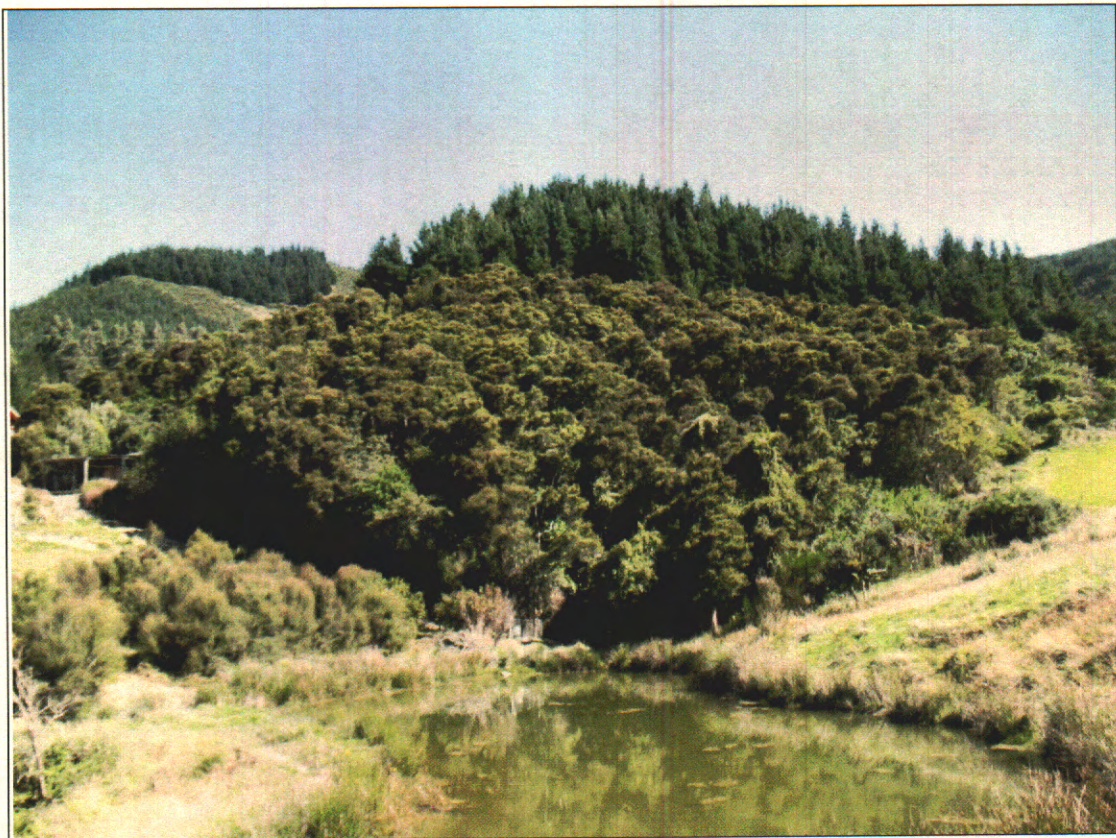


TIMARU DISTRICT
SIGNIFICANT NATURAL AREAS
SURVEY

SOUTH PROPERTY



Report prepared for Timaru District Council by Mike Harding
April 2012

TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

PROPERTY REPORT

PROPERTY DETAILS:

Owner: Grant South
Valuation References: 24640/035.01
Address: Evans Flat, Blandswood
Location: On hill slopes above Evans Flat, Blandswood.
Ecological District: Orari Ecological District.
TDC Land Type: Hard Rock Hills and Downs.
Land Environment: Q2.1a (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 probably 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 indigenous hardwood forest with podocarps (*kahikatea* and *totara*) present only as seedlings. 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 March 2012. Two connected areas, totalling approximately 2.48 hectares, 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
687a		J37: 676-989	0.79	Hardwood forest
687b		J37: 677-990	1.69	Hardwood forest

These SNAs are illustrated on the attached aerial photograph and described in greater detail on the SNA Survey Form 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: two small patches of forest near the pond; and regenerating indigenous species within and adjacent to the southern pine plantation. Indigenous vegetation in these areas does not meet the significance criteria in the Timaru District Plan. This does not mean that these areas 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.



Healthy understorey vegetation within SNA 687b.

South Property
24640/035.01



1:2,500

TIMARU DISTRICT SNA SURVEY

SNA 687a and 687b

Area Name:	Property: South	
Ecological District: Orari	Nearest Locality: Blandswood	
AREA 687a: Location (central map ref.): J37: 676-989	Area Size (ha): 0.79	Altitude (m): 380-440
AREA 687b: Location (central map ref.): J37: 677-990	Area Size (ha): 1.69	Altitude (m): 380-400
Surveyors: Mike Harding	Survey Time: 5 hours	Survey Date: 21-03-12

General Description:

These two SNAs lie on moderately steep hill slopes at Evans Flat, west of Blandswood, near Peel Forest Park Scenic Reserve. SNA 687a is on east-facing slopes just north of the main dwelling on the property; SNA687b is on south-facing slopes of a small gully behind (west of) the dwelling. The two SNAs are connected along the small spur behind the dwelling and have similar ecological values. They are described separately here, as the forest composition of each area is slightly different.

Plant Communities:

Both SNAs support tall regenerating indigenous forest, described separately below. Naturalized (exotic) species are indicated with an asterisk*.

East-facing slopes (SNA 687a):

The forest canopy of this area is dominated by kanuka. Trunk diameters (at breast height) of the larger kanuka trees range between 20 and 25cm. Other canopy species are five-finger, broadleaf, lemonwood, marbleleaf, mahoe, mapou, wineberry, fuchsia, cabbage tree and native jasmine. Other canopy species present at the forest margin are matipo, narrow-leaved mahoe, rowan* and pohuehue.

The forest understorey is, on the upper slopes, relatively thick. Species commonly present are mahoe, mapou and five-finger. Other species present in the forest understorey are *Coprosma rhamnoides*, lemonwood, matipo, broadleaf, lancewood and bush lawyer. Occasionally present are horopito, koromiko and clematis. The lower part of the forest (below the vehicle track) appears to be occasionally grazed. Species of *Coprosma* are more common here and other species such as five-finger and mahoe are less common.



The northern area of forest (SNA 687a) with pond in foreground.

Ground-cover species commonly present are hen and chickens fern and prickly shield fern. Less commonly present are crown fern, *Asplenium gracillimum* x *flaccidum*, bush lily, *Carex forsteri* and *Uncinia rupestris*. Seedlings present at the time of survey were lancewood, broadleaf, mahoe, five-finger, native jasmine, clematis, totara (rare) and *Coprosma* species (including *Coprosma linariifolia*).

Additional species present at damper sites are *Blechnum fluviatile*, *Blechnum minus*, *Blechnum chambersii*, *Blechnum vulvanicum* (rare) and water fern. Other species present at the forest margin are bracken, *Coprosma propinqua*, broom*, gorse*, Khasia berry*, thousand-leaved fern and *Hypolepis ambigua*. One large clump of old man's beard* is present in the forest canopy at the lower edge of this SNA (near the water-supply intake).

A patch of younger regenerating forest is present on the slopes at the southern boundary of this area (adjacent to SNA 687b). It is dominated by bracken, blackberry*, gorse*, pohuehue and Himalayan honeysuckle* with emergent kanuka, cabbage tree, five-finger, fuchsia, mahoe and rowan*. Other species present here are mapou, *Coprosma rotundifolia*, *Coprosma rhamnoides*, *Coprosma dumosa*, *Coprosma propinqua*, pate and *Hypolepis ambigua*.

South-facing slopes (SNA 687b):

The forest canopy of this area is dominated by five-finger, mahoe and broadleaf with scattered emergent kanuka. Other canopy species are wineberry, mapou, cabbage tree, lancewood, matipo, pohuehue and native jasmine. Trunk diameters (at breast height) of the larger kanuka trees range between 20 and 30cm; and trunks of the larger five-finger trees are between 35 and 45cm. There are several lowland ribbonwood trees on the lower slopes, the largest of which has a trunk diameter of 55cm. One large ash* tree and several grey willow* trees are present near the stream at the down-valley (east) end of the area.

The forest has a relatively thick and healthy understorey. Species commonly present are pate, mahoe and *Coprosma rhamnoides*. Other species present in the forest understorey are *Coprosma rotundifolia*, wineberry, broadleaf, five-finger, mapou, marbleleaf, lemonwood, native jasmine and bush lawyer. Occasionally present are *Coprosma linariifolia*, *Coprosma propinqua*, lancewood, horopito, matipo, koromiko, cabbage tree, tutsan* and clematis. Species present on tree trunks are hound's tongue fern and leather-leaf fern.

Important ground-cover species are prickly shield fern and hen and chickens fern. Other forest-floor species present are *Asplenium gracillimum* x *flaccidum*, *Asplenium hookerianum*, hanging spleenwort (rare), necklace fern (rare), *Blechnum chambersii*, mountain kiokio, hound's tongue fern, bush lily, *Carex forsteri*, *Uncinia divaricata* and one plant of the orchid *Gastrodia cunninghamii*. Many seedlings were present at the time of survey, including five-finger, mapou, mahoe, broadleaf, lancewood, horopito, native jasmine and *Coprosma* species. A few very small kahikatea seedlings and one small totara seedling were observed on upper slopes within the forest.

Additional species present along the stream or at damper sites are *Blechnum fluviatile*, *Blechnum pennamarina* and *Leptopteris hymenophylloides*. Other species present at the forest margin, including at recently disturbed sites along the newly-constructed road, are elderberry*, Himalayan honeysuckle*, thousand-leaved fern, creeping buttercup*, stitchwort*, pennywort, broad-leaved dock*, *Juncus pallidus* and *Juncus tenuis**

Birds/Fauna Observed:

Native birds observed during this brief survey were fantail, bellbird, grey warbler, kereru (NZ pigeon), rifleman and tomtit. Paradise shelduck and welcome swallow were observed at the lower edge of SNA 687a, near the pond.



The southern area of forest (SNA 687b).

Notable Flora, Fauna and Habitats:

Important features of this area are: the presence of well-established regenerating indigenous forest with a number of representative canopy species; the presence of podocarp species as naturally-occurring seedlings; the diversity of plant species; the presence of two locally uncommon plant species (*Blechnum vulcanicum* and *Gastrodia cunninghamii*); the habitat the area provides for forest birds, including an at-risk (declining) species (rifleman); the location of the area near to other indigenous forest, including Peel Forest Park Scenic Reserve; and, the location of the area within a critically under-protected land environment (Q2.1a).

Notable Plant and Animal Pests:

The most important plant pests present are rowan, Khasia berry and old man's beard. Rowan is scattered at forest margins and forest openings, Khasia berry is present at forest margins, and old man's beard appears confined to one large clump at the lower boundary of SNA 687a. Grey willow and one large ash tree present are present along the lower reaches of the stream (SNA 687b), though the ash does not appear to be spreading. Other naturalized species, such as gorse, broom and blackberry, do not pose a significant threat to the forest. Animal pests were not surveyed, though browsing pressure appears low.

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

SNA 687a adjoins developed pasture along most of its lower (north and east) boundaries, pine plantation at its upper (west) boundary and SNA 687b at its south boundary. SNA 687b adjoins pine plantation along its upper (north) boundary, a recently-constructed vehicle track and pine plantation along its south boundary, other regenerating forest on an adjacent property at its up-valley (west) boundary and SNA 687a at its down-

valley (east) boundary. Both areas are relatively well buffered by their locations on moderately-steep slopes and (at present) by pine plantations. They lie near to other areas of indigenous forest in the Evans Flat-Blandswood area. The lower boundary of SNA 687a is fenced, though stock appear to have access to lower parts of the forest. Two small patches of indigenous forest are present below SNA 687a, beside and below the pond.

Condition and Management Issues:

Both areas of forest are in good condition. The northern block (SNA 687a) appears younger than the southern block and has a slightly different species composition, presumably because of its age and aspect (east-facing rather than south-facing). The lower (southern) boundary of SNA 687b has been recently affected by construction of a vehicle track. It is unclear whether construction involved the removal of indigenous forest but the stream has been affected by deposition of loose excavated material. Wild animal populations appear low in both areas of forest. The most important management issue is removal of invasive naturalized plants, especially old man's beard, Khasia berry, rowan and grey willow. It would also be prudent to remove (or kill) the large ash tree, to reduce the risk of seedlings becoming established in or at the margins of the forest. Protection of the lower part of SNA 687a from stock would also be beneficial.

Property Owner Comment:

Mr South is interested in providing further protection for these areas.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M/H	Good examples of indigenous forest typical of this part of the ecological district and containing species representative of the original vegetation (including seedling podocarps).
Rarity	M	Provides good habitat for an at-risk (declining) bird species (rifleman). Supports populations of two locally-uncommon plant species (<i>Blechnum vulcanicum</i> and <i>Gastrodia cunninghamii</i>). Lies in a critically under-protected land environment.
Diversity and pattern	M	Plant species diversity is moderate and typical though probably reduced from its original condition.
Distinctiveness/special features	M	The presence of large lowland ribbonwood trees is a distinctive feature.
Other Criteria		
Size/shape	M	Small to moderate-sized areas for the Orari ED, but with good shape and well buffered.
Connectivity	M	The two SNAs adjoin one another, are linked to other areas of regenerating indigenous forest, make a useful contribution to forest bird habitat in the wider area, and lie close to extensive areas of protected forest.
Long-term Sustainability	M/H	Some plant (and probably 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):

These two areas of indigenous forest have been informally protected by the landowner. They have very limited potential for farm development. It appears that access to pine plantations on upper slopes should be possible without further disturbance to these areas of indigenous forest.

Discussion:

These areas easily meet the District Plan criteria for Significant Natural Areas. Important features are: the presence of well-established regenerating indigenous forest with podocarp species as naturally-occurring seedlings; the diversity of plant species present; the presence of two locally uncommon plant species; the habitat the area provides for forest birds, including an at-risk (declining) species (rifleman); the location of the area near to other indigenous forest, including Peel Forest Park Scenic Reserve; and, the location of the area within a critically under-protected land environment.

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>
bracken.....	<i>Pteridium esculentum</i>
broadleaf.....	<i>Griselinia littoralis</i>
broad-leaved dock*.....	<i>Rumex obtusifolius</i>
broom*.....	<i>Cytisus scoparius</i>
bush lawyer.....	<i>Rubus cissoides</i>
bush lily.....	<i>Astelia fragrans</i>
cabbage tree/ti rakau	<i>Cordyline australis</i>
clematis.....	<i>Clematis paniculata</i>
creeping buttercup*.....	<i>Ranunculus repens</i>
crown fern.....	<i>Blechnum discolor</i>
elderberry*.....	<i>Sambucus nigra</i>
five-finger.....	<i>Pseudopanax arboreus</i>
fuchsia.....	<i>Fuchsia excorticata</i>
gorse*.....	<i>Ulex europaeus</i>
grey willow*.....	<i>Salix cinerea</i>
hanging spleenwort.....	<i>Asplenium flaccidum</i>
hen and chickens fern.....	<i>Asplenium gracillimum</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>
kanuka.....	<i>Kunzea ericoides</i>
Khasia berry*.....	<i>Cotoneaster simonsii</i>
koromiko.....	<i>Hebe salicifolia</i>
kowhai.....	<i>Sophora microphylla</i>
lancewood.....	<i>Pseudopanax crassifolius</i>
leather-leaf fern.....	<i>Pyrrosia eleagnifolia</i>
lemonwood.....	<i>Pittosporum eugenioides</i>
lowland ribbonwood.....	<i>Plagianthus regius</i>
mahoe/whiteywood.....	<i>Melicytus ramiflorus</i>
mapou.....	<i>Myrsine australis</i>
marbleleaf/putaputaweta.....	<i>Carpodetus serratus</i>
matipo/kohuhu.....	<i>Pittosporum tenuifolium</i>
mountain kiokio.....	<i>Blechnum montanum</i>
narrow-leaved mahoe.....	<i>Melicytus lanceolatus</i>
native jasmine.....	<i>Parsonsia heterophylla</i>
necklace fern.....	<i>Asplenium flabellifolium</i>
old man's beard*.....	<i>Clematis vitalba</i>
pate.....	<i>Schefflera digitata</i>
pennywort.....	<i>Hydrocotyle novae-zelandiae</i>
pohuehue.....	<i>Muehlenbeckia australis</i>
prickly shield fern.....	<i>Polystichum vestitum</i>
rowan*.....	<i>Sorbus aucuparia</i>
stitchwort*.....	<i>Stellaria graminea</i>
thousand-leaved fern.....	<i>Hypolepis millefolium</i>
totara.....	<i>Podocarpus totara</i>
tutsan*.....	<i>Hypericum androsaemum</i>
water fern.....	<i>Histiopteris incisa</i>
wineberry.....	<i>Aristotelia serrata</i>