

TIMARU DISTRICT

SIGNIFICANT NATURAL AREAS
SURVEY

CONWAYS BUSH
ROYAL FOREST AND BIRD
PROTECTION SOCIETY



Report prepared for the Timaru District Council by Mike Harding
April 2008

Mike Harding

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29 April 2008

Royal Forest and Bird Protection Society
c/- Fraser Ross
29a Nile Street
Highfield
Timaru

**COPY FOR YOUR
INFORMATION**

Dear Fraser,

Thank you for providing and collating comments on the draft report of significant indigenous vegetation and habitat at Conways Bush. I have added the comments and the details of management history provided by you and Ines to the description of Conways Bush in the report. Otherwise, the enclosed edited copy is much the same as the draft report.

The indigenous vegetation and habitat at Conways Bush is very important and most deserving of Forest and Bird's care and protection. It is in very good condition, thanks to all the hard work over the years, and is a stronghold for the newly-described *Melicytus* "Waihi". It makes an important contribution to the network of indigenous forest habitat in the Woodbury-Waihi area.

Thank you for your willingness to be part of the District-wide SNA survey and your comments. This report will now become part of the Council's records and it is expected that the SNA will eventually be listed in the District Plan.

I have enclosed several copies of the report so it can be circulated to others in Forest and Bird. I have left one copy unbound, to enable further copying, and can arrange for additional copies if required.

Please do not hesitate to contact me or Andrew Hammond (District Planner, 687-7299) if you have any questions or concerns regarding this report.

Yours sincerely,

Mike Harding

cc: Andrew Hammond, District Planner, Timaru District Council

TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

PROPERTY REPORT

PROPERTY DETAILS:

Owner: Royal Forest and Bird Protection Society
Valuation Reference: 24660/188.02
Address: Clark Road, Woodbury, RD 21, Geraldine
Location: Northwest of Rae Road, between Woodbury Road and the Waihi River, northwest of Woodbury.
Ecological District: Geraldine Ecological District
TDC Land Type: Plains
Land Environment: N2 (well drained plains)

ECOLOGICAL CONTEXT:

The property lies in the northern part of the Geraldine Ecological District, on a terrace of the Waihi River. The original vegetation of this area would have been predominantly podocarp-hardwood forest, dominated by totara. Other important canopy species at free-draining sites were probably matai, narrow-leaved lacebark, kowhai, lemonwood, broadleaf and five-finger. Damper sites may have supported kahikatea and lowland ribbonwood. 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 is regenerating podocarp-hardwood forest dominated by totara and matai. Forest on the property is part of a more extensive area of scattered to dense totara-dominated forest which stretches from the foothills at Waihi Gorge to Waihi Bush near Woodbury. This forest is the largest area of totara forest remaining on the Canterbury Plains. The property provides suitable habitat for two chronically threatened bird species: kereru and rifleman, and supports the best known population of a newly-discovered plant species: *Melicytus* "Waihi" (probably 'acutely threatened'). The property lies within the likely range of the South Canterbury population of long-tailed bat (acutely threatened).

SIGNIFICANT AREAS ON THE PROPERTY:

The property was surveyed as part of the District-wide survey of Significant Natural Areas during March 2008. The area of indigenous forest on the property 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 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 in the long term (criterion vii, page B19), with some management. SNAs are subject to confirmation by Council after regarding the matters listed under Final Considerations (pages B19-B20).

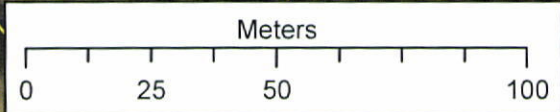
The implication of an area being listed as a SNA is that consent is required from Council for clearance by any means (including burning and spraying with herbicides) or over-planting. This does not normally prevent clearance to prevent shading of buildings, weed control, grazing or the maintenance of tracks and fences. To assist with the protection and management of any SNA, landowners can apply to Council for financial assistance. SNAs will eventually be listed in the District Plan. Any questions regarding the protection, management and use of SNAs should be directed to the District Planner.



Conways Bush (Forest&Bird)
24660/188.02



606a



1:1,500

TIMARU DISTRICT SNA SURVEY

AREA 606a

Area Name: Conways Bush Reserve
Location (central map reference): J37: 640-870
Ecological District: Geraldine
Surveyors: Mike Harding

Property: Royal Forest and Bird Protection Society
Nearest Locality: Woodbury
Area Size (ha): 2.32 **Altitude (m):** 265
Survey Time: 1½ hours **Survey Date:** 29-02-08

General Description:

Conways Bush is located on a terrace of the Waihi River downstream from Waihi Gorge at the edge of the foothills inland from Woodbury. It is one of a series of scattered patches of totara-dominated forest between Waihi Bush near Woodbury and the foothills at Waihi Gorge. The area was bequeathed to the Royal Forest and Bird Protection Society by the late Stan Conway in 1988 and formally protected by a Protected Private Land Agreement in 1990. Society members have undertaken considerable work in the reserve since 1977, notably the removal of aggressive introduced plants.

Plant Communities:

Conways Bush comprises dense young totara-matai forest and adjacent areas of open vegetation with scattered shrubs. These plant communities are described separately below. Naturalized (exotic) species are indicated with an asterisk*. The arboretum is excluded from this area.

Totara-matai forest:

The canopy of this forest is dominated by totara and matai. Other canopy species present are narrow-leaved lacebark, lemonwood, lancewood, broadleaf, kaikomako, kahikatea, bush lawyer and pohuehue. Trunk diameters (at breast height) of the larger trees are: totara, 50-75cm; matai, 50-85cm, five-finger, 40cm; and lancewood, 34cm.

The forest understorey is dominated by poataniwha, *Melicytus* "Waihi", *Coprosma crassifolia* and mahoe. Other understorey species commonly present are matipo, mapou, weeping mapou, five-finger, narrow-leaved lacebark, shrubby mahoe, lancewood, *Coprosma rigida*, bush lawyer and saplings of totara and matai. Understorey species less commonly present are *Coprosma rhamnoides*, *Coprosma rotundifolia*, *Raukaua anomalus*, yellowwood, narrow-leaved mahoe, broadleaf, fuchsia and *Clematis marata*.

The forest floor is relatively open, with some forest floor species confined to damp or stony areas. Forest floor (ground-cover) species present are bidibid, hairy pennywort, *Cardamine* sp., *Ranunculus* sp., *Schizeilema trifoliolatum*, *Blechnum penna-marina*, *Asplenium appendiculatum*, hound's tongue fern, hen and chickens fern, necklace fern, *Asplenium hookerianum*, *Asplenium richardii*, prickly shield fern, common shield fern, *Carex* sp., black nightshade* and male fern*. Also present are seedlings of native jasmine, mahoe, narrow-leaved mahoe, shrubby mahoe, *Melicytus* "Waihi", mapou, broadleaf, matai, totara, kowhai, cabbage tree, lancewood, lemonwood, hawthorn*, sycamore*, barberry* and elderberry* (all seedlings observed were removed).

Grassland-shrubland:

Small parts of the reserve are not forested. These areas are dominated by rank pasture grasses, especially cocksfoot and browntop, with bracken and scattered shrubs. The most common shrub species present here are *Coprosma propinqua* and *Coprosma rigida*. Other plant species present in these open areas and at the forest margin are *Coprosma crassifolia*, *Melicytus* "Waihi", five-finger, kowhai, matipo, lemonwood, mapou, narrow-leaved mahoe, cabbage tree, broadleaf, kanuka, poroporo, blackberry*, thistles*, a single mountain kiokio plant and a single mountain flax bush (planted?). The climbers, pohuehue, *Clematis foetida*, *Clematis marata*, lawyer, *Calystegia tuguriorum* and Chilean flame creeper* are present. Mistletoe is present on *Coprosma propinqua* and matipo.

Additional species observed previously¹ during more careful inspections were *Libertia* sp., *Clematis paniculata*, hanging spleenwort and *Pellaea rotundifolia*. Species recorded during this inspection, but not during the 2001 survey, are yellowwood, poroporo, *Clematis marata*, *Asplenium hookerianum*, *Blechnum*

¹ Recorded during a more detailed inspection of the reserve in 2001.

penna-marina, mountain kiokio, common shield fern, *Cardamine* sp., hairy pennywort and *Schizeilema trifoliolatum*.

Birds/Fauna Observed:

Native birds observed during this brief inspection were grey warbler, silvereve, kereru, bellbird, rifleman and fantail. Other species observed at Conways Bush are harrier, skinks and stick insects.

Notable Flora, Fauna and Habitats:

Notable features of this SNA are the dominance of podocarps (especially totara and matai), the diversity of plant species present, the abundance of the newly-discovered *Melicytus* "Waihi", the virtual absence of common woody weeds, the habitat the reserve provides for threatened species (kereru, rifleman and *Melicytus* "Waihi") and the contribution the reserve makes to the network of fauna habitat in the area. Especially significant is the abundance of *Melicytus* "Waihi", presumably due to the relatively long absence of grazing; the reserve contains the best known population of this species.

Notable Plant and Animal Pests:

The only woody plant pests observed during this brief inspection of the forest were seedlings of sycamore, hawthorn, elderberry and barberry (all seedlings observed were removed). The absence of woody weeds is due to the sustained efforts of Forest and Bird members who visit the reserve twice-yearly to remove weed seedlings. Other weed species present are Chilean flame creeper, blackberry, black nightshade and male fern. Of these, Chilean flame creeper poses the greatest threat. This species appears to be confined to two or three sites in the reserve, but is difficult to control. Male fern can be invasive but could probably be contained by continued removal of young plants. Blackberry and black nightshade are relatively uncommon and do not at present pose a significant threat to the reserve, though considerable control of blackberry has been undertaken. Animal pests were not surveyed.

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

The forest has a compact shape, is well fenced and is not grazed. It adjoins other areas of similar (though less intact) forest to the northwest and southeast. It is an important part of the corridor of scattered forest and network of fauna habitat stretching between the foothills at Waihi Gorge and Waihi Bush near Woodbury.

Condition and Management Issues:

Conways Bush reserve is in excellent condition. It has been protected and carefully managed since 1977 and provides a great example of what can be achieved by sustained intensive weed control. Continued control of invasive introduced plants and control of animal pests are the main management issues, especially as there are seed sources of numerous aggressive plant pests nearby. Monitoring of the population of *Melicytus* "Waihi", especially recruitment of plants into the adult population would be very worthwhile.

Property Owner Comment:

More information about the area is contained in the Conways Bush Reserve Management Plan (2002). Some weed species (such as blackberry) were once much more widespread but have been intensively controlled for many years. Also posing a threat are holly and violet, both of which have been controlled. The presence of ground ivy on the adjoining property is a concern. Forest and Bird members are prepared to assist with control of aggressive weeds on adjoining properties.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M/H	A very good example of indigenous forest typical of the ecological district and containing a good representation of the species originally present.
Rarity	H	Supports the best known population of <i>Melicytus</i> "Waihi": a species that is likely to be classified as 'acutely threatened'. Provides habitat for kereru and rifleman (chronically threatened species).
Diversity and pattern	M/H	Species diversity is greater than typical for this forest type.
Distinctiveness/special features	M/H	The virtual absence of plant pests is a special feature.

Other Criteria

Size/shape	M	A relatively small reserve but with a good shape and well buffered.
Connectivity	M/H	Adjoins other areas of indigenous forest, provides an ecologically-viable link between those areas, and makes an important contribution to the network of fauna habitat in the area.
Long-term Sustainability	M	The ecological values of the area are likely to persist and improve with continued reserve management.

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

This area has been formally protected by the Royal Forest and Bird Protection Society since 1990. Intensive management of the area since 1977 has created a reserve that is largely free of introduced plant pests; a remarkable achievement, considering the abundant weed seed sources nearby. Its protection is guided by a management plan and made secure by the dedication and commitment of the Royal Forest and Bird Protection Society and in particular its local members. The arboretum is not included in this SNA as many species present in the arboretum are not indigenous to this area. Inclusion of the arboretum may constrain management of the plants in this small area.

Discussion:

This area very easily meets the District Plan criteria for a Significant Natural Area. Important features of the SNA are the dominance of podocarps (especially totara and matai), the diversity of plant species present, the abundance of the newly-discovered *Melicytus* "Waihi", the virtual absence of common woody weeds, the habitat the reserve provides for threatened species (kereru, rifleman and *Melicytus* "Waihi") and the contribution the reserve makes to the network of fauna habitat in the area.



Melicytus "Waihi" at Conways Bush

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)	
barberry*	<i>Berberis glaucocarpa</i>
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>
browntop*	<i>Agrostis capillaris</i>
bush lawyer	<i>Rubus cissoides</i>
cabbage tree/ti rakau	<i>Cordyline australis</i>
Chilean flame creeper*	<i>Tropaeolum speciosum</i>
cocksfoot*	<i>Dactylis glomerata</i>
common shield fern	<i>Polystichum richardii</i>
elderberry*	<i>Sambucus nigra</i>
five-finger	<i>Pseudopanax arboreus</i>
fuchsia	<i>Fuchsia excorticata</i>
hairy pennywort	<i>Hydrocotyle moschata</i>
hanging spleenwort	<i>Asplenium flaccidum</i>
hawthorn*	<i>Crataegus monogyna</i>
hen and chickens fern	<i>Asplenium bulbiferum</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>
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>
mapou	<i>Myrsine australis</i>
matai/black pine	<i>Prumnopitys taxifolia</i>
matipo/kohuhu	<i>Pittosporum tenuifolium</i>
mistletoe	<i>Ileostylis micranthus</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>
narrow-leaved snow-tussock	<i>Chionochoa rigida</i>
native jasmine	<i>Parsonsia</i> sp.
necklace fern	<i>Asplenium flabellifolium</i>
poataniwha	<i>Melicope simplex</i>
pohuehue	<i>Muehlenbeckia australis</i>
poroporo	<i>Solanum laciniatum</i>
prickly shield fern	<i>Polystichum vestitum</i>
shrubby mahoe	<i>Melicytus micranthus</i>
sycamore*	<i>Acer pseudoplatanus</i>
totara	<i>Podocarpus totara</i>
weeping mapou	<i>Myrsine divaricata</i>
yellowwood	<i>Coprosma linariifolia</i>