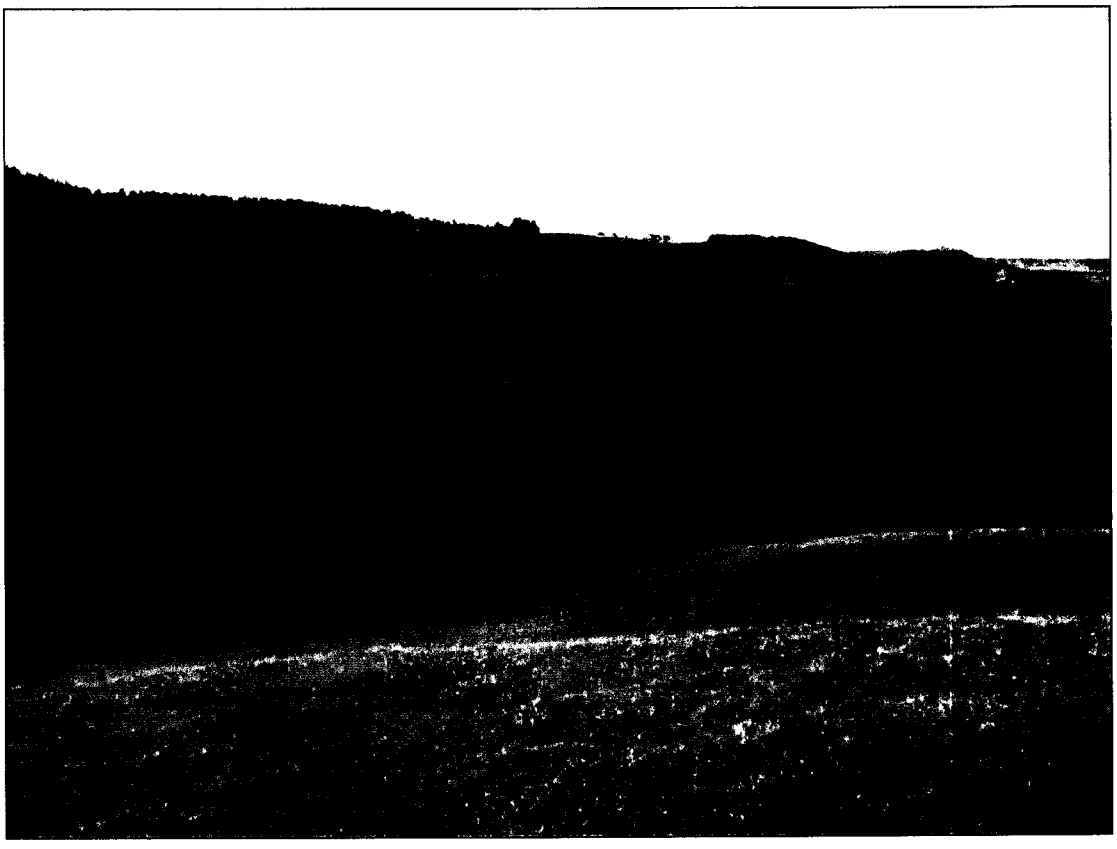
TIMARU DISTRICT

SIGNIFICANT NATURAL AREAS SURVEY

WELLSPRING FARM
STANTON



Report prepared for Timaru District Council by Mike Harding
July 2010

TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

PROPERTY REPORT

PROPERTY DETAILS:

Owner: ..... Stanton
Valuation References: 24670/126.00
Address: ..... Gualter Road, Hilton
Location:..... West of Gualter Road and north of the Kakahu River.
Ecological District:..... Geraldine Ecological District.
TDC Land Type:..... Soft Rock Hills and Downs.
Land Environment: ..... N3 (eastern South Island undulating plains and hills).

ECOLOGICAL CONTEXT:

The property covers mostly gentle to moderate slopes in a series of small valleys on the north side of the Kakahu River valley in the central part of Geraldine Ecological District. The original vegetation of this area would have been predominantly podocarp-hardwood forest. Denser podocarp-hardwood (matai-totara-kahikatea-lowland ribbonwood) forest would have occupied older terraces and flats, and tall kanuka forest would have been present on recently disturbed surfaces. Minor areas of matagouri-*Coprosma-Olearia* shrubland and small wetlands were likely to have been present on valley-floors, possibly with associated areas of short tussockland. 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 areas of regenerating indigenous forest, dominated mostly by kanuka, and one area of wetland vegetation. These areas lie close to other indigenous vegetation on nearby properties, including that present to the west on limestone at Rocky Ridges and Kakahu. Notable fauna observed on the property were velvet worms (peripatus) and ground weta.

SIGNIFICANT AREAS ON THE PROPERTY:

The property was surveyed as part of the District-wide survey of Significant Natural Areas during May and June 2010. Most parts of the property were visited and assessed. Four small areas, totalling approximately 19 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
179a	Wellspring Farm Pineacres Forest	J38: 617-741	6.7	Kanuka Forest
179b	Wellspring Farm Wilderness Forest	J38: 608-740	6.5	Kanuka Forest
179c	Wellspring Farm Manuka Forest	J38: 607-740	4.9	Kanuka Forest
163d	Wellspring Farm Wetland	J38: 601-738	1.1	Sedgeland

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 in the long term, or 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.

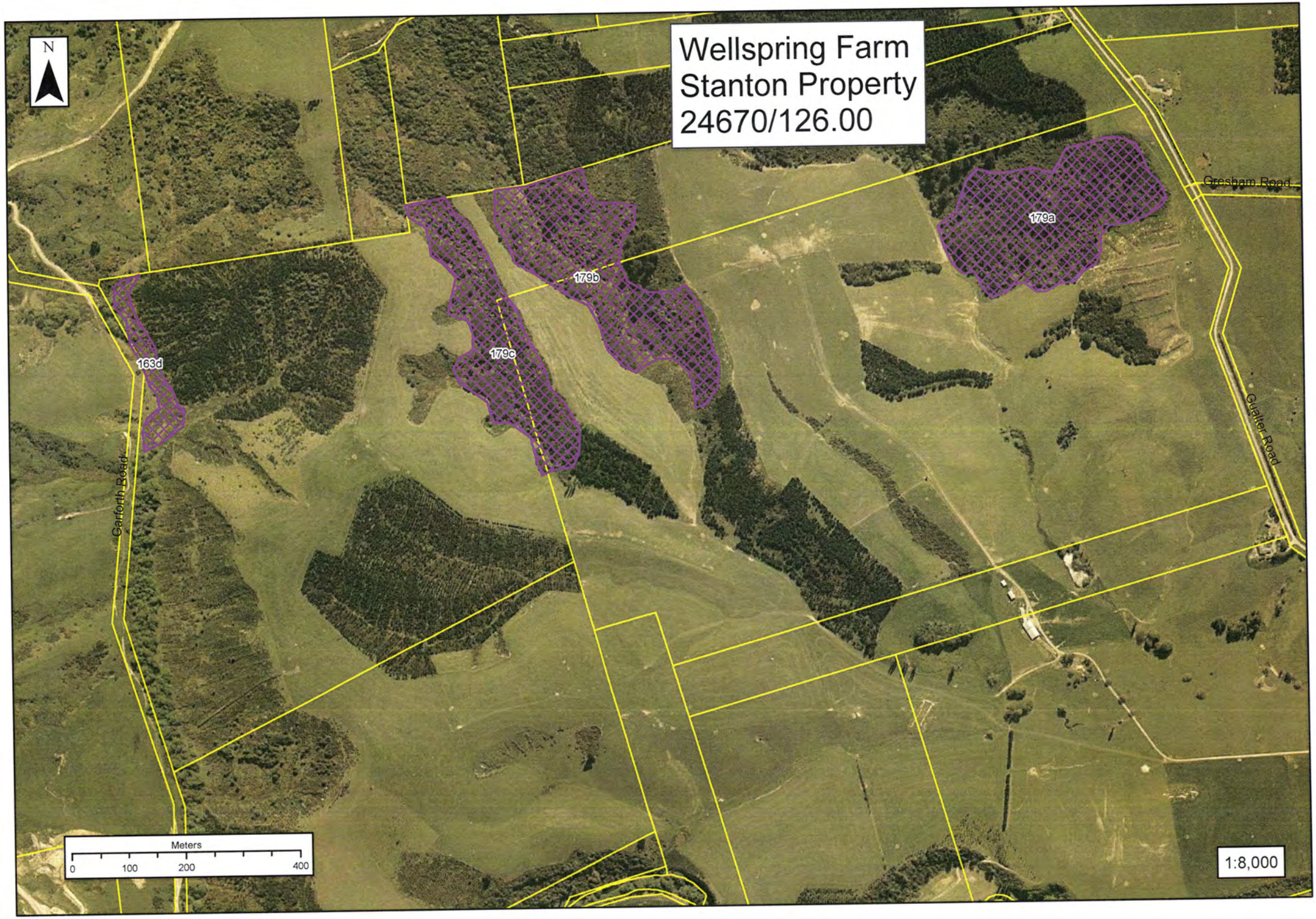
At present, consent is required from Council for clearance of areas of indigenous vegetation or habitat which meet the Interim Definitions in the District Plan. Clearance includes burning, spraying with herbicides and over-planting. SNAs encompass most, but not necessarily all, areas of vegetation and 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 on the property were inspected but are not significant when assessed against the District Plan criteria. Areas worth noting are the narrow strips of regenerating vegetation (presently dominated by woody weeds) on the steep scarp above the Kakahu River, and the smaller more open (heavily grazed) patches of kanuka elsewhere on the property. These areas may, with appropriate management, eventually become more diverse and significant. Failure of an area to be assessed as significant does not mean that the area is unimportant; it simply means that it does not presently meet the District Plan criteria. Another notable feature is the presence of ground weta (*Zealandosandrus* sp?) beneath dead gorse branches adjacent to a patch of kanuka forest just south of SNA 179a.

Ground weta (*Zealandosandrus* sp?) observed near SNA 179a.


Wellspring Farm
Stanton Property
24670/126.00
N
179a
179b
179c
163d
Gresham Road
Garforth Road
Gualter Road
Meters
0
100
200
400
1:8,000

TIMARU DISTRICT SNA SURVEY SNA 179a

Area Name: Wellspring Farm Pineacres Forest
Property: Wellspring Farm (Stanton)
Location (central map reference): J38: 617-741
Nearest Locality: Hilton
Ecological District: Geraldine
Area Size (ha): 6.7
Altitude (m): 120-160
Surveyors: Mike Harding and Julie Brown
Survey Time: 1 hour
Survey Date: 24-05-10

General Description:

This SNA lies on a moderately-steep southwest-facing slope adjacent to Gualter Road at the northeast corner of the property. It adjoins a pine plantation on its northern boundary and pasture on other boundaries.

Plant Communities:

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

The forest canopy is dominated by kanuka. Trunk diameters (at breast height) of most kanuka trees are approximately 25cm. Some larger kanuka trees have trunk diameters between 35 and 40cm. Other canopy species are mahoe, cabbage tree, matipo, lancewood, sycamore*, pohuehue, native jasmine and lawyer. Large emergent pine* trees are present at the northern edge of the site.

The forest understorey is relatively open in most places. Understorey species present are mahoe, *Coprosma propinqua*, *Coprosma crassifolia*, *Coprosma tayloriae*, *Coprosma rhamnoides*, *Coprosma robusta* X *propinqua*, lancewood, sycamore*, hawthorn*, Khasia berry* and *Clematis marata*.

Ground-cover species are *Hypolepis ambigua*, necklace fern, *Pellaea rotundifolia*, male fern*, hookgrass, bidibid, pennywort, black nightshade*, wall lettuce*, moss and seedlings of mahoe, kanuka, cabbage tree, matipo, lancewood, mapou, blackberry*, elderberry*, sycamore*, pohuehue, native jasmine and *Coprosma* species.

Additional species present at damper sites are wineberry, pate, hen and chickens fern, common shield fern, thousand-leaved fern and *Blechnum fluviatile*.

Species present on the forest margin or in forest openings are fuchsia, poroporo, Himalayan honeysuckle*, bracken, *Hypolepis ambigua*, broom*, gorse* and blackberry*.

Birds/Fauna Observed:

Native birds observed during this brief survey were harrier, bellbird and fantail. Four velvet worms (peripatus) were observed beneath rotting wood within the forest.

Notable Flora, Fauna and Habitats:

Important features of this area are the habitat the area provides for forest birds, the presence of velvet worms (possibly a threatened species), the extent (size) of the area and the contribution it makes to the network of fauna habitat in the area.

Notable Plant and Animal Pests:

Sycamore and hawthorn are the two most important plant pests present. These invasive species are able to colonise closed-canopy forest and sycamore can over-top and displace the indigenous canopy species. Other important plant pests are Khasia berry, elderberry, Himalayan honeysuckle, gorse, broom and blackberry, though these species do not pose a significant threat to the intact forest. Animal pests were not surveyed.

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

The forest boundaries are mostly unfenced, so the forest is grazed (lightly) as part of a larger block. The forest grades to scrub and then plantation pine forest on its northern boundary. It adjoins pasture on its other boundaries. The lower (western) boundary is at a small stream on the valley floor. There are other areas of indigenous forest nearby, including regionally-important forest remnants (some on limestone) three to four kilometres distant at Rocky Ridges and Kakahu.

Condition and Management Issues:
The forest is in reasonably good condition. Sycamore is common in the northern part of the forest and the forest understorey depleted in places, presumably by domestic stock. Important management issues are control of invasive plant pests (notably sycamore) and continued control of animal pests (especially possums). The forest would benefit from the exclusion of stock, though this would probably need to be accompanied by weed control.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M	Kanuka forest that is typical of regenerating indigenous forest in this part of the ecological district.
Rarity	M/H	Supports a population of velvet worms (possibly a threatened species) and provides some useful habitat for an at-risk (declining) bird species (rifleman) that is present in the area.
Diversity and pattern	M	Species diversity is typical of similar areas of forest, though diversity is reduced from that originally present.
Distinctiveness/special features	L	
Other Criteria		
Size/shape	H	A moderate-sized (> 2 ha) block with a good shape and reasonably well buffered.
Connectivity	M	A useful part of a network of fauna habitat in the area.
Long-term Sustainability	M	Control of plant and animal pests (notably sycamore) will be necessary to maintain ecological values of the area 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 some potential for farm development, though this is limited by the steepness of the slope.

Discussion:
This area meets the District Plan criteria for a Significant Natural Area. Important features of the area are the habitat the area provides for forest birds, the presence of velvet worms (possibly a threatened species), the extent (size) of the area and the contribution it makes to the network of fauna habitat in the area.

TIMARU DISTRICT SNA SURVEY SNA 179b

Area Name: Wellspring Farm Wilderness Forest
Location (central map reference): J38: 608-740
Ecological District: Geraldine
Surveyors: Mike Harding and Julie Brown
Property: Wellspring Farm (Stanton)
Nearest Locality: Hilton
Area Size (ha): 6.5 **Altitude (m):** 120-160
Survey Time: 1½ hours **Survey Date:** 24-05-10

General Description:

This SNA lies on moderately-steep southwest-facing slopes of a small valley at the northern edge of the property. It adjoins a pine plantation at its down-valley (southern) boundary, regenerating indigenous vegetation at its northern boundary and scrub or pasture on other boundaries.

Plant Communities:

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

The forest canopy is dominated in most places by kanuka. Other canopy species are mahoe, cabbage tree, matipo, sycamore*, hawthorn*, wineberry and bush lawyer.

Understorey species are matipo, mahoe, mapou, hawthorn*, *Coprosma propinqua*, *Coprosma rhamnoides*, *Coprosma crassifolia*, *Coprosma ciliata*, poroporo, Khasia berry*, elderberry*, sycamore*, blackberry*, lancewood, lawyer, *Clematis marata* and native jasmine.

Ground-cover species are hound's tongue fern, hen and chickens fern, necklace fern, prickly shield fern, common shield fern, *Blechnum fluviatile*, *Hypolepis ambigua*, *Histiopteris incisa*, male fern*, black nightshade*, bidibid, *Carex* sp., foxglove* and seedlings of mahoe, matipo, mapou, cabbage tree, five-finger, broadleaf, native jasmine, pohuehue, kanuka, clematis, barberry*, hawthorn*, gorse* and *Coprosma* species.

Species present on the forest margin or in forest openings are matipo, fuchsia, koromiko, gorse*, blackberry*, Himalayan honeysuckle*, hawthorn*, broom*, pohuehue, *Hypolepis ambigua* and bracken.

Birds/Fauna Observed:

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

Notable Flora, Fauna and Habitats:

Important features of this area are the habitat the area provides for forest birds, the presence of an at-risk (declining) bird species (rifleman), the buffering the area provides to the stream and the contribution it makes to the network of fauna habitat in the area.

Notable Plant and Animal Pests:

Sycamore and hawthorn are the two most important plant pests present. These invasive species are able to colonise closed-canopy forest and sycamore can over-top and displace the indigenous canopy species. Other important plant pests are Khasia berry, elderberry, Himalayan honeysuckle, gorse, broom and blackberry, though these species do not pose a significant threat to the intact forest. Animal pests were not surveyed.

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

The area is fenced and appears to be affected by grazing only at its lower end. It adjoins other low-stature indigenous forest at its northern (property) boundary and adjoins scrub or pasture on other boundaries. It lies near other areas of regenerating indigenous forest and only a few kilometres from important areas of indigenous forest at Rocky Ridges and Kakahu.

Condition and Management Issues:

The upper (northern) part of this area is in relatively good condition, though has a high component of weed species (especially hawthorn). The lower part of the area is affected by stock. The main management issues are control of plant pests (especially hawthorn and sycamore) and protection of the lower part of the area from the effects of grazing.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M	The forest is typical of regenerating forest in the Geraldine Ecological District.
Rarity	M	Provides habitat for an at-risk (declining) bird species (rifleman).
Diversity and pattern	M	Species diversity is similar to that of other indigenous forest in this area.
Distinctiveness/special features	L	
Other Criteria		
Size/shape	M/H	A moderate-sized area that is well buffered.
Connectivity	M	Is part of a network of fauna habitat in the area and adjoins protected indigenous forest at its northern boundary.
Long-term Sustainability	M	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 has been informally protected by the landowners. It has limited potential for farm development.

Discussion:
This area meets the District Plan criteria for a Significant Natural Area. Important features of the area are the habitat the area provides for forest birds, the presence of an at-risk (declining) bird species (rifleman), the buffering the area provides to the stream and the contribution it makes to the network of fauna habitat in the area.

Lower end of SNA 179b, viewed from the west

TIMARU DISTRICT SNA SURVEY SNA 179c

Area Name: Wellspring Farm Manuka Forest
Location (central map reference): J38: 607-740
Ecological District: Geraldine
Surveyors: Mike Harding and Julie Brown
Property: Wellspring Farm (Stanton)
Nearest Locality: Hilton
Area Size (ha): 4.9 **Altitude (m):** 120-150
Survey Time: 1 hour **Survey Date:** 15-06-10

General Description:

This SNA lies on moderately-steep slopes of a small valley near the northern boundary of the property. It adjoins another area of regenerating indigenous forest across the property boundary and lies close to other areas of indigenous vegetation on this and other properties.

Plant Communities:

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

The forest canopy of most of this area is dominated by kanuka. Other canopy species are hawthorn*, mahoe, mapou, cabbage tree, fuchsia, old man's beard* and pohuehue.

The forest understorey is dominated by *Coprosma rhamnoides*. Other understorey species present are *Coprosma propinqua*, bush lawyer, native jasmine, blackberry*, old man's beard* and Himalayan honeysuckle*.

The ground-cover through most parts of the forest is dominated by pasture grasses. Other ground-cover species present are common shield fern, prickly shield fern, hen and chickens fern, *Asplenium hookerianum*, *Blechnum penna-marina*, *Blechnum fluviatile*, *Hypolepis ambigua*, male fern*, black nightshade*, foxglove*, *Libertia ixioides*, bidibid, *Lagenifera* sp., pennywort, selfheal* and seedlings of kanuka, matipo, mahoe, mapou, wineberry, cabbage tree, clematis, native jasmine, blackberry*, elderberry*, broom*, Khasia berry* and *Coprosma* species.

Species commonly present at the forest margin and in forest openings are gorse*, Himalayan honeysuckle*, bracken and thousand-leaved fern.

Birds/Fauna Observed:

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

Notable Flora, Fauna and Habitats:

Important features of this area are the habitat the area provides for forest birds, including an 'at-risk' (declining) bird species (rifleman), the presence of a locally uncommon plant species (*Libertia ixioides*), the buffering the area provides to the stream and the contribution it makes to the network of forest-bird habitat in the area.

Notable Plant and Animal Pests:

Old man's beard and hawthorn are the most important plant pests present. Other plant pests present, such as Himalayan honeysuckle, gorse and broom, do not pose a significant threat to the forest. Animal pests were not surveyed.

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

This area is reasonably well buffered by its location in a small incised gully. It is fenced along its eastern boundary and buffered to some extent by a pine plantation at its lower (southern) boundary. It adjoins an area of low-stature regenerating (protected) forest at its upper (northern) boundary and lies close to other areas of indigenous forest on this and other properties.

Condition and Management Issues:

The main management issues are control of invasive plant pests (notably old man's beard), continued animal pest (especially possum) control and protection of the area from the effects of grazing.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	**M**	A good example of regenerating forest typical of the ecological district.
Rarity	**M**	Provides habitat for an 'at-risk' (declining) bird species (rifleman); supports a good population of a locally-uncommon plant species, *Libertia ixioides*.
Diversity and pattern	**L/M**	Relatively low species diversity; diversity is much reduced from that originally present.
Distinctiveness/special features	**L**	
Other Criteria		
Size/shape	**M/H**	A moderate-sized area that is reasonably well buffered.
Connectivity	**M**	Adjoins an area of protected forest at its upper boundary and is part of a network of fauna habitat in the area.
Long-term Sustainability	**M**	Plant and animal pest control will be required to maintain the ecological values of the area in the long term.

SNA 179b viewed from the west

Final Consideration (of other matters: Section D, page B-19 of Timaru District Plan):
This area has been informally protected by the landowners. It has limited potential for farm development.

Discussion:
This area meets the District Plan criteria for a Significant Natural Area. Important features of the area are the habitat the area provides for forest birds, including at 'at-risk' (declining) bird species (rifleman), the presence of a locally uncommon plant species (*Libertia ixioides*), the buffering the area provides to the stream and the contribution it makes to the network of fauna habitat in the area.

TIMARU DISTRICT SNA SURVEY SNA 163d

Area Name: Wellspring Farm Wetland
Location (central map reference): J38: 601-738
Ecological District: Geraldine
Surveyors: Mike Harding and Julie Brown
Property: Wellspring Farm (Stanton)
Nearest Locality: Hilton
Area Size (ha): 1.1 **Altitude (m):** 110
Survey Time: 1 hour **Survey Date:** 15-06-10

General Description:
This SNA lies in a small valley at the northwest corner of the property. It is linked by the stream to other areas of wetland vegetation up-valley on the adjacent property.

Plant Communities:
The main indigenous plant community present is *Carex secta* sedgeland, described below. Naturalized (exotic) species are indicated with an asterisk*.

Indigenous wetland vegetation at this site comprises a relatively large area of tall *Carex secta*. It is a uniform community with few other indigenous species. These are scattered bushes of *Coprosma propinqua*, occasional patches of swamp kiokio (*Blechnum minus*) and, at the sedgeland margin, scattered plants of *Carex coriacea* and *Juncus gregiflorus*.

The groundcover within the wetland and at the sedgeland margins is dominated by naturalized species, including soft rush*, creeping buttercup*, *Mimulus* sp.*, cocksfoot*, Yorkshire fog*, white clover* and foxglove*. Large crack willow* trees are present in the stream valley above and below the wetland.

Birds/Fauna Observed:
The only native birds observed in the wetland during this brief survey were fantail, including black-morph individuals. Native 'leaf-veined' slugs were observed under dead wood within the nearby crack willow trees.

Notable Flora, Fauna and Habitats:
The most important feature of this area is the extent and stature of the *Carex secta* sedgeland. This is one of the larger patches of *Carex secta* in this area. Lowland wetlands are a nationally-rare ecosystem.

Notable Plant and Animal Pests:
Crack willow is the most important plant pest present. Large crack willow trees dominate the valley-floor upstream and downstream from the wetland. Crack willow could readily invade the sedgeland community. Animal pests were not surveyed.

Boundaries (buffering, fencing, adjoining plant communities and habitats):
The sedgeland community is buffered to some extent by its position at a wet valley-floor site. The wetland is fenced along the property boundary but is grazed as part of a larger paddock. The site is buffered to some extent by a pine plantation on the adjacent eastern hill slope.

Condition and Management Issues:
While the *Carex secta* sedges are tall and healthy, other plant communities at the wetland are markedly affected by grazing. The presence of cattle has affected the vegetation and the wetland substrate through pugging. Protection from grazing (especially cattle) would probably prompt a recovery in wetland vegetation including an increase in the extent of *Carex secta*, though may need to be accompanied by weed control (especially crack willow).

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	**M**	A good example of wetland vegetation typical of the ecological district.
Rarity	**M**	Lowland wetlands are nationally-rare ecosystem type.
Diversity and pattern	**L/M**	Only one main plant community is present. Species diversity is substantially reduced from that originally present.
Distinctiveness/special features	**M**	The stature of the *Carex secta* plants is a special feature.
Other Criteria		
Size/shape	**M/H**	A moderate to large sized wetland for this part of the district.
Connectivity	**M**	Lies close to and is linked by the stream to other areas of indigenous wetland vegetation upstream.
Long-term Sustainability	**L/M**	Protection of the wetland from grazing will be required to maintain its ecological values in the long term.

Final Consideration (of other matters: Section D, page B-19 of Timaru District Plan):
This area has been informally protected by the landowners. The wetland lies at the far corner of the property and has very limited potential for farm development. The presence and health of the wetland may be affected by activities upstream on the adjacent property.

Discussion:
This area meets the District Plan criteria for a Significant Natural Area. Important features of the area are the extent and stature of the *Carex secta* sedgeland and that lowland wetlands are a nationally-rare ecosystem.

Tall dense *Carex secta* at SNA 163d

TIMARU DISTRICT SNA SURVEY Wetland 163d
Wetland Record Form

Wetland name: Wellspring Farm Wetland	**Date:** 15 June 2010
Property: Wellspring Farm (Stanton)	**GPS/Grid Ref:** J38: 601-738
Altitude: 110 m	**No. of plots sampled:**
Location: In small valley northwest of Hilton	**Approximate size (ha):**

Classification: I System	IA Subsystem	II Wetland Class	IIA Wetland Form
Riverine	Permanent	Swamp	Riparian

Surveyors: Mike Harding and Julie Brown

Indicator	Indicator components	Specify and Comment	Score 0-5[1]	Mean score
Change in hydrological integrity	Impact of manmade structures	None present	5	4.33
	Water table depth	No detectable changes	5	
	Dryland plant invasion	Pasture grasses present	3	
Change in physico-chemical parameters	Fire damage	No evidence of damage	5	3.67
	Degree of sedimentation/erosion	Stock trampling and pugging	3	
	Nutrient levels	Dung present	3	
	von Post index			
Change in ecosystem intactness	Loss in area of original wetland	Loss at margins	3	3.5
	Connectivity barriers	Large trees	4	
Change in browsing, predation and harvesting regimes	Damage by domestic or feral animals	Browsing and trampling over >50% of wetland	2	3.33
	Introduced predator impacts on wildlife	Unclear	3	
	Harvesting levels	None apparent	5	
Change in dominance of native plants	Introduced plant canopy cover	Crack willow in places	4	3.5
	Introduced plant understorey cover	Dominant in places	3	
Total wetland condition index /25				**18.33**

Main vegetation types: *Carex secta* sedgeland

Native fauna: Fantail, 'leaf-veined' slug (beneath adjacent crack willow).

Other comments: The wetland is linked hydrologically along the stream channel to other indigenous vegetation upstream.

Pressure	Rating[2]	Specify and Comment
Modifications to catchment hydrology	1	Small dams and vehicle crossings
Water quality within the catchment	3	Small catchment grazed by cattle and sheep.
Animal access	4	Little impediment to animal access
Key undesirable species	2	Crack willow and gorse
% catchment in introduced vegetation	4	Most of catchment
Other pressures	1	Fertiliser drift?
Total wetland pressure index /30	**15**	

Source: Clarkson *et al*, Handbook for monitoring wetland condition, Ministry for the Environment, August 2002.

[1] Assign degree of modification thus: 5=v. low/ none, 4=low, 3=medium, 2=high, 1=v. high, 0=extreme

[2] Assign pressure scores as follows: 5=very high, 4=high, 3=medium, 2=low, 1=very low, 0=none

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 (* = naturalised species)	Scientific name
barberry*	*Berberis glaucocarpa*
bidibid	*Acaena* sp.
blackberry*	*Rubus fruticosus*
black nightshade*	*Solanum nigrum*
bracken	*Pteridium esculentum*
broadleaf	*Griselinia littoralis*
broom*	*Cytisus scoparius*
bush lawyer	*Rubus cissoides*
cabbage tree/ti rakau	*Cordyline australis*
clematis	*Clematis* sp.
cocksfoot*	*Dactylis glomerata*
common shield fern	*Polystichum richardii*
crack willow*	*Salix fragilis*
creeping buttercup*	*Ranunculus repens*
elderberry*	*Sambucus nigra*
five-finger	*Pseudopanax arboreus*
foxglove*	*Digitalis purpurea*
fuchsia	*Fuchsia excorticata*
gorse*	*Ulex europaeus*
hawthorn*	*Crataegus monogyna*
hen and chickens fern	*Asplenium bulbiferum*
Himalayan honeysuckle*	*Leycesteria formosa*
hookgrass	*Uncinia* sp.
hound's tongue fern	*Microsorum pustulatum*
kahikatea/white pine	*Dacrycarpus dacrydioides*
kanuka	*Kunzea ericoides*
Khasia berry*	*Cotoneaster simonsii*
koromiko	*Hebe salicifolia*
lancewood	*Pseudopanax crassifolius*
lawyer	*Rubus schmidelioides*
lowland ribbonwood	*Plagianthus regius*
mahoe/whiteywood	*Melicytus ramiflorus*
male fern*	*Dryopteris filix-mas*
mapou	*Myrsine australis*
matagouri	*Discaria toumatou*
matai/black pine	*Prumnopitys taxifolia*
matipo/kohuhu	*Pittosporum tenuifolium*
native jasmine	*Parsonsia* sp.
necklace fern	*Asplenium flabellifolium*
old man's beard*	*Clematis vitalba*
pate	*Schefflera digitata*
pennywort	*Hydrocotyle* sp.
pohuehue	*Muehlenbeckia australis*
poroporo	*Solanum laciniatum*
prickly shield fern	*Polystichum vestitum*
selfheal*	*Prunella vulgaris*
soft rush*	*Juncus effusus*
swamp kiokio	*Blechnum minus*
sycamore*	*Acer pseudoplatanus*
thousand-leaved fern	*Hypolepis millefolium*
totara	*Podocarpus totara*
wall lettuce*	*Mycelis muralis*
white clover*	*Trifolium repens*

wineberry	*Aristotelia serrata*
Yorkshire fog*	*Holcus lanatus*