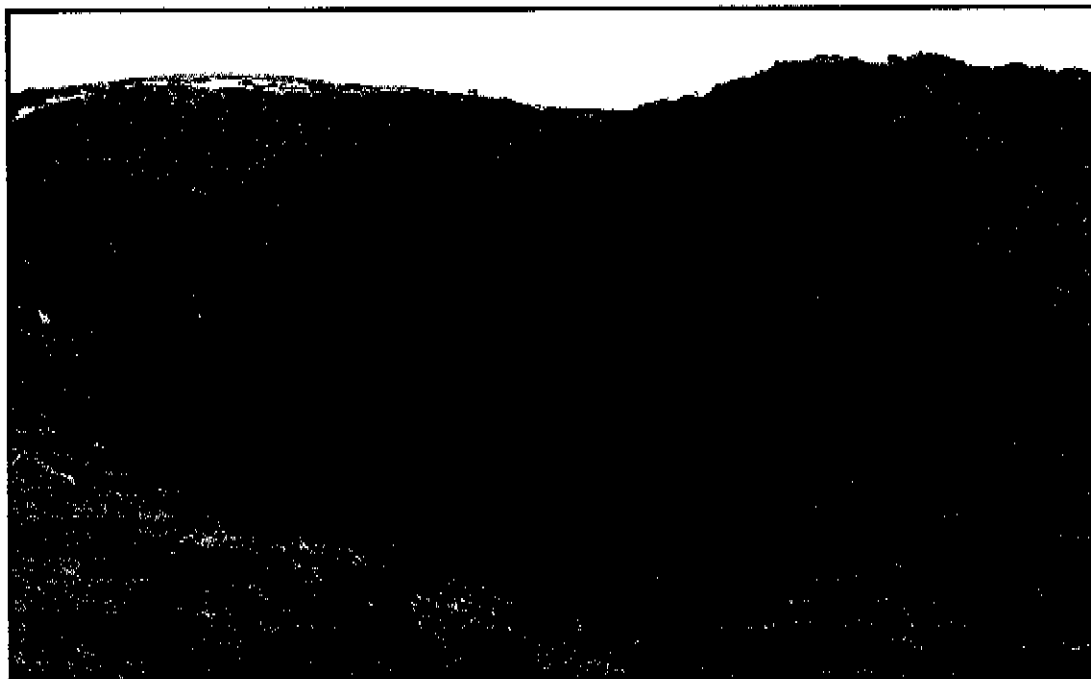




TIMARU DISTRICT

SIGNIFICANT NATURAL AREAS
SURVEY

SCOBIE PROPERTY



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

TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

PROPERTY REPORT

PROPERTY DETAILS:

Owners: NG & MJ Scobie
Valuation Reference: 24640/094.00
Address: 280 Sowerby Road, Peel Forest, RD 22, Geraldine.
Location: On low rolling hill country (downlands) on the north side of the Orari River, adjacent to the foothills of the Mt Peel Range.
Ecological Districts: On the boundary of the Orari and Geraldine ecological districts.
TDC Land Type: Hard Rock Hills and Downs.
Land Environment: Q2 (Southeastern Hill Country).

ECOLOGICAL CONTEXT:

The foothills adjacent to the property (above approximately 300 m altitude) lie within the Orari Ecological District. The gentler hills, downs and river terraces of the property lie within the Geraldine Ecological District. The main landforms on the property are low flat-topped hills with shallow gullies and flat or gently sloping terraces of the Orari River and Scotsburn. The original vegetation of this area would have been predominantly podocarp-hardwood forest, possibly with areas of mountain beech forest. Dense podocarp-hardwood (matai-totara-lowland ribbonwood) forest would have occupied the hill country and the older terraces and flats. Tall kanuka-kowhai-cabbage tree forest or treeland would have been present on recently disturbed terraces. Shrubland and/or scrub may have been present along the active floodplain of the Scotsburn. Wetland vegetation would have been present in poorly drained areas.

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. Long-tailed bats would also have been present.

The property is adjacent to the foothills, where more extensive areas of indigenous vegetation are present. The property lies close to the known range 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 June 2007 and September 2008. Nearly all parts of the property were visited and assessed. Five areas, totalling approximately 25 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
641a		J37: 662-952	14.26	hardwood forest
650	Scobie Homestead Forest	J37: 681-937	1.47	hardwood forest
651	Scobie Kanuka Forest	J37: 682-944	2.64	kanuka and hardwood forest
652	Lower Scotsburn Treelands	various	4.41	treeland
653		J37: 674-950	2.05	podocarp-hardwood forest

These 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 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 (criterion vii, page B19), apart from SNA 652 which will require 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 an SNA is that consent is required from Council for clearance of indigenous vegetation or habitat by any means (including burning and spraying with herbicides) or over-planting. 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. It is expected that SNAs will eventually be listed in the District Plan by way of a plan change.

OTHER AREAS INSPECTED ON THE PROPERTY:

Other areas of indigenous vegetation and habitat on the property were inspected. These mostly comprise scattered cabbage trees and other trees and shrubs within gorse scrub or shrubland. These areas have some value as scattered indigenous vegetation and as habitat for birds, but do not quite meet the significance criteria in the Timaru District Plan. Failure of these areas to meet the significance criteria does not necessarily mean that they are not important for nature conservation or the protection of indigenous biodiversity; it simply means that the areas (as assessed at this time) do not meet the criteria in the Timaru District Plan.



Scobie
24640/094.00

Horsfall Road

Scotburn Road

Blair Road

Oran River Road

Inglis Road

Thorn Road

Solway Road

641a

653

652d

652e

652c

652f

652b

652g

652a

652h

652i

651

650



1:15,000

TIMARU DISTRICT SNA SURVEY

AREA 641a

Area Name:

Location (central map reference): J37: 662-952

Ecological District: Geraldine/Orari boundary

Surveyors: Mike Harding

Property: Scobie

Nearest Locality: Peel Forest

Area Size (ha): 14.26 **Altitude (m):** 300-350

Survey Time: 2½ hours **Survey Date:** 07-06-07

General Description:

This SNA covers gently sloping lower slopes and an adjoining valley floor at the northwest corner of the property, at the base of the foothills of the Mt Peel Range. It is contiguous with other areas of indigenous forest on the adjacent property (Areas 641b, c and d).

Plant Communities:

South- and southeast-facing slopes within the Area support mixed hardwood forest. The main valley floor supports mixed hardwood forest along the stream and scattered indigenous trees and pasture on the main terrace. Northwest-facing hill slopes in the Area support regenerating hardwood forest, manuka low-forest, scattered indigenous trees and dense gorse scrub. These plant communities are described separately below. Naturalized (exotic) species are indicated with an asterisk*.

South- and southeast-facing slopes:

Forest on these slopes is dominated by broadleaf, lemonwood, mahoe, lancewood and fuchsia. Other canopy species are kowhai, five-finger, wineberry, marbleleaf and mapou. There are some large broadleaf and lemonwood trees present, with trunk diameters between 50 and 70 cm and occasionally larger (one broadleaf has a trunk diameter of 115 cm).

The forest understorey is dominated by *Coprosma rotundifolia*. Other understorey species present are *Coprosma rigida*, cabbage tree, mapou, lancewood, bush lawyer, narrow-leaved mahoe and *Calystegia tuguriorum*.

Important ground-cover species are prickly shield fern, *Blechnum fluviatile*, mahoe seedlings and broadleaf seedlings. Other ground-cover species are necklace fern, hen and chickens fern, *Asplenium hookerianum*, *A. richardii*, thousand-leaved fern, *Hypolepis ambigua*, *Blechnum penna-marina*, *Schizaelema* sp., bidibid, *Clematis* seedlings and wall lettuce*.

Additional species present on the forest margins are *Coprosma tayloriae*, koromiko, gorse*, Himalayan honeysuckle*, bracken, water fern, hard fern, *Hypolepis rufobarbata*, mountain kiokio, male fern*, foxglove* and pohuehue.

This forest grades upslope to shrubland, fernland and pasture. Dominant species here are prickly shield fern, *Coprosma rotundifolia*, *C. propinqua* and patches of Himalayan honeysuckle*. Other important species are young lancewood trees, cabbage tree, mapou, pohuehue, native jasmine, bush lawyer, bracken, tutu, fescue tussock, silver tussock, mountain kiokio and occasional gorse* and hemlock*.

At the eastern corner of the Area, above the vehicle track is an area of low forest dominated by Himalayan honeysuckle*. Other species present are fuchsia, prickly shield fern, gorse*, *Coprosma propinqua*, *C. rigida*, *C. rotundifolia*, bush lawyer, weeping mapou, koromiko, scrambling fuchsia and pohuehue, with emergent cabbage tree, broadleaf and lancewood. Additional species present below the road (nearer the stream) are pate, wineberry, lemonwood, mapou, five-finger, thousand-leaved fern, *Blechnum fluviatile* and *B. chambersii*.

A small population (five small trees) of the threatened Canterbury tree broom (threat status: range restricted) is present at the eastern corner of the Area, beside the road near the property boundary (map reference: 2366640E-5695548N).

Valley floor/terrace:

Forest along the stream at the base of the hill slope supports tall narrow-leaved lacebark, kowhai and cabbage trees, emergent over a canopy of fuchsia. Other species present are mahoe, marbleleaf, bush lawyer, pohuehue and one large crack willow* tree.

Dominant understorey species are *Coprosma rotundifolia*, mapou, pate, thousand-leaved fern and *Blechnum fluviatile*. *Coprosma propinqua* and *C. rigida* are present on the forest margin.

At the upper (north) end of the Area, several tall lowland ribbonwood trees are present along the stream near the property boundary. Also present here, mostly on ground disturbed by recent fence construction, are hemlock*, nodding thistle*, foxglove*, woolly mullein*, burdock* and Himalayan honeysuckle*.

The main open terrace on the valley floor supports pasture. Scattered across this terrace are kowhai and narrow-leaved lacebark trees, some of which may be remnants of the original forest. Trunk diameters of the kowhai trees range from 38 to 88 cm; trunk diameters of the narrow-leaved lacebark trees range from 42 to 60 cm. Hybrids between narrow-leaved lacebark and lowland ribbonwood are present.

Northwest-facing slopes:

Indigenous vegetation on these slopes is more broken and scattered, but is sufficiently intact in places to justify inclusion in this Area.

Slopes at the northern end support a substantial patch of low forest dominated by kowhai, lancewood, marbleleaf and mapou. Other canopy species present are cabbage tree, mahoe, native jasmine, *Clematis* sp. and *Calystegia tuguriorum*.

The low-forest understorey is dominated by *Coprosma rotundifolia*. Other understorey and ground-cover species are fuchsia, *Coprosma rigida*, weeping mapou, *Blechnum penna-marina*, *B. fluviatile*, *B. minus*, thousand-leaved fern, *Asplenium hookerianum*, *A. richardii* and sedge (*Carex* sp.).

The low-forest at the northern end adjoins the valley floor forest downslope. It grades upslope to patches of tall manuka and other patches of scrub dominated by gorse*, *Coprosma propinqua*, *C. rigida*, scrambling fuchsia, bush lawyer, thousand-leaved fern and prickly shield fern, with emergent cabbage tree, broadleaf, mahoe and manuka.

Slopes at the southern end support a small patch of regenerating hardwood forest dominated by five-finger, matipo, narrow-leaved lacebark, cabbage tree, kowhai, fuchsia and Himalayan honeysuckle*. The central slopes, between the northern and southern patches of forest described above, support dense gorse scrub with emergent cabbage trees.

Birds/Fauna Observed:

Native birds observed were fantail, grey warbler, bellbird, rifleman, kereru, silvereye and harrier.

Notable Flora, Fauna and Habitats:

Notable features of the Area are the presence and abundance of kowhai, narrow-leaved lacebark and lowland ribbonwood trees on the valley floor, the presence of a population of the threatened Canterbury tree broom, the presence of rifleman and kereru (threat status: gradual decline), the extent of the forest on the south- and southeast-facing slopes, the presence of similar forest on the adjoining property (together forming a substantial area of forest), and the habitat the forest provides for birds and possibly long-tailed bats.

Notable Plant and Animal Pests:

Himalayan honeysuckle and gorse are the most widespread and dominant plant pests present. However, these weeds do not pose a significant threat to indigenous forest in the Area. Gorse, especially on the northwest-facing slopes, provides useful habitat for the regeneration of indigenous woody species. One crack willow tree is present beside the stream, though does not appear to be spreading. A number of pasture weeds are present, including burdock, hemlock, nodding thistle and foxglove. Animal pests were not surveyed, though possum sign was observed.

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

The north and west boundaries of the Area are for the most part the property boundaries. Similar forest is present on the adjacent property along these boundaries. The southern and eastern boundaries follow the extent of the scattered indigenous trees (mostly cabbage tree, kowhai and narrow-leaved lacebark) emergent over pasture or gorse scrub, and the smaller patches of regenerating indigenous forest. The Area is well buffered to the north and west, and is to some extent buffered on other boundaries by gorse scrub. The Area lies very close to the identified range of long tailed bat (a nationally endangered species) in South Canterbury and supports older trees that provide suitable roost sites for bats.

Condition and Management Issues:

Forest in most parts of the Area is in good condition, especially the patch of forest on the hill slopes below the vehicle track at the western corner. Here, the forest between the road and stream does not appear to have been recently grazed. It has a denser and more diverse understorey than forest in other parts of the Area. Grazing pressure in other parts of the Area does not appear to have been heavy, and the regeneration of canopy species is occurring in most places.

Unfortunately, recent track and fence construction has caused considerable damage to forest in the northeast corner of the Area. Tracks several metres wide and with banks approximately two metres high have been excavated through forest. Large trees have been removed and other trees affected by material that has spilled down slope from the tracks.

The most worthwhile management action for protection of the indigenous forest in this Area would be removal of grazing from the densely forested parts. Removal of recently-constructed deer fences would be desirable, as intensive grazing by deer will have a significant detrimental effect on indigenous forest in this Area.

Property Owner Comment:

The property owners have expressed considerable concern about the recent construction of tracks and fences in this Area; developments that have occurred without their consent.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M	A modified (regenerating) example of forest typical of the ecological district.
Rarity	M/H	Provides very good habitat for kereru and rifleman. A small population of Canterbury tree broom is present. May provide habitat for long-tailed bat (nationally endangered).
Diversity and pattern	M	Species diversity is reduced from that originally present; a range of forest habitats are present.
Distinctiveness/special features	M	A number of large trees are present.
Other Criteria		
Size/shape	H	A moderate-sized area that has a good shape and is well buffered.
Connectivity	M/H	Adjoins other (covenanted) indigenous forest along approximately half its boundary and forms an important part of a network of forest habitat.
Long-term Sustainability	M/H	The ecological values of the Area are likely to persist with minimal conservation management.

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

Indigenous forest in this Area has been informally protected by the landowners. Plant and animal pests do not appear to be having a significant long-term impact on the forest, and the forest appears relatively resilient. Parts of the Area which support gorse scrub (on the northwest-facing slopes) have some development potential. Development of those areas would not severely compromise the ecological value of the Area, though protection (to permit continued forest regeneration) would be beneficial. Forest in the northeast part of the Area has been damaged by the recent construction of tracks, as part of track and fence construction on the adjacent property (i.e. not by the landowners and without the landowners consent).

Discussion:

This area of indigenous forest easily meets the District Plan criteria for a Significant Natural Area. Important features are the presence of areas of valley-floor forest, the presence of threatened species (Canterbury tree broom, rifleman and kereru), the extent of the forest, its location adjacent to other areas of indigenous forest, and the habitat the forest provides for birds and possibly long-tailed bats.

Area 652g:

A grove of large cabbage trees, one large kowhai tree and pohuehue in pasture, on the east side of Scotsburn Stream.

Area 652h:

A grove of cabbage trees and two large kowhai trees in pasture, on the east side of Scotsburn Stream.

Condition and Management Issues:

Forest in most parts of the Area is in good condition, especially the patch of forest on the hill slopes below the vehicle track at the western corner. Here, the forest between the road and stream does not appear to have been recently grazed. It has a denser and more diverse understorey than forest in other parts of the Area. Grazing pressure in other parts of the Area does not appear to have been heavy, and the regeneration of canopy species is occurring in most places.

Unfortunately, recent track and fence construction has caused considerable damage to forest in the northeast corner of the Area. Tracks several metres wide and with banks approximately two metres high have been excavated through forest. Large trees have been removed and other trees affected by material that has spilled down slope from the tracks.

The most worthwhile management action for protection of the indigenous forest in this Area would be removal of grazing from the densely forested parts. Removal of recently-constructed deer fences would be desirable, as intensive grazing by deer will have a significant detrimental effect on indigenous forest in this Area.

Property Owner Comment:

The property owners have expressed considerable concern about the recent construction of tracks and fences in this Area; developments that have occurred without their consent.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

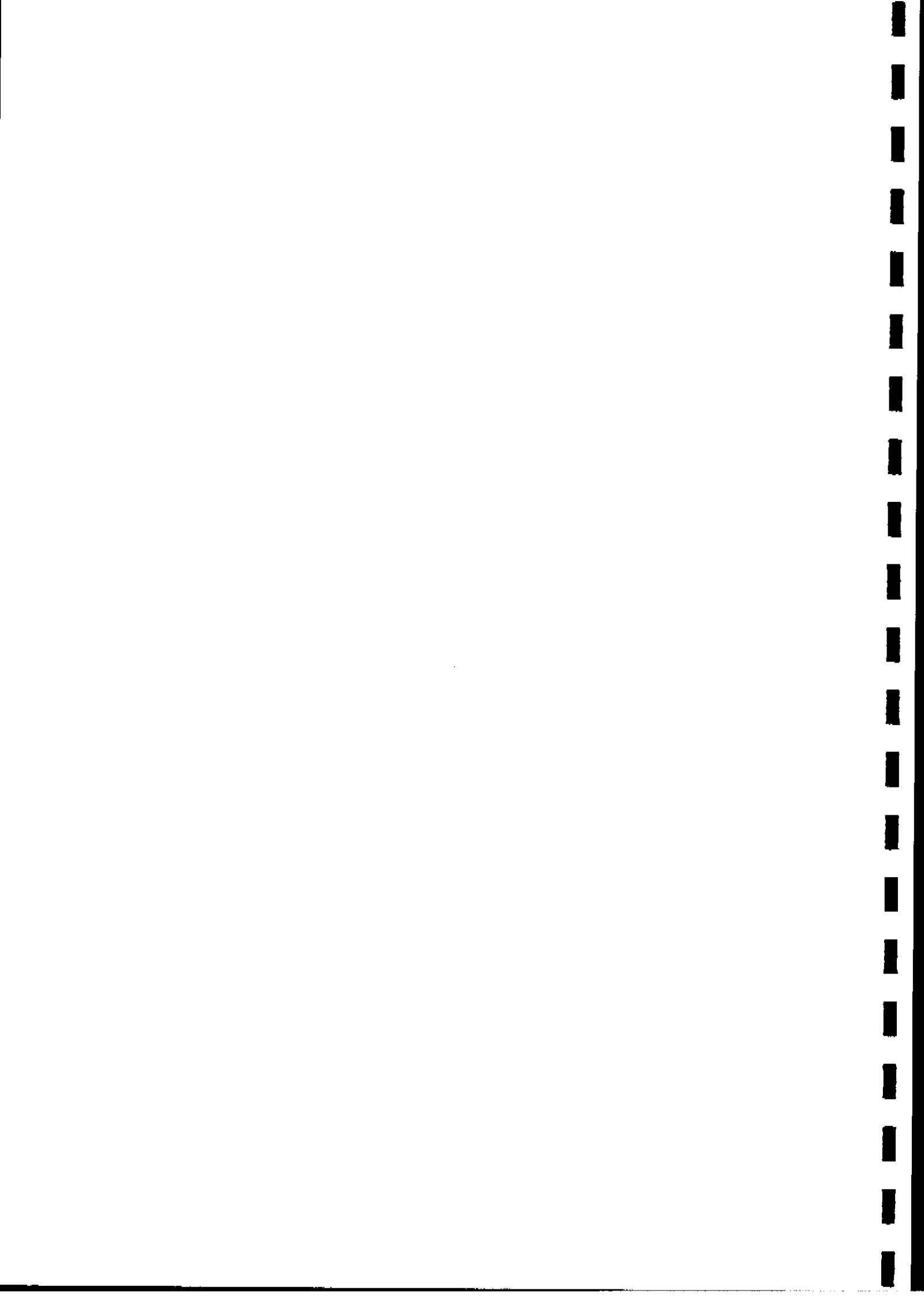
Primary Criteria	Rank	Notes
Representativeness	M	A modified (regenerating) example of forest typical of the ecological district.
Rarity	M/H	Provides very good habitat for kereru and rifleman. A small population of Canterbury tree broom is present. May provide habitat for long-tailed bat (nationally endangered).
Diversity and pattern	M	Species diversity is reduced from that originally present; a range of forest habitats are present.
Distinctiveness/special features	M	A number of large trees are present.
Other Criteria		
Size/shape	H	A moderate-sized area that has a good shape and is well buffered.
Connectivity	M/H	Adjoins other (covenanted) indigenous forest along approximately half its boundary and forms an important part of a network of forest habitat.
Long-term Sustainability	M/H	The ecological values of the Area are likely to persist with minimal conservation management.

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

Indigenous forest in this Area has been informally protected by the landowners. Plant and animal pests do not appear to be having a significant long-term impact on the forest, and the forest appears relatively resilient. Parts of the Area which support gorse scrub (on the northwest-facing slopes) have some development potential. Development of those areas would not severely compromise the ecological value of the Area, though protection (to permit continued forest regeneration) would be beneficial. Forest in the northeast part of the Area has been damaged by the recent construction of tracks, as part of track and fence construction on the adjacent property (i.e. not by the landowners and without the landowners consent).

Discussion:

This area of indigenous forest easily meets the District Plan criteria for a Significant Natural Area. Important features are the presence of areas of valley-floor forest, the presence of threatened species (Canterbury tree broom, rifleman and kereru), the extent of the forest, its location adjacent to other areas of indigenous forest, and the habitat the forest provides for birds and possibly long-tailed bats.



TIMARU DISTRICT SNA SURVEY

AREA 650

Area Name: Scobie Homestead Forest

Location (central map reference): J37: 681-937

Ecological District: Geraldine

Surveyors: Mike Harding

Property: Scobie

Nearest Locality: Peel Forest

Area Size (ha): 1.47

Altitude (m): 270-350

Survey Time: 1 hour

Survey Date: 16-09-08

General Description:

This SNA lies on moderately steep south-facing slopes at the edge of the rolling hill country behind the homestead, at the base of the Mt Peel Range between the Orari River and Scotsburn Stream.

Plant Communities:

The main plant community present is hardwood forest. This is described in detail below. Naturalized (exotic) species are indicated with an asterisk*.

The forest canopy is dominated by mahoe, broadleaf and pohuehue. Other canopy species are mapou, fuchsia, matipo, five-finger, narrow-leaved lacebark, cabbage tree and native jasmine.

The forest understorey is very open. Plant species present are bush lawyer, *Coprosma rotundifolia*, *Coprosma crassifolia* and elderberry*.

Ground-cover species present are pennywort, hairy pennywort, *Asplenium hookerianum*, *Pellaea rotundifolia*, prickly shield fern, *Hypolepis ambigua*, foxglove*, and seedlings of mahoe.

Shrubland dominated by *Coprosma propinqua* is present at the upper forest margin. Other species present are gorse*, hawthorn*, mahoe, fuchsia, *Coprosma tayloriae*, kanuka, bush lawyer, pohuehue and native jasmine.

A stand of tall macrocarpa* trees is present at the bottom (southern) edge of the forest. The forest grades along the slope to the west to gorse scrub with scattered indigenous shrubs and trees.

Birds/Fauna Observed:

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

Notable Flora, Fauna and Habitats:

Important features of this area are the habitat the area provides for birds and the extent to which the area is buffered by its location and surrounding vegetation.

Notable Plant and Animal Pests:

Hawthorn and elderberry are the most important plant pests present. Gorse is present at the forest margins but does not threaten the forest and will allow continued regeneration of indigenous species. The native climber pohuehue (*Muehlenbeckia*) is dominant in places.

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

The area is very well buffered by its location on steep south-facing slopes and by the gorse and other shrubland vegetation at its margins. It is part of a much more extensive area of woody vegetation, dominated by exotic species, that is present on the steep lower slopes of the downlands. This wider area does not meet the definition of indigenous vegetation but probably provides useful habitat for indigenous birds and other fauna.

Condition and Management Issues:

The forest understorey is very open, presumably due to grazing. Exclusion of grazing animals is the priority management issue. Some control of pohuehue may be necessary.

Property Owner Comment:

The property owners are interested in fencing this block. Geckos have been observed in this area.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M	An example of indigenous vegetation typical of the ecological district, though only partly representative of the original vegetation. May provide some habitat for threatened birds, such as kereru. Species diversity is reduced from that originally present.
Rarity	I/M	
Diversity and pattern	M	
Distinctiveness/special features	L	
Other Criteria		
Size/shape	M	A relatively small area, though with a good shape and very well buffered.
Connectivity	M	Part of a much larger area of more-modified vegetation on adjoining slopes.
Long-term Sustainability	M	Some conservation management will probably be required 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 has been informally protected by the landowners. Its location on steeper slopes limits its 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 birds and the extent to which the area is buffered by its location and surrounding vegetation.

TIMARU DISTRICT SNA SURVEY

AREA 651

Area Name: Scobie Kanuka Forest	Property: Scobie
Location (central map reference): J37: 682-944	Nearest Locality: Peel Forest
Ecological District: Geraldine	Area Size (ha): 2.64 Altitude (m): 260-300
Surveyors: Mike Harding	Survey Time: 1½ hours Survey Date: 16-09-08

General Description:

This SNA lies in two small gullies and on the intervening slopes on the east side of rolling hill country at the base of the Mt Peel Range, west of lower Scotsburn Stream.

Plant Communities:

Two main plant communities are present: hardwood forest and kanuka forest, in three patches linked by gorse scrub. These plant communities are described separately below. Naturalized (exotic) species are indicated with an asterisk*.

Northern gully:

The forest canopy in the upper gully is dominated by mahoe. Other canopy species present are mapou, broadleaf, fuchsia, bush lawyer, native jasmine and pohuehue. A single cherry laurel* tree is present at the upper forest margin. A single narrow-leaved lacebark tree is present in the stream-side part of the forest. Species present in the relatively open forest understorey are bush lawyer, *Coprosma crassifolia*, *Coprosma rotundifolia*, mapou, rohutu, white climbing rata, black nightshade* and poroporo. Ground-cover species present are necklace fern, *Asplenium hookerianum*, *Pellaea rotundifolia*, *Hypolepis ambigua*, pennywort, *Cardamine** sp., foxglove* and seedlings of elderberry*. Species generally confined to the stream margin are patc, hen and chickens fern, *Blechnum fluviatile* and prickly shield fern.

The forest canopy in the lower gully is dominated by kanuka. Trunk diameters (at breast height) of the larger kanuka trees range between 30 and 40 cm.

The forest floor here is mostly dominated by exotic grasses and herbs. Other understorey and ground-cover species present are lancewood, fuchsia, bush lawyer, *Coprosma rotundifolia*, *Coprosma propinqua*, pohuehue, foxglove*, necklace fern and *Hypolepis ambigua*.

Other species present on the small terrace beside the stream are one moderate-sized kahikatea tree (with a trunk diameter of 33 cm), one matipo tree, one turepo tree, rohutu, *Blechnum fluviatile* and prickly shield fern.

Both forest patches have dense to scattered gorse at their margins. Other species present at the margins are kanuka and cabbage trees, *Coprosma crassifolia*, mapou and pohuehue.

Central slopes:

A patch of young kanuka is present on the lower hill slope between the northern and southern gullies. This kanuka is linked to the other forest patches by gorse scrub. It has an open understorey and a ground cover dominated by introduced pasture grasses and herbs.

Southern gully:

The canopy of this patch of forest is dominated by mahoe and in places fuchsia. Other canopy species are mapou, marhleleaf, broadleaf, wineberry, pohuehue and native jasmine.

The forest understorey is open. The only plant species present is elderberry*.

Ground-cover species present are *Asplenium hookerianum*, necklace fern, *Polystichum richardii*, foxglove*, horehound*, black nightshade*, poroporo and seedlings of mahoe.

Species present at damper sites are *Blechnum fluviatile*, *Hypolepis ambigua* and hairy pennywort.

The forest margin is mostly dominated by gorse*, except at the top where shrubs of *Coprosma propinqua* dominate. Other species commonly present on the forest margin are cabbage tree, kanuka, fuchsia, pohuehue and bush lawyer. There is a patch of tall radiata pine trees adjacent to the upper boundary of the forest.

Birds/Fauna Observed:

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

Notable Flora, Fauna and Habitats:

Important features of this area are the presence of a young kahikatea tree, the presence of locally uncommon plant species: rohutu (*Neomyrtus pedunculata*), turepo (*Streblus heterophyllus*) and white climbing rata (*Metrosideros diffusa*), the habitat the area is likely to provide for birds (including kereru) and the contribution the area makes to the network of fauna habitat in the wider area.

Notable Plant and Animal Pests:

Gorse is the main plant pest present. It is dominant on the forest margins and adjoining slopes. However, gorse will not invade the forest, provides a buffer to the forest and will over time permit the regeneration of native species. The only other significant plant pest observed was elderberry and a single cherry laurel tree. The native climbing pohuehue (*Muehlenbeckia*) is not dominant, though forest remnants of this size are vulnerable to invasion by this species. Animal pests were not surveyed.

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

The patches of forest in this area are buffered to some extent by their location in gullies and by the presence of gorse scrub at their margins. They do not adjoin other areas of indigenous vegetation, though are not far from other SNAs on the property (650 and 652) and more extensive areas of indigenous vegetation in the foothills.

Condition and Management Issues:

The forest understorey is generally very open and bare, presumably as a result of grazing. Protection from animals, by fencing the remaining boundaries and excluding stock, is the most important management issue.

Property Owner Comment:

The property owners are interested in fencing this area of forest to exclude stock.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M/H	A good example of indigenous vegetation typical of the ecological district and containing species representative of the original vegetation (such as kahikatea).
Rarity	M	Supports three locally uncommon plant species and probably provides habitat for a threatened bird species (kereru/NZ pigeon).
Diversity and pattern	M	Two main plant communities are present, though species diversity is probably reduced from that originally present.
Distinctiveness/special features	L/M	The presence of kanuka is interesting.
Other Criteria		
Size/shape	M	A moderate-sized area that is well buffered, though with a poor shape.
Connectivity	M	Is part of a network of fauna habitat in the area.
Long-term Sustainability	M	Some conservation management (weed and pest control) will probably 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 occupies steeper slopes on which the potential for development is limited. It is already partly fenced from adjacent paddocks.

Discussion:

This area meets the District Plan criteria for a Significant Natural Area. Important features of the area are the presence of a young kahikatea tree, the presence of locally uncommon plant species, the habitat the area is likely to provide for birds (including kereru) and the contribution the area makes to the network of fauna habitat in the wider area.

TIMARU DISTRICT SNA SURVEY

AREA 652

Area Name: Lower Scotsburn Treelands	Property: Scobie
Ecological District: Geraldine	Nearest Locality: Mount Peel
Area 652a: Location (central map ref.): J37:685-945	Area Size (ha): 0.32 Altitude (m): 245
Area 652b: Location (central map ref.): J37: 685-947	Area Size (ha): 0.24 Altitude (m): 245
Area 652c: Location (central map ref.): J37: 686-949	Area Size (ha): 0.24 Altitude (m): 245
Area 652d: Location (central map ref.): J37: 686-954	Area Size (ha): 1.33 Altitude (m): 250-270
Area 652e: Location (central map ref.): J37: 686-951	Area Size (ha): 0.08 Altitude (m): 250
Area 652f: Location (central map ref.): J37: 687-948	Area Size (ha): 0.06 Altitude (m): 245
Area 652g: Location (central map ref.): J37: 687-946	Area Size (ha): 0.32 Altitude (m): 245
Area 652h: Location (central map ref.): J37: 687-942	Area Size (ha): 0.68 Altitude (m): 245
Area 652i: Location (central map ref.): J37: 685-940	Area Size (ha): 1.14 Altitude (m): 240
Surveyors: Mike Harding	Survey Time: 2 hours Survey Date: 16-09-08

General Description:

This SNA lies on the floodplain and adjacent terraces of Scotsburn Stream, east of Blair Road and at the western edge of the property. It comprises several areas of scattered trees (treeland), mostly within developed pasture.

Plant Communities:

The main plant community present is cabbage tree-kowhai treeland. This plant community is described in detail for each separate parts of the area below. Naturalized (exotic) species are indicated with an asterisk*. Many of the trees in each of these areas have cavities that provide suitable roost sites for birds and bats.

Area 652a:

Approximately 35 mature cabbage trees in pasture at the edge of gorse scrub on the west side of Scotsburn Stream. Trunk diameters at breast height (dbh) of the larger trees are between 60 and 75 cm. Also present within the area are gorse* and elderberry*.

Area 652b:

One cabbage tree, three large kowhai trees (dbh 40 to 73) and one large dead crack willow* tree, in pasture and gorse* on the west side of Scotsburn Stream.

Area 652c:

Several cabbage trees (dbh 52-56) and two large kowhai trees (dbh 42 and 56) in gorse* shrubland on the west side of Scotsburn Stream.

Area 652d:

This area comprises a relatively narrow strip of scattered indigenous trees and shrubs with exotic vegetation, mostly on the terrace edge downstream from the northwest property boundary.

Canopy or emergent trees are kanuka (at the northern end), kowhai, cabbage tree, crack willow*, hawthorn*, elderberry* and pohuehue.

Shrub species present are gorse*, broom*, *Coprosma propinqua*, *Coprosma rigida*, matagouri, pohuehue, lawyer and native jasmine.

Open areas are dominated by pasture grasses with thistles*, hemlock*, woolly mullein* and other exotic herbs.

Area 652e:

A single totara tree right beside the riverbed, with cabbage tree, elderberry* and pohuehue, on the east side of Scotsburn Stream.

Area 652f:

Cabbage trees, crack willow* and gorse*, on the east side of Scotsburn Stream.

Area 652g:

A grove of large cabbage trees, one large kowhai tree and pohuehue in pasture, on the east side of Scotsburn Stream.

Area 652h:

A grove of cabbage trees and two large kowhai trees in pasture, on the east side of Scotsburn Stream.

Area 652i:

Cabbage trees in pasture, on the west side of Scotsburn Stream.

Birds/Fauna Observed:

Native birds observed during this brief survey were harrier, grey warbler, kereru, paradise duck, South Island pied oystercatcher and pukeko. Larger trees in this area provide good roost sites for birds. They also provide roost sites for long-tailed bats. Bats have been recently recorded nearby at Peel Forest.

Notable Flora, Fauna and Habitats:

Important features of this area are the number and size of the mature kowhai and cabbage trees, the presence of a totara tree, the habitat the area provides for birds and possibly bats (seasonal food resource and roost/nest sites) and the extent of the area occupied by treeland.

Notable Plant and Animal Pests:

Gorse is the most prominent plant pest present. It does not directly affect the older trees but may hinder (or could help) regeneration of these canopy trees. Elderberry and hawthorn pose a greater threat, though neither is dominant at present. Some control of the native climber pohuehue (*Muehlenbeckia*) may be necessary to prevent smothering of trees.

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

This extensive and sparsely vegetated area is unfenced. It is buffered to some extent by the gorse scrub and associated vegetation that occupies the unstable floodplain of Scotsburn Stream. It forms a broken corridor of vegetation and habitat along the stream. At its upstream end it is close to other areas of indigenous vegetation and it is near to SNA 651 and SNA 650.

Condition and Management Issues:

The larger trees (cabbage tree and kowhai) are generally in good condition. A few are partly smothered by pohuehue and some have damaged trunks, probably from the effects of cattle rubbing. An important issue is regeneration of tree species. There are a few young kowhai trees along the terrace edge (Area 652d) but otherwise there is no regeneration of cabbage trees or kowhai. Regeneration could be encouraged by removing grazing animals, though some weed control may also be required to allow successful regeneration. The most valuable area to fence would be Area 652d, though it may be difficult to maintain a stock-proof fence along the unstable margin of Scotsburn Stream.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M	A good example of treeland and containing species representative of the original stream side forest (kowhai, cabbage tree and kanuka).
Rarity	M/H	The large trees provide very good roost/nest sites for birds and bats. Long-tailed bat (a nationally-endangered species) has been recorded nearby.
Diversity and pattern	L	
Distinctiveness/special features	M	The size of the larger kowhai and cabbage trees is a distinctive feature.
Other Criteria		
Size/shape	M	Each area (except 652d) is small, though collectively they cover a relatively large area.
Connectivity	M	The area forms a broken corridor of indigenous vegetation that provides good stream side habitat and lies close to other areas of indigenous vegetation.
Long-term Sustainability	L	The long term future of this area of indigenous vegetation is doubtful unless successful regeneration of tree species can occur.

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

The trees that are present within these areas have been informally protected by the landowners. Some lie within productive pasture and may hinder further development of those pastures. However, the trees provide some shelter and shade for stock and add considerable amenity value to the property. The trees that are closer to the stream lie on the unstable floodplain of the Scotsburn, an area which has limitations for further development. Most of the trees are clearly visible from Blair Road.

Discussion:

This area meets the District Plan criteria for a Significant Natural Area. Important features of the area are the number and size of the mature kowhai and cabbage trees, the presence of a totara tree, the habitat the area provides for birds and possibly bats (seasonal food resource and roost/nest sites) and the extent of the area occupied by treeland.



SNA 652d

TIMARU DISTRICT SNA SURVEY

AREA 653

Area Name:	Property: Scobie		
Location (central map reference): J37: 674-950	Nearest Locality: Peel Forest		
Ecological District: Geraldine/Orari boundary	Area Size (ha): 2.05	Altitude (m): 320-400	
Surveyors: Mike Harding	Survey Time: 1½ hours	Survey Date: 16-09-08	

General Description:

This SNA lies on south-facing slopes in a small gully on rolling hill country at the base of the Mt Peel Range between the Orari River and Scotsburn Stream.

Plant Communities:

Hardwood forest is the main plant community present. This is described in detail below. Naturalized (exotic) species are indicated with an asterisk*.

The forest canopy is dominated by mahoe and broadleaf. Other canopy or sub-canopy species present are lemonwood, marbleleaf, mapou, fuchsia, pohuehue, a single young matai/black pine with a trunk diameter (at breast height) of 22 cm, and a single large kahikatea/white pine tree adjacent to the stream (trunk diameter 133 cm).

The forest understorey is relatively open. The only shrub species commonly present is *Coprosma rotundifolia*. Other species occasionally present are bush lawyer, marbleleaf, mapou, pate and horopito. Important ground-cover species present are *Blechnum fluviatile* and *Asplenium hookerianum*.

Other ground-cover species occasionally present are pennywort, hairy pennywort, hen and chickens fern, necklace fern, *Asplenium richardii*, hound's tongue fern, *Blechnum penna-marina*, *Blechnum chambersii*, prickly shield fern, hard fern, *Hypolepis ambigua*, foxglove*, bidibid, blackberry*, wall lettuce* and seedlings of mahoe, *Coprosma rotundifolia* and elderberry*.

The forest is surrounded (and buffered) by gorse* scrub. Other species commonly present at the forest margins are *Coprosma tayloriae*, *Coprosma rotundifolia*, native jasmine, fuchsia and bracken, with emergent kanuka and cabbage trees and occasional lancewood trees. A single *Olearia bullata* shrub is present at the upper edge of the forest.

Species confined to or more common along the stream margin are pate, rushes (*Juncus* sp.), sedges (*Carex coriacea*) and *Blechnum chambersii*.

Birds/Fauna Observed:

Native birds observed during this brief survey were grey warbler, bellbird and fantail. The forest is likely to provide habitat for kereru and possibly rifleman, both of which are present in the wider area.

Notable Flora, Fauna and Habitats:

Important features of this area are the presence of a single large kahikatea tree (probably a remnant from the original forest), a young matai tree, a locally-uncommon plant species (*Olearia bullata*), the habitat the area is likely to provide for threatened bird species (kereru and rifleman), the diversity of plant species, the size of the area and the contribution that the area makes to the network of fauna habitat in the wider area.

Notable Plant and Animal Pests:

Gorse is the main plant pest present. It is dominant on the forest margins and adjoining slopes. However, gorse will not invade the forest, provides a buffer to the forest and will over time permit the regeneration of native species. The only other significant plant pest observed was elderberry. The native climbing pohuehue (*Muehlenbeckia*) is not dominant, though forest remnants of this size are vulnerable to invasion by this species. Animal pests were not surveyed, though possum sign was observed.

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

The area is fenced (along with areas of gorse scrub) along approximately two-thirds of its boundary. It is very well buffered by its location on a steeper south-facing slope and by the presence of dense gorse scrub at its margins. It does not adjoin other areas of indigenous vegetation, though is not far from other SNAs on the property (641, 650, 651 and 652) and more extensive areas of indigenous vegetation in the nearby foothills.

Condition and Management Issues:

The forest understorey is very open and bare, presumably as a result of grazing. Protection from animals, by fencing the remaining boundaries and excluding stock, is the most important management issue.

Property Owner Comment:

The property owners are interested in fencing this area of forest to exclude stock.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M/H	A good example of indigenous vegetation typical of the ecological district and containing species that are representative of the original vegetation (kahikatea and matai).
Rarity	M	One locally-uncommon plant species is present (<i>Olearia bullata</i>); this species has not yet been recorded from the Geraldine ED during this survey. The forest provides suitable habitat for two threatened bird species (kereru/NZ pigeon and rifleman).
Diversity and pattern	M	A relatively diverse range of species is present, though species diversity is probably reduced from that originally present.
Distinctiveness/special features	M	The presence of a large, and presumably old, kahikatea tree is a special feature.
Other Criteria		
Size/shape	M/H	A moderate-sized area, with a good shape and well buffered.
Connectivity	M	Is part of a network of fauna habitat in the wider area.
Long-term Sustainability	M	Some conservation management is probably 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 area has been informally protected by the landowners. It occupies a steeper south-facing slope on which the potential for development is limited. It is already partly fenced from adjacent paddocks.

Discussion:

This area meets the District Plan criteria for a Significant Natural Area. Important features of the area are the presence of a single large kahikatea tree (probably a remnant from the original forest), a young matai tree, a locally-uncommon plant species (*Olearia bullata*), the habitat the area is likely to provide for threatened bird species (kereru and rifleman), the diversity of plant species, the size of the area and the contribution that the area makes to the network of fauna habitat in the wider area.

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)	
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>
broom*	<i>Cytisus scoparius</i>
burdock*	<i>Arctium minus</i>
bush lawyer	<i>Rubus cissoides</i>
cabbage tree/ti rakau	<i>Cordyline australis</i>
Canterbury tree broom	<i>Carmichaelia torulosa</i>
cherry laurel*	<i>Prunus laurocerasus</i>
crack willow*	<i>Salix fragilis</i>
elderberry*	<i>Sambucus nigra</i>
fescue tussock	<i>Festuca novae-zelandiae</i>
five-finger	<i>Pseudopanax arboreus</i>
foxglove*	<i>Digitalis purpurea</i>
fuchsia	<i>Fuchsia excorticata</i>
gorse*	<i>Ulex europaeus</i>
hairy pennywort	<i>Hydrocotyle moschata</i>
hard fern	<i>Paesia scaberula</i>
hawthorn*	<i>Crataegus monogyna</i>
hemlock*	<i>Conium maculatum</i>
hen and chickens fern	<i>Asplenium bulbiferum</i>
Himalayan honeysuckle*	<i>Leycesteria formosa</i>
horchound*	<i>Marrubium vulgare</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>
koromiko	<i>Hebe salicifolia</i>
kowhai	<i>Sophora microphylla</i>
lancewood	<i>Pseudopanax crassifolius</i>
lawyer	<i>Rubus schmidtioides</i>
lemonwood	<i>Pittosporum eugenioides</i>
lowland ribbonwood	<i>Plagianthus regius</i>
macrocarpa*	<i>Cupressus macrocarpa</i>
mahoe/whiteywood	<i>Melicytus ramiflorus</i>
male fern*	<i>Dryopteris filix-mas</i>
manuka	<i>Leptospermum scoparium</i>
mapou	<i>Myrsine australis</i>
marbleleaf/pulaputaweta	<i>Carpodetus serratus</i>
matagouri	<i>Discaria toumatou</i>
matai/black pine	<i>Prumnopitys taxifolia</i>
matipo/kohuhu	<i>Pittosporum tenuifolium</i>
mountain beech	<i>Nothofagus solandri</i> var. <i>cliffortioides</i>
mountain kiokio	<i>Blechnum montanum</i>
narrow-leaved lacebark	<i>Hoheria angustifolia</i>
narrow-leaved mahoe	<i>Melicytus lanceolatus</i>
native jasmine	<i>Parsonsia</i> sp.
necklace fern	<i>Asplenium flabellifolium</i>
nodding thistle*	<i>Carduus nutans</i>
pate	<i>Schefflera digitata</i>
pennywort	<i>Hydrocotyle</i> sp.

pohuehue	<i>Muehlenbeckia australis</i>
poroporo	<i>Solanum laciniatum</i>
prickly shield fern	<i>Polystichum vestitum</i>
radiata pine*	<i>Pinus radiata</i>
rohutu	<i>Neomyrtus pedunculata</i>
scrambling fuchsia	<i>Fuchsia perscandens</i>
silver tussock.....	<i>Poa cita</i>
thousand-leaved fern	<i>Hypolepis millefolium</i>
totara	<i>Podocarpus totara</i>
turepo	<i>Streblus heterophyllus</i>
tutu	<i>Coriaria sarmentosa</i>
wall lettuce*	<i>Mycelis muralis</i>
water fern	<i>Hystiopteris incisa</i>
weeping mapou	<i>Myrsine divaricata</i>
white climbing rata.....	<i>Metrosideros diffusa</i>
wineberry	<i>Aristotelia serrata</i>
woolly mullein*	<i>Verbascum thapsus</i>