhai, native jasmine, sycamore*, holly* and *Coprosma* species.

Species present at the forest margin and along the stream are Himalayan honeysuckle*, gorse*, broom*, blackberry*, Chilean flame creeper*, crack willow* (planted) and tutu.

Birds/Fauna Observed:

Native birds observed during this brief survey were bellbird, fantail, rifleman, kereru (NZ pigeon) and harrier hawk.

Notable Flora, Fauna and Habitats:

Important features of this area are the presence of mature and regenerating podocarps, a locally uncommon perching plant species (*Huperzia varia*), the relative abundance of turepo (*Streblus heterophyllus*) and kaikomako (*Pennantia corymbosa*), the habitat the area provides for an at risk (declining) bird species (rifleman) and role the area plays buffering the stream and adjacent forest.

Notable Plant and Animal Pests:

Sycamore, ash and old man's beard are dominant over substantial parts of the reserve. Other invasive plant pests, including holly, elderberry and Chilean flame creeper, are also present. Animal pests were not surveyed, though possums, pigs and possibly deer are likely to be present.

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

This area of terrace forest is buffered on the upper (northwest) boundary by a much more extensive area of indigenous forest that extends onto adjacent hill slopes. It is securely fenced along its southern boundary. The stream boundary is protected to some extent by flood protection works, including planted crack willow trees. A stand of large exotic trees separates the area from farmland on its eastern boundary.

Condition and Management Issues:

The forest canopy is, at present, severely compromised by the presence and in places dominance of tall sycamore and ash trees and the smothering effects of old man's beard. However, indigenous trees are present in the canopy and are co-dominant at the inland side of the SNA. Saplings of indigenous canopy trees, such as kahikatea, totara, narrow-leaved lacebark, mahoe and lemonwood are present in the understorey. This SNA is within a wider area targeted for plant pest control over the 2011/2012 summer. Funding is available under that plant pest control project to remove invasive plant pests (sycamore, ash, old man's beard, holly and elderberry) from this and adjacent SNAs.

Property Owner Comment:

Council Property Manager advises that the reserve is unlikely to be used for gravel extraction at this location.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M	A highly-modified (by sycamore and ash) example of lowland terrace podocarp forest, though still containing canopy species representative of the original vegetation.
Rarity	M/H	Provides habitat for an at risk (declining) bird species (rifleman) and supports a locally-uncommon plant species (<i>Huperzia varia</i>). Indigenous forest on recent lowland river terraces is now very rare in Canterbury.
Diversity and pattern	L/M	Plant species diversity is substantially reduced.
Distinctiveness/special features	M	The presence of larger podocarp trees and podocarp regeneration is a special feature.
Other Criteria		
Size/shape	M	A small SNA, though with a good shape and well buffered.
Connectivity	M	Adjoins other indigenous forest on its inland boundary.
Long-term Sustainability	L/M	Plant pest control will 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 parcel of land is set aside as a Local Purpose (gravel) reserve and administered by Timaru District Council. Extraction of gravel from the reserve would be incompatible with the protection of its ecological values. Flood protection works could continue at the reserve margin without compromising ecological values, so long as such works were carefully managed.

Discussion:

This area meets the District Plan criteria for a Significant Natural Area. Important features of the area are the presence of mature and regenerating podocarps, a locally uncommon perching plant species (*Huperzia varia*), the relative abundance of turepo and kaikomako, the habitat the area provides for an at risk (declining) bird species (rifleman), the role the area plays buffering the stream and adjacent forest, and that it is a good example of recent river terrace forest.