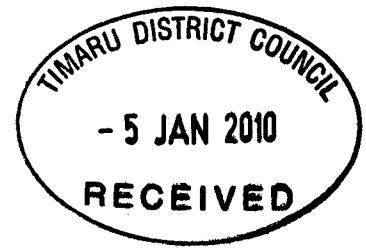


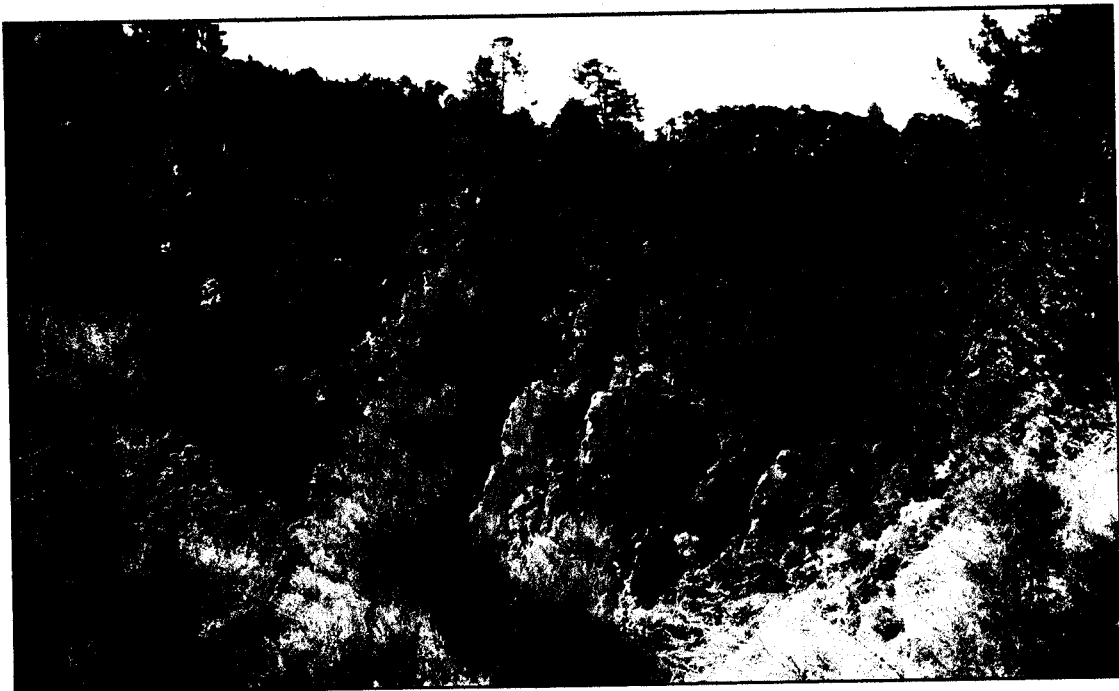
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TIMARU DISTRICT

SIGNIFICANT NATURAL AREAS
SURVEY

J&A MORRISON
KAKAHU



Report prepared for Timaru District Council by Mike Harding
December 2009

TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

PROPERTY REPORT

PROPERTY DETAILS:

Owner: John and Anne Morrison
Valuation References: 24670/228.00 and 24670/221.00
Address: Winchester Hanging Rock Road, Kakahu
Location: Low hills and river banks along the Kakahu River, near Kakahu
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 lower hill country, terraces and river banks in the Kakahu Bush area in South Canterbury. It includes the steep slopes alongside parts of the Kakahu River gorge. The property lies in the central inland part of Geraldine Ecological District.

It is likely that the original vegetation of this area was predominantly mixed podocarp-hardwood forest with smaller areas of scrub, shrubland, wetland and rock-bluff flora. This is the part of the Geraldine Ecological District with the largest remaining areas of indigenous forest. Nevertheless, indigenous forest is still generally confined to small remnants in gullies and around bluffs, with some larger areas of younger regenerating forest.

The indigenous fauna would have originally been significantly more numerous and diverse, with a greater range of birds, lizards and invertebrates than is presently found in the area. The property lies within the known range of the South Canterbury population of long-tailed bat. This species is listed as nationally-endangered.

Indigenous vegetation on the property comprises areas of podocarp-hardwood forest, kanuka forest, bluff vegetation and a small wetland. The property lies close to an extensive area of indigenous forest on the slopes of Kakahu Hill and close to other important indigenous forest remnants on limestone scarps.

SIGNIFICANT AREAS ON THE PROPERTY:

The property was surveyed as part of the District-wide survey of Significant Natural Areas during September 2009. Nearly all parts of the property were visited and assessed. Four areas, totalling approximately eleven 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
8e	Morrison Lime Kiln Forest	J38: 560-712	1.0	hardwood forest
8g	Kakahu River gorge	J38: 554-709	2.3	podocarp-hardwood forest; kanuka forest
8h	Kakahu River gorge	J38: 556-712	2.0	podocarp-hardwood forest; kanuka forest
335b	Kakahu River peninsula forest	J38: 563-711	5.5	kanuka forest

These SNAs are illustrated on the attached aerial photograph and described in greater detail on the SNA 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.

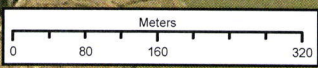
At present, consent is required from Council for clearance of areas of indigenous vegetation or habitat which meet the Interim Definitions in the District Plan. Clearance includes burning, spraying with herbicides and over-planting. SNAs encompass most, but not necessarily all, areas of vegetation and 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 a small wetland on a terrace near the centre of the property, a small patch of totara trees on the terrace scarp west of the farmhouse road, and kanuka forest on the terrace scarp east of the farmhouse road. These areas are too small and/or too modified to presently meet the District Plan criteria. This does not mean that they are not important for nature conservation or biodiversity protection. With appropriate management and/or restoration, these areas may meet the District Plan criteria in the future.

J&A Morrison
24670/228.00
24670/221.00



1:8,000

TIMARU DISTRICT SNA SURVEY

AREA 8e

Area Name: Morrison Lime Kiln Forest
Location (central map reference): J38: 560-712
Ecological District: Geraldine
Surveyors: Mike Harding

Property: John and Anne Morrison
Nearest Locality: Kakahu
Area Size (ha): 1.0 **Altitude (m):** 140-170
Survey Time: 1 hour **Survey Date:** 08-09-09

General Description:

This SNA lies on moderately steep rocky slopes at the northern edge of the property, near the old lime kiln. It is contiguous with a more extensive area of forest (SNA 8d) on the adjoining property.

Plant Communities:

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

The forest canopy of this small area of forest is dominated by matipo. Other canopy species present are cabbage tree, five-finger, broadleaf, kanuka, lancewood, yellowwood, native jasmine, pohuheue, bush lawyer and a single totara tree.

Species present in the forest understorey are *Coprosma rhamnoides*, *Coprosma crassifolia*, *Helichrysum lanceolatum*, mahoe, mapou, weeping mapou, spindle tree*, toatoa and saplings of totara.

Ground-cover species are common shield fern, hanging spleenwort, necklace fern, hen and chickens fern, *Asplenium hookerianum*, hound's tongue fern, *Libertia ixioides*, bidibid, hookgrass and seedlings of native jasmine, totara and *Coprosma* species.

The forest margin is dominated by dense gorse*. Other species present at the margin are hawthorn*, wineberry, marbleleaf, fuchsia, *Coprosma rigida*, *Coprosma rotundifolia*, prickly shield fern, blackberry*, foxglove* and bracken.

Birds/Fauna Observed:

Native birds observed during this brief survey were bellbird, kereru, brown creeper and grey warbler.

Notable Flora, Fauna and Habitats:

Important features of this area are the presence of totara (including totara regeneration), the habitat the area provides for forest birds and its location adjacent to a more extensive area of indigenous forest.

Notable Plant and Animal Pests:

Hawthorn is the most important plant pest present. Animal pests were not surveyed, though a mob of approximately 12 goats was present at the time of survey.

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

The area is not fenced but is well buffered by dense gorse. It adjoins a more extensive area of forest on the property boundary.

Condition and Management Issues:

This small patch of forest is in surprisingly good condition for its size, probably due in part to its location on a steep rocky slope and the dense gorse at its margins.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

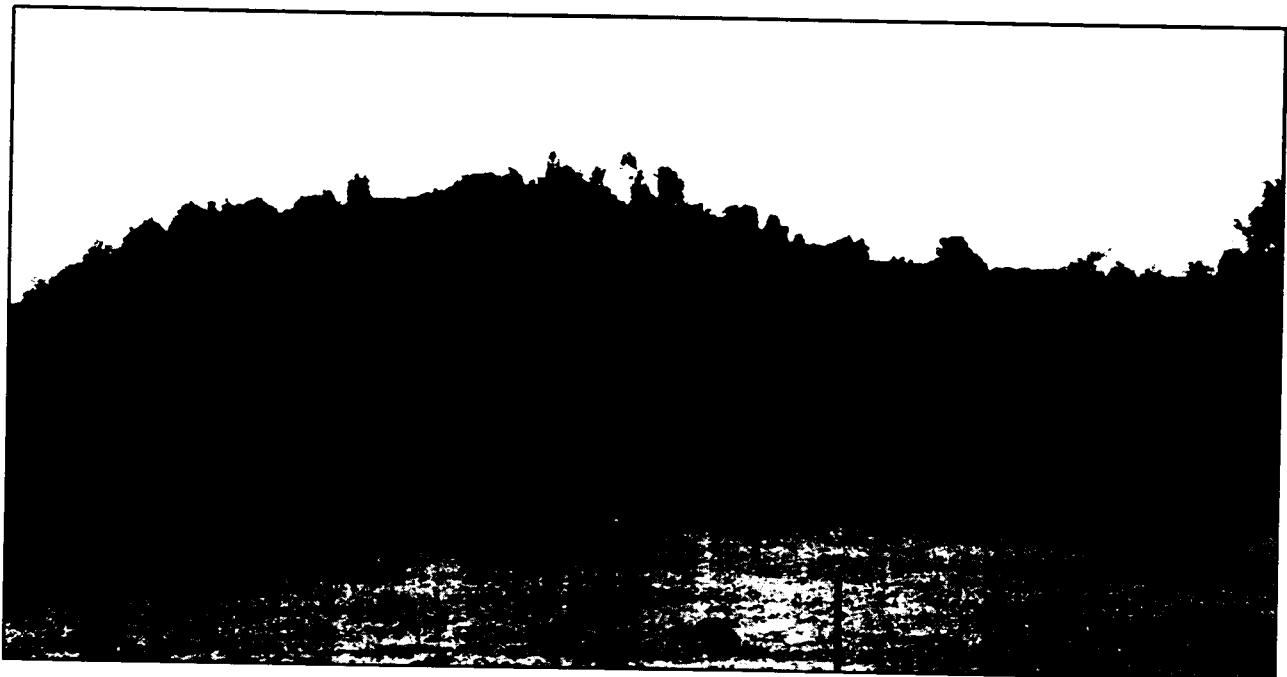
Primary Criteria	Rank	Notes
Representativeness	M	A typical example of regenerating indigenous forest, with species representative of the original forest canopy (notably totara).
Rarity	M	Probably provides some habitat for an at-risk bird species (rifleman) and may provide habitat for a nationally-endangered species (long-tailed bat).
Diversity and pattern	M	Relatively diverse for its size, though diversity is probably reduced from that originally present.
Distinctiveness/special features	L	
Other Criteria		
Size/shape	M	A small area of forest but with a good shape and well buffered.
Connectivity	M	Connected to a much more extensive area of indigenous forest.
Long-term Sustainability	M	Some 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 is well protected by its location on steep rocky slopes. The central part of this area has little potential for farm development.

Discussion:

This area meets the District Plan criteria for a Significant Natural Area. Important features of the area are the presence of totara (including totara regeneration), the habitat the area provides for forest birds and its location adjacent to a more extensive area of indigenous forest.



SNA Se

TIMARU DISTRICT SNA SURVEY

AREA 8g

Area Name: Kakahu River gorge
Location (central map reference): J38: 554-709
Ecological District: Geraldine
Surveyors: Mike Harding

Property: John and Anne Morrison
Nearest Locality: Kakahu
Area Size (ha): 2.3 **Altitude (m):** 130-160
Survey Time: 1 hour **Survey Date:** 08-09-09

General Description:

This SNA lies on the steep banks of the Kakahu River just west of the property homestead. It is a relatively narrow area lying between the river and open pasture on gentler slopes above the gorge. It lies close to other areas of indigenous vegetation, notably on the neighbouring property across the river.

Plant Communities:

Kanuka forest is the main plant community present, though there are two small patches of podocarp trees. This plant community is described below. Naturalized (exotic) species are indicated with an asterisk*.

The forest canopy throughout this area is broken either by the steepness of the slope or by patches of open vegetation. Canopy species present in the main part of this area are kanuka, matipo, broadleaf, totara, hawthorn*, lancewood, kowhai, wineberry, lawyer, bush lawyer, *Clematis* sp., native jasmine, pohuehue and one matai tree. Larger radiata pine* trees are present at the upper forest margin. Tall ash*(?) and poplar* trees are present at the down-valley edge of the area. Sycamore* trees are present at the centre of the area.

Areas of denser forest support a good range of understorey species, including *Coprosma rhamnoides*, *Coprosma rotundifolia*, *Coprosma crassifolia*, yellowwood, poataniwha, korokio, *Helichrysum lanceolatum*, mingimingi, weeping mapou, *Raukaua anomalus* and marbleleaf.

Ground cover species present are common shield fern, necklace fern, hanging spleenwort, hen and chickens fern, hound's tongue fern, *Pellaea rotundifolia*, male fern*, *Libertia ixioides*, scrub pohuehue, hairy pennywort, bidibid, hookgrass and seedlings of matipo, mahoe, kowhai and *Coprosma* species. One patch of periwinkle* was observed. The invasive herb, ground ivy*, is present at the down-valley end of the area.

Areas of open vegetation support gorse*, hawthorn*, broom*, *Coprosma propinqua*, *Coprosma rigida*, *Coprosma rotundifolia*, fuchsia, scrambling fuchsia, wineberry, prickly shield fern, blackberry*, foxglove*, flowering currant*, gooseberry*, Chilean flame creeper* and, at the lower end, ivy*.

Additional species present alongside the river are crack willow*, bush lily, *Blechnum fluviatile* and *Carex secta*.

Two small patches of podocarps are present at the up-valley end of this area. They support matai, kahikatea, totara, kanuka and matipo. Trunk diameters (cm at breast height) of the trees are: matai, 35-40 and kahikatea, 18 to 49. Other species present at these patches are *Coprosma rotundifolia*, *Coprosma rhamnoides*, *Coprosma propinqua*, *Coprosma rigida*, elderberry*, prickly shield fern and pennywort.

Birds/Fauna Observed:

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

Notable Flora, Fauna and Habitats:

Important features of this area are the presence of young podocarp trees (kahikatea, matai and totara), two locally-uncommon plant species (korokio and *Raukaua anomalus*), two at-risk bird species (rifleman and black shag), good habitat for forest birds (including kowhai trees), the buffering the area provides to the river and the contribution the area makes to fauna habitat in the area.

Notable Plant and Animal Pests:

Sycamore, hawthorn and ground ivy are the most important plant pests present. Also of concern are ivy (at the lower end), flowering currant and Chilean flame creeper. Animal pests were not surveyed, though possums and feral goats are present in the area.

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

The SNA is well buffered by its location on steep slopes. It is fenced along most of its upper boundary and protected at its lower boundary by the river. It does not directly adjoin other areas of indigenous vegetation but lies close to extensive areas of indigenous forest, including the regionally-important Kakahu Bush.

Condition and Management Issues:

The forest is in moderate condition. It has been damaged by recent snowfalls and open sections of forest have a high proportion of exotic species. The most important management issue is weed control, especially removal of sycamore and hawthorn. The other plant pest species pose a lesser threat at present.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M/H	A reasonably good example of riparian forest typical of the ecological district.
Rarity	M/H	Provides reasonable habitat for two locally uncommon plant species and two at-risk bird species (rifleman and black shag). May provide some habitat for a nationally-endangered species (long-tailed bat).
Diversity and pattern	M	A relatively diverse forest remnant, though diversity is probably reduced from that originally present.
Distinctiveness/special features	L/M	Provides useful buffering for the Kakahu River.
Other Criteria		
Size/shape	M	A small to moderate sized area with a poor shape but well buffered.
Connectivity	M	Lies close to other areas of indigenous forest and makes a useful contribution to fauna habitat in the area.
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 is protected by its location on steep river-side slopes. It has little potential for farm development.

Discussion:

This area meets the District Plan criteria for a Significant Natural Area. Important features of the area are the presence of young podocarp trees, two locally-uncommon plant species, two at-risk bird species, good habitat for forest birds (including kowhai trees), the buffering the area provides to the river and the contribution the area makes to fauna habitat in the area.

TIMARU DISTRICT SNA SURVEY

AREA 8h

Area Name: Kakahu River gorge
Location (central map reference): J38: 556-712
Ecological District: Geraldine
Surveyors: Mike Harding

Property: John and Anne Morrison
Nearest Locality: Kakahu
Area Size (ha): 2.0 **Altitude (m):** 140-200
Survey Time: 1½ hours **Survey Date:** 08-09-09

General Description:

This SNA lies on steep slopes of the Kakahu River gorge at the northwest corner of the property. It adjoins more extensive areas of indigenous forest (including SNA 8c) on neighbouring properties.

Plant Communities:

Two main plant communities are present: kanuka forest on the upper slopes and podocarp-hardwood forest nearer the river. These plant communities are described separately below. Naturalized (exotic) species are indicated with an asterisk*.

Upper slope kanuka forest:

The forest canopy on the upper slopes is dominated by kanuka. Trunk diameters (at breast height) of the larger kanuka trees are between 20 and 30 cm. Hawthorn* is also present and is dominant near the upper forest margin. Other canopy species present are matipo, yellowwood, broadleaf, lancewood, mahoe, mapou, cabbage tree, cherry plum*, native jasmine and pohuehue.

The forest understorey is relatively open, probably due to the dryness of the slope and the presence of feral goats. The dominant understorey species are *Coprosma rhamnoides* and *Helichrysum lanceolatum*. Other understorey species present are *Coprosma rotundifolia*, *Coprosma crassifolia*, poataniwha, weeping mapou, korokio, porcupine shrub, toatoa, poroporo, *Clematis* sp., gorse*, broom* and tutsan*.

Ground cover species on the upper slopes are common shield fern, pennywort, hairy pennywort, bidibid, *Libertia ixioides*, grasses*, male fern* and seedlings of totara, mahoe, matipo, hawthorn*, gorse*, elderberry* and *Coprosma* species.

Species present on or associated with the numerous large rock outcrops are scrub pohuehue, necklace fern, hen and chickens fern, *Asplenium hookerianum*, leather-leaf fern, *Cheilanthes humilis*, *Pellaea rotundifolia*, hound's tongue fern, *Coprosma propinqua* and *Clematis marata*.

The upper forest margin is dominated by gorse*. Other species present at the forest margin are kanuka, hawthorn*, blackberry*, bush lawyer and emergent radiata pine* trees.

Podocarp-hardwood forest:

This forest is similar to that described above except that podocarps (predominantly totara) and hardwood species (notably broadleaf and lancewood) are more common in the forest canopy. One patch of forest closer to the river, and only viewed from a distance, is dominated by tall trees of matai and kahikatea.

Other species present in the lower slope forest that were not observed on upper slopes are wineberry, marbleleaf, shrubby mahoe, shrubby mahoe X mahoe and hookgrass.

Birds/Fauna Observed:

Native birds observed during this brief survey were fantail, grey warbler, bellbird, brown creeper, harrier, kereru and welcome swallow. Pukeko were observed on the grassy river bank. A black shag colony is present near the site in tall pine trees.

Notable Flora, Fauna and Habitats:

Important features of this area are the presence of tall podocarp (totara, matai and kahikatea) trees, podocarp (totara) regeneration, locally-uncommon plant species (*Cheilanthes humilis*, korokio, porcupine shrub and leather-leaf fern), the extensive rock outcrops and the dry-rock habitat they provide, good-quality forest bird habitat, the size of the area and the contribution the area makes to fauna habitat in the wider area.

Notable Plant and Animal Pests:

Hawthorn is the most important plant pest present. It is dominant on the upper slopes and present throughout. A few cherry plum trees are also present. Other naturalised species such as gorse, broom and elderberry probably do not pose a significant long-term threat. Animal pests were not surveyed. However, feral goats are clearly affecting the forest understorey.

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

The area is fenced along its upper boundary and adjoins indigenous forest (on an adjoining property) on its up-valley boundary and dense exotic scrub (hawthorn and gorse) on its down-valley boundary. The river forms the lower-slope boundary. Indigenous forest is present on slopes on the other side of the river.

Condition and Management Issues:

This area of forest is in reasonable condition. The forest understorey is depleted, especially on upper slopes, by animals (predominantly feral goats). The forest canopy is affected on upper slopes by hawthorn and to a lesser extent cherry plum. However, the steepness of the slopes and the presence of large rock outcrops provide representative habitats. The main management issues are the control of hawthorn, cherry plum and feral goats.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M/H	A good example of indigenous forest typical of such sites in the ecological district and supporting, especially on lower slopes and rock bluffs, indigenous vegetation representative of that originally present. Provides good habitat for several locally-uncommon dry-slope plant species. Provides habitat for two at-risk bird species (rifleman and black shag) and may provide habitat for long-tailed bat (nationally endangered).
Rarity	M/H	
Diversity and pattern	M/H	Supports a relatively high number of plant species in three main habitats: rockland, dry upper-slope kanuka forest and lower-slope podocarp-hardwood forest.
Distinctiveness/special features	M	The spectacular rock outcrops are a special feature.
Other Criteria		
Size/shape	M/H	A small to moderate-sized area but with a good shape and very well buffered.
Connectivity	M/H	Adjoins and links other areas of indigenous forest, parts of which are protected, on three boundaries.
Long-term Sustainability	M	Plant and animal pest control will be required to protect the ecological values in the long term.

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

This area is well protected by its location on steep rocky slopes. It has little potential for farm development and has been managed sympathetically by the present landowners.

Discussion:

This area meets the District Plan criteria for a Significant Natural Area. Important features of the area are the presence of tall podocarp (totara, matai and kahikatea) trees, podocarp (totara) regeneration, locally-uncommon plant species (*Cheilanthes humilis*, korokio, porcupine shrub and leather-leaf fern), the extensive rock outcrops and the dry-rock habitat they provide, good-quality forest bird habitat, the size of the area and the contribution the area makes to fauna habitat in the wider area.

TIMARU DISTRICT SNA SURVEY

AREA 335b

Area Name: Kakahu River Peninsula Forest
Location (central map reference): J38: 563-711
Ecological District: Geraldine
Surveyors: Mike Harding

Property: John and Anne Morrison
Nearest Locality: Kakahu
Area Size (ha): 5.5 **Altitude (m):** 130-160
Survey Time: 2 hours **Survey Date:** 10-09-09

General Description:

This SNA lies on a small peninsula in a bend of the Kakahu River between Kakahu and Kakahu Bush, at the northeast corner of the property. It adjoins, across the Kakahu River, a more extensive area of indigenous forest (SNA 8d) on an adjoining property.

Plant Communities:

Two main plant communities are present: kanuka forest and regenerating hardwood forest. These plant communities are described separately below. Naturalized (exotic) species are indicated with an asterisk*.

Kanuka forest:

Kanuka forest is the dominant plant community on the peninsula. The forest canopy here is dominated by kanuka. Trunk diameters (at breast height) of the larger kanuka trees range between 15 and 20 cm. Other canopy species present are matipo, broadleaf, lancewood, five-finger, native jasmine and pohuehue.

The forest understorey on steeper western slopes is dominated by *Coprosma rhamnoides* and mingimingi. On gentler eastern slopes the understorey is dominated by matipo and blackberry*. Other understorey species are *Coprosma rotundifolia*, *Coprosma rhamnoides*, *Coprosma crassifolia*, *Coprosma propinqua*, yellowwood, mapou, weeping mapou, broadleaf, lancewood, *Helichrysum lanceolatum*, hawthorn*, gorse*, broom*, pohuehue, scrub pohuehue and *Calystegia tuguriorum*. Plants of *Khasia berry** are present near the northwest end of the site.

Species commonly present at rocky or steeper sites are koromiko, mountain akeake, hanging spleenwort, necklace fern, hen and chickens fern, common shield fern, hound's tongue fern, mouse-ear hawkweed* and foxglove*. Other ground-cover species are bidibid, and seedlings of broadleaf, kanuka, matipo, five-finger, lancewood, cabbage tree and *Coprosma* species. Also present are occasional seedlings of totara and patches of moss.

The forest margins are dominated by dense gorse*. Other species present on the forest margin are blackberry*, broom*, Himalayan honeysuckle*, hawthorn*, gooseberry*, *Coprosma rotundifolia*, pohuehue and lawyer.

Additional species present alongside the Kakahu River are crack willow*, *Coprosma propinqua*, *Xrobusta*, prickly shield fern, *Blechnum minus*, *Blechnum penna-marina* and male fern*.

Regenerating hardwood forest:

This forest is present at the eastern corner of the property. It is connected to the kanuka forest by dense gorse with emergent matipo and other hardwoods. It was inspected only from the outside as access into the forest is restricted by dense gorse and blackberry. The forest canopy is dominated by matipo. Other canopy species present are kanuka, cabbage tree and pohuehue.

Birds/Fauna Observed:

Native birds observed during this brief survey were grey warbler, brown creeper, bellbird, rifleman, kereru, fantail, paradise duck, pukeko and black shag.

Notable Flora, Fauna and Habitats:

Important features of this area are the presence of podocarp (totara) seedlings, habitat for two at-risk bird species (rifleman and black shag), possible habitat for long-tailed bat (nationally endangered), the buffering the area offers to the Kakahu River, and the contribution the area makes to fauna habitat in the wider area.

Notable Plant and Animal Pests:

Hawthorn and Khasia berry (*Cotoneaster simonsii*) are the most important plant pests present. Other plant pests, such as gorse, broom and blackberry, do not pose a significant threat to the regenerating forest.

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

The area is well buffered by its location on a steep-sided peninsula and by the dense gorse scrub at its margins. It adjoins, across the Kakahu River, much more extensive areas of indigenous forest.

Condition and Management Issues:

This forest, though relatively young, is in good condition, as indicated by the diversity of understorey species and by the presence of seedlings of canopy species including totara.

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M	A good example of regenerating indigenous forest and containing species representative of the original forest canopy.
Rarity	M	Provides good habitat for an at-risk bird species (rifleman); contributes to habitat for another at-risk bird species (black shag). May provide some habitat for a nationally-endangered species (long-tailed bat).
Diversity and pattern	M	Typical diversity for regenerating forest, though diversity is probably reduced from that originally present.
Distinctiveness/special features	L/M	The site occupies a prominent peninsula with a steep rocky face on its western side.
Other Criteria		
Size/shape	M	A moderate-sized area, with a long and narrow shape but well buffered.
Connectivity	M	Adjoins other protected forest across the Kakahu River.
Long-term Sustainability	M	Limited plant and animal pest control should enable ecological values to continue to improve.

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

The landowners have protected this area by way of a QEII covenant.

Discussion:

This area meets the District Plan criteria for a Significant Natural Area. Important features of the area are the presence of podocarp (totara) seedlings, habitat for two at-risk bird species (rifleman and black shag), possible habitat for long-tailed bat (nationally endangered), the buffering the area offers to the Kakahu River, and the contribution the area makes to 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)	
ash*	<i>Fraxinus excelsior</i>
bidibid	<i>Acaena</i> sp.
blackberry*	<i>Rubus fruticosus</i>
bracken	<i>Pteridium esculentum</i>
broadleaf	<i>Griselinia littoralis</i>
broom*	<i>Cytisus scoparius</i>
bush lawyer	<i>Rubus cissoides</i>
bush lily	<i>Astelia</i> sp.
cabbage tree/ti rakau	<i>Cordyline australis</i>
cherry plum*	<i>Prunus cerasifera</i>
Chilean flame creeper*	<i>Tropaeolum speciosum</i>
common shield fern	<i>Polystichum richardii</i>
crack willow*	<i>Salix fragilis</i>
elderberry*	<i>Sambucus nigra</i>
five-finger	<i>Pseudopanax arboreus</i>
flowering currant*	<i>Ribes sanguineum</i>
foxglove*	<i>Digitalis purpurea</i>
fuchsia	<i>Fuchsia excorticata</i>
gooseberry*	<i>Ribes uva-crispa</i>
gorse*	<i>Ulex europaeus</i>
ground ivy*	<i>Glechoma hederacea</i>
hairy pennywort	<i>Hydrocotyle moschata</i>
hanging spleenwort	<i>Asplenium flaccidum</i>
hawthorn*	<i>Crataegus monogyna</i>
hen and chickens fern	<i>Asplenium bulbiferum</i>
Himalayan honeysuckle*	<i>Leycesteria formosa</i>
hookgrass	<i>Uncinia</i> sp.
hound's tongue fern	<i>Microsorium pustulatum</i>
ivy*	<i>Hedera helix</i>
kahikatea/white pine	<i>Dacrycarpus dacrydioides</i>
kanuka	<i>Kunzea ericoides</i>
Khasia berry*	<i>Cotoneaster simonsii</i>
korokio	<i>Corokia cotoneaster</i>
koromiko	<i>Hebe salicifolia</i>
kowhai	<i>Sophora microphylla</i>
lancewood	<i>Pseudopanax crassifolius</i>
lawyer	<i>Rubus schmidelioides</i>
leather-leaf fern	<i>Pyrrosia eleagnifolia</i>
mahoe/whiteywood	<i>Melicytus ramiflorus</i>
male fern*	<i>Dryopteris filix-mas</i>
mapou	<i>Myrsine australis</i>
marbleleaf/putaputaweta	<i>Carpodetus serratus</i>
matai/black pine	<i>Prumnopitys taxifolia</i>
matipo/kohuhu	<i>Pittosporum tenuifolium</i>
mingimingi	<i>Cyathodes juniperina</i>
mountain akeake	<i>Olearia avicenniifolia</i>
mouse-ear hawkweed*	<i>Hieracium pilosella</i>
native jasmine	<i>Parsonsia</i> sp.
necklace fern	<i>Asplenium flabellifolium</i>
pennywort	<i>Hydrocotyle</i> sp.
periwinkle*	<i>Vinca major</i>
poataniwha	<i>Melicope simplex</i>
pohuehue	<i>Muehlenbeckia australis</i>

poplar*	<i>Populus</i> sp.
porcupine shrub	.....	<i>Melicytus alpinus</i>
poroporo	.....	<i>Solanum laciniatum</i>
prickly shield fern	.....	<i>Polystichum vestitum</i>
radiata pine*	<i>Pinus radiata</i>
scrambling fuchsia	.....	<i>Fuchsia perscandens</i>
scrub pohuehue	.....	<i>Muehlenbeckia complexa</i>
shrubby mahoe	.....	<i>Melicytus micranthus</i>
spindle tree*	<i>Euonymus europaeus</i>
sycamore*	<i>Acer pseudoplatanus</i>
toatoa	.....	<i>Haloragis erecta</i>
totara	.....	<i>Podocarpus totara</i>
tutsan*	<i>Hypericum androsaemum</i>
weeping mapou	.....	<i>Myrsine divaricata</i>
wineberry	.....	<i>Aristotelia serrata</i>
yellowwood	.....	<i>Coprosma linariifolia</i>