TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

PROPERTY REPORT

PROPERTY DETAILS:

Owner: .....Robert Swann
Valuation Reference: 24660/252.03
Address: .....Sherratt Road, Geraldine
Location:.....On the crest of the Geraldine Downs, north of Sherratt Road
Ecological District: .....Geraldine Ecological District
TDC Land Type:.....Soft Rock Hills and Downs
Land Environment: .....N3 (downlands of South Canterbury and coastal Otago)

ECOLOGICAL CONTEXT:

The property lies on the eastern edge of the Geraldine Ecological District, on the low rolling hills of the Geraldine Downs. The original vegetation of this area would have been predominantly podocarp-hardwood forest, dominated by totara, matai and kahikatea emergent over a hardwood canopy. Important canopy hardwood species would probably have been narrow-leaved lacebark, pokaka, kowhai, lemonwood, five-finger, broadleaf and mahoe. 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.

Two indigenous plant communities are present on the property: podocarp-hardwood forest and treeland. The main forest area supports remnant and regenerating indigenous vegetation, including large totara and kahikatea trees. The areas of treeland are highly modified remnants of the original forest and comprise scattered trees of kahikatea, totara, narrow-leaved lacebark, kowhai, broadleaf and pokaka. Native species have been planted in several fenced patches of treeland. Forest and treeland on the property are part of a more extensive area of scattered patches of forest and treeland on the Geraldine Downs. The most important of these is Talbot Forest Scenic Reserve, which lies approximately 1½ km southeast of the property.

These areas of forest and treeland provide habitat for birds including kereru (threat status: gradual decline) and are likely to provide important (though maybe only occasionally used) roost sites for bats (nationally endangered). Notable plant species present on the property are the locally-uncommon white climbing rata and *Neomyrtus pedunculatus*, the remnant podocarp trees (totara, matai and kahikatea) and large kahikatea trees.

SIGNIFICANT AREAS ON THE PROPERTY:

The property was surveyed as part of the District-wide survey of Significant Natural Areas during May 2007. All parts of the property were visited, though the smaller fenced areas were only viewed from the outside. One main area of forest and seven areas of scattered trees (treeland) are regarded as significant when assessed against the District Plan criteria. These eight areas are listed in the table below.

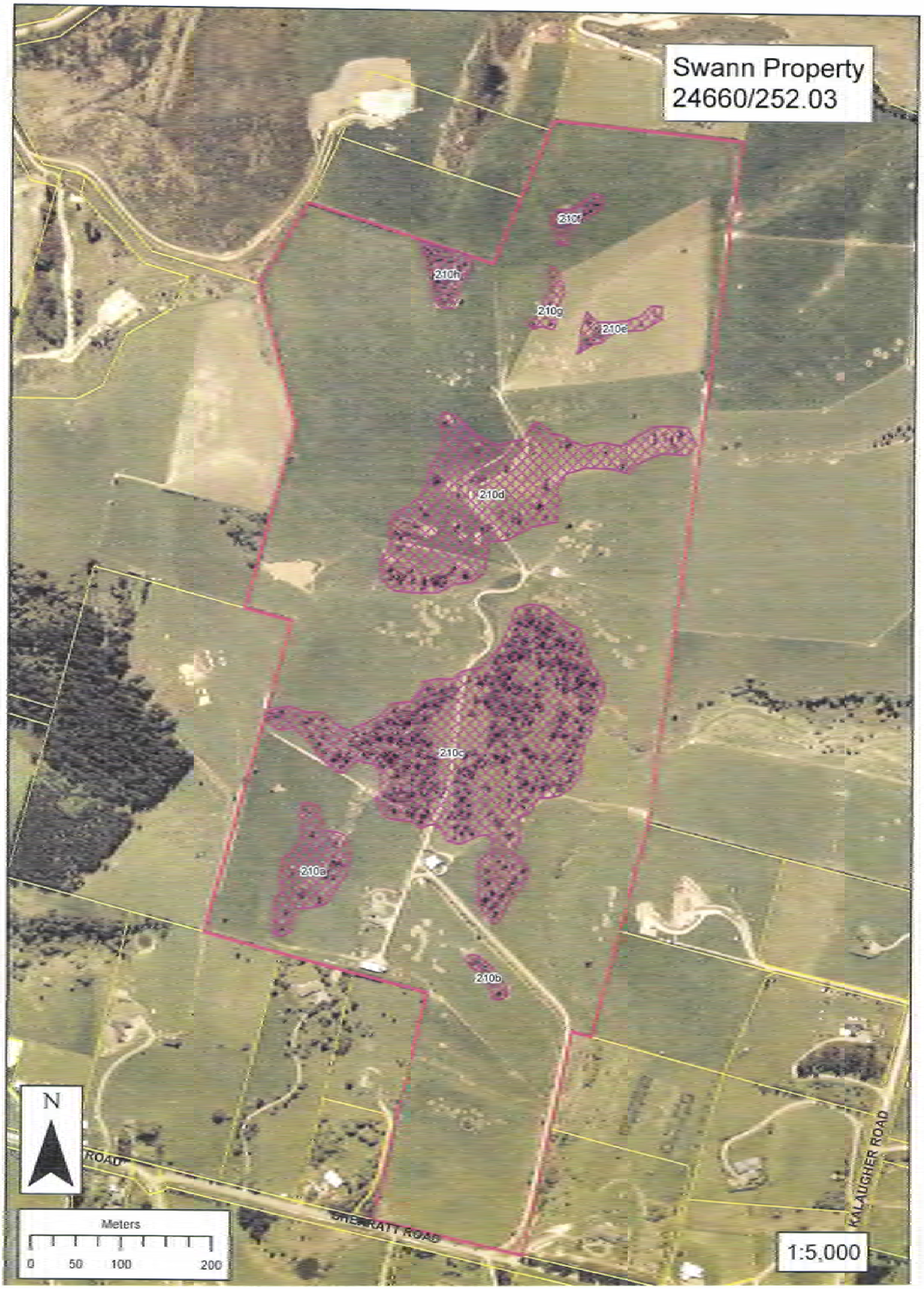
Area No.	Area Name	Central grid reference	Aprox. size(ha)	Vegetation/habitat type
210a		J37: 675-800	0.67	Podocarp-hardwood treeland
210b		J38: 677-799	0.09	Podocarp-hardwood treeland
210c		J37: 676-801	5.2	Podocarp-hardwood forest
210d		J37: 677-804	2.87	Podocarp-hardwood treeland
210e		J37: 678-807	0.18	Hardwood treeland
210f		J37: 687-808	0.14	Hardwood treeland
210g		J37: 678-807	0.12	Hardwood treeland
210h		J37: 676-808	0.25	Podocarp-hardwood treeland

Areas of indigenous vegetation and/or habitat on the property that are identified as Significant Natural Areas (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 SNAs meet the ecological criteria in the Timaru District Plan (criteria i-vi, pages B18-B19). The forest remnant (Area 210c) will require some management to be sustainable in the long term (criterion vii, page B19). The areas of treeland will require active management (such as the fencing and planting undertaken by the landowner) to maintain their ecological values in the long-term. 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 an 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, the maintenance of tracks and fences, or grazing. 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.

SIGNIFICANT TREES ON THE PROPERTY:

In addition to the Significant Natural Areas identified on the property, one individual tree warrants recognition as a Significant Tree: the large kahikatea tree within Area 210c. This tree has the largest trunk diameter of any kahikatea tree observed so far during this survey of forest remnants in the Timaru District. The tree trunk and upper branches have a number of cavities that provide suitable roost sites for bats. This tree is in a shallow gully at map reference 2367597E-5680151N.


Swann Property
24660/252.03
210f
210h
210g
210e
210d
210c
210a
210b
N
Meters
0 50 100 200
1:5,000
KALAUGHER ROAD

TIMARU DISTRICT SNA SURVEY AREA 210c

Area Name: Swann Forest
Property: Swann
Location (central map reference): J37: 676-801
Nearest Locality: Geraldine
Ecological District: Geraldine
Area Size (ha): 5.2
Altitude (m): 200-220
Surveyors: Mike Harding
Survey Time: 2 hours
Survey Date: 24-05-07

General Description:

The Area is on gently rolling hill country on the crest of the Geraldine Downs, on the north side of Sherratt Road just east of its junction with Downs Road.

Plant Communities:

The Area comprises a relatively large remnant of podocarp-hardwood forest and associated patches of scattered indigenous trees. The forest remnant is a mosaic of closed-canopy patches with a sparse understorey of shrub species and more open areas with scattered trees over pasture. Other smaller areas of forest and scattered trees are present nearby on the property and are described separately (Areas 210a, b, d, e, f, g, h). Naturalized (exotic) species are indicated with an asterisk*.

The forest canopy is dominated by kahikatea, totara and narrow-leaved lacebark. One kahikatea tree is very large, with a trunk diameter (at breast height) of approximately 160 cm.
Other canopy species are matai, mapou, pokaka, lemonwood, mahoe, broadleaf, pohuehue and bush lawyer.
Dominant understorey and ground cover species are shrubby mahoe and *Coprosma rotundifolia*.
Other understorey species present are narrow-leaved lacebark, *Neomyrtus pedunculata*, *Lophomyrtus obcordata*, kaikomako, *Coprosma areolata*, *C. crassifolia*, yellowwood, kahikatea, cabbage tree, weeping mapou, fuchsia, bush lawyer, mahoe seedlings, foxglove*, pennywort, nettle, native jasmine, necklace fern, *Asplenium hookerianum*, *Hypolepis ambigua*, *Blechnum fluviatile* and *Cardamine* sp.
Present but less common are lancewood, horopito, elderberry*, black nightshade*, prickly shield fern, *Blechnum penna-marina*, bidibid and mistletoe (on *Coprosma crassifolia*).
Additional species present on the forest margin are kanuka, *Coprosma propinqua*, *Calystegia tuguriorum*, lawyer and white climbing rata.

Birds Observed:

Native birds observed during this brief visit were bellbird, grey warbler, fantail, silvereye, paradise duck and harrier. A group of feral pigeons was observed roosting in the forest canopy.

Notable Flora, Fauna and Habitats:

Notable features of this forest remnant are the presence of podocarps (kahikatea, totara and matai), the size of the remnant (one of the largest on the Geraldine Downs), the presence of locally uncommon species (white climbing rata and *Neomyrtus pedunculata*), the habitat the area provides for birds and possibly bats (long-tailed bats are present nearby in Talbot Forest) and its proximity to other indigenous forest remnants in the area which collectively provide important forest bird habitat. Also notable is the large kahikatea tree.

Notable Plant and Animal Pests:

No significant plant or animal pests were observed during this brief inspection. The native climber pohuehue is a threat, especially on the forest margins where it can smother large trees. Possums are likely to be present.

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

This forest remnant is unfenced except for fences along the road that bisect the remnant and divide it into separate paddocks. It is grazed as part of the surrounding paddocks. It is relatively large and has a good shape. The main areas of forest are buffered to some extent by their position in a small gully. Other smaller patches of forest and scattered trees are present nearby on this property and on adjoining properties. The forest remnant is approximately 1½ km from a relatively large area of remnant indigenous forest in Talbot Forest Scenic Reserve and less than one kilometre from other significant areas of indigenous forest on the Geraldine Downs.

Condition and Management Issues:
The canopy of this forest remnant is in relatively good condition. The forest understorey is more open and noticeably affected in places by stock (e.g. deer tracks, deer wallows and de-barked tree trunks). Fencing and removal of stock would allow regeneration of understorey and canopy species, though removal of grazing would need to be followed by weed control, and regeneration of indigenous species would be hampered in places by the sward of pasture grasses. Control and management of the invasive native climber pohuehue may be beneficial, though effective control may be difficult to achieve. Removal of the isolated plants of elderberry would be desirable. The presence of apparently-resident feral pigeons may affect use of the forest by kereru.

Property Owner Comment:

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	H	A good example of the indigenous forest that was originally present in the ecological district.
Rarity	M/H	The forest provides habitat for kereru (gradual decline) and possibly long-tailed bat (nationally endangered).
Diversity and pattern	M	Species diversity is reduced from that originally present at the site.
Distinctiveness/special features	M/H	Some larger trees have cavities that provide suitable roost sites for long-tailed bat (present nearby in Talbot Forest). The large kahikatea tree is notable. The forest is part of a network of fauna habitat on the Geraldine Downs.
Other Criteria		
Size/shape	H	The area of forest is moderate-sized, has a good shape and could easily be buffered or protected.
Connectivity	M	This area is isolated from other indigenous forest remnants but is an important part of a network of fauna habitat on the Geraldine Downs.
Long-term Sustainability	M	Some management (notably encouragement of understorey and canopy species regeneration) will be required for the maintenance of 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 retained and informally protected by the landowners. The presence of the trees enhances the existing land use (grazing) by providing shelter and shade, though may limit the potential for farm development. It is visible from nearby houses and distantly visible from the plains north of the Geraldine Downs. Some management will be required to maintain the ecological values of this area in the long-term.

Discussion:
This forest remnant easily meets the District Plan criteria for a Significant Natural Area. Important attributes the presence of podocarps (kahikatea, totara and matai), the size of the remnant (one of the largest on the Geraldine Downs), the presence of locally uncommon species (white climbing rata and *Neomyrtus pedunculata*), the habitat the area provides for birds and possibly bats (long-tailed bats are present nearby in Talbot Forest) and its proximity to other indigenous forest remnants in the area which collectively provide important forest bird habitat. Also notable is the large kahikatea tree.

TIMARU DISTRICT SNA SURVEY AREAS 210a, b, d, e, f, g, h

Area Name: Swann Forest Remnants	**Property:** Swann property	
Ecological District: Geraldine	**Nearest Locality:** Geraldine	
AREA 210a: Location (central map ref.): J37: 675-800	**Area Size (ha):** 0.67	**Altitude (m):** 220
AREA 210b: Location (central map ref.): J38: 677-799	**Area Size (ha):** 0.09	**Altitude (m):** 220
AREA 210d: Location (central map ref.): J37: 677-804	**Area Size (ha):** 2.87	**Altitude (m):** 210
AREA 210e: Location (central map ref.): J37: 678-807	**Area Size (ha):** 0.18	**Altitude (m):** 200
AREA 210f: Location (central map ref.): J37: 678-808	**Area Size (ha):** 0.14	**Altitude (m):** 200
AREA 210g: Location (central map ref.): J37: 678-807	**Area Size (ha):** 0.12	**Altitude (m):** 200
AREA 210h: Location (central map ref.): J37: 676-808	**Area Size (ha):** 0.25	**Altitude (m):** 200
Surveyors: Mike Harding	**Survey Time:** 1½ hours	**Survey Date:** 24-05-07

General Description:

These Areas are located on gently rolling hill country on the crest of the Geraldine Downs, on the north side of Sherratt Road just east of its junction with Downs Road. They comprise small forest remnants in pasture. They lie north and south of a larger forest remnant on the property (Area 210c) which is described on a separate Area Inspection Form.

Plant Communities:

All seven areas are patches of scattered remnant trees (treeland) in pasture. Some have been fenced from stock and planted with native shrubs. These plant communities are described separately below. Naturalized (exotic) species are indicated with an asterisk*.

Area 210a:
This Area consists of a fenced patch of mature trees of totara and narrow-leaved lacebark, with younger planted trees and shrubs. Scattered trees of kahikatea, totara and pokaka (some with trunks protected by fences) are present around the fenced patch.

Area 210b:
This Area consists of a small fenced patch of mature native trees, with younger planted trees and shrubs.

Area 210d:
This Area consists of a relatively large area of scattered mature trees of kahikatea, totara, narrow-leaved lacebark, kowhai, broadleaf and pokaka. Two small patches of trees within this area have been fenced and planted with native trees and shrubs. Some of the other scattered trees within this area have their trunks protected by fences.

Area 210e:
This Area consists of a small fenced patch of mature narrow-leaved lacebark trees, with younger planted trees and shrubs.

Area 210f:
This Area consists of a small fenced patch of mature narrow-leaved lacebark trees, with younger planted trees and shrubs.

Area 210g:
This Area consists of a small unfenced patch of mature narrow-leaved lacebark trees.

Area 210h:
This treeland consists of a fenced patch of mature trees of kahikatea, totara and narrow-leaved lacebark, with younger planted trees and shrubs. The kahikatea tree is large, with a trunk diameter (at breast height) of approximately 95 cm.

Notable Flora, Fauna and Habitats:
Important features of this area are number and size of the remnant indigenous trees, the presence cavities in the trunks of the older trees that provide favourable roost sites for long-tailed bat (nationally endangered), the presence of a relatively large kahikatea tree (in Area 210h), and the location of the treeland close to larger indigenous forest remnants (Area 210c and Talbot Forest Scenic Reserve). The protection of several of the denser stands of trees by fences and native plantings is also an important feature.

Notable Plant and Animal Pests:
No notable plant or animal pests were observed. Possums are likely to be present.

Boundaries (buffering, fencing, adjoining plant communities and habitats):
The boundaries of these Areas have been selected to include the main remnant indigenous trees. Several denser patches of trees have been fenced from grazing and buffered by native plantings. Though scattered, the trees in these areas collectively form a relatively large area of indigenous treeland. This treeland surrounds a larger indigenous forest remnant on the property (Area 210c) and is part of a network of fauna habitat on the Geraldine Downs.

Condition and Management Issues:
Most trees within these areas are healthy. Some older trees are mature and nearing senescence. In the long-term the unprotected treeland will disappear as the trees progressively senesce and die, unless replacement trees become established. Considerable effort has been made by the landowner to protect the denser stands of trees and help ensure the regeneration of canopy species. Some blocks have been fenced and planted for more than 12 years. These blocks are in very good condition. All trees planted in the blocks are native species, though not all of these species were originally present on the Geraldine Downs.

Property Owner Comment:

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

All Areas

Primary Criteria	Rank	Notes
Representativeness	M	These areas of treeland are depleted/modified examples of the indigenous vegetation originally present in the ecological district.
Rarity	M/H	These areas provide habitat for kereru and contain trees with cavities that provide suitable roost sites for long-tailed bat (a nationally endangered species).
Diversity and pattern	L/M	Substantially depleted indigenous plant communities with much-reduced species diversity.
Distinctiveness/special features	M/H	The trees in these areas are part of a regionally-important habitat for long-tailed bat and part of a network of fauna habitat on the Geraldine Downs.
Other Criteria		
Size/shape	L/M	All of these areas except Area 210d are small, though some are well buffered.
Connectivity	M/H	These areas are close to other areas of indigenous vegetation and provide ecologically-viable stepping stones of habitat for long-tailed bat and kereru.
Long-term Sustainability	L/M	Active management will be required to maintain the ecological values of these areas in the long-term.

Final Consideration (of other matters: Section D, page B-19 of Timaru District Plan):
Trees in these three areas of treeland have been retained and informally protected by the landowners. The presence of the trees enhances the existing land use (grazing) by providing shelter and shade, though may limit the potential for farm development. Active management (fencing and planting) has been undertaken in some of these Areas.

Discussion:

These seven areas of treeland meet the District Plan criteria for Significant Natural Areas, primarily because they collectively provide important habitat for native birds and they have potential roost sites (trunk cavities) for long-tailed bat. Long-tailed bat utilise the nearby Talbot Forest Scenic Reserve and adjoining areas of habitat on the Geraldine Downs. Long-tailed bat is a nationally endangered species and the South Canterbury population is nationally significant. The effort of the landowner to protect and restore some of these areas is commendable.

Scientific names of species cited by common name

Common Name (* = naturalised species)	Scientific name
bidibid	*Acaena* sp.
black nightshade*	*Solanum nigrum*
broadleaf	*Griselinia littoralis*
bush lawyer	*Rubus cissoides*
cabbage tree/ti rakau	*Cordyline australis*
elderberry*	*Sambucus nigra*
five-finger	*Pseudopanax arboreus*
foxglove*	*Digitalis purpurea*
fuchsia	*Fuchsia excorticata*
horopito/pepperwood	*Pseudowintera colorata*
kahikatea/white pine	*Dacrycarpus dacrydioides*
kaikomako	*Pennantia corymbosa*
kanuka	*Kunzea ericoides*
kowhai	*Sophora microphylla*
lancewood	*Pseudopanax crassifolius*
lawyer	*Rubus schmidelioides*
lemonwood	*Pittosporum eugenioides*
mahoe/whiteywood	*Melicytus ramiflorus*
mapou	*Myrsine australis*
matai/black pine	*Prumnopitys taxifolia*
mistletoe	*Ileostylis micranthus*
narrow-leaved lacebark	*Hoheria angustifolia*
native jasmine	*Parsonsia* sp.
necklace fern	*Asplenium flabellifolium*
nettle*	*Urtica* sp.
pennywort	*Hydrocotyle* sp.
pohuehue	*Muehlenbeckia australis*
pokaka	*Elaeocarpus hookerianus*
prickly shield fern	*Polystichum vestitum*
shrubby mahoe	*Melicytus micranthus*
totara	*Podocarpus totara*
weeping mapou	*Myrsine divaricata*
white climbing rata	*Metrosideros diffusa*
yellowwood	*Coprosma linariifolia*