



TIMARU DISTRICT
SIGNIFICANT NATURAL AREAS
SURVEY

CLAY DOWNS # 2 PROPERTY
GR & MA CHAPMAN

DRAFT



Report prepared for Timaru District Council by Mike Harding
July 2008

TIMARU DISTRICT SIGNIFICANT NATURAL AREAS SURVEY

PROPERTY REPORT

PROPERTY DETAILS:

Owner: GR & MA Chapman
Valuation Reference: 24670/115.00 and 24680/002.02
Address: South Boundary Road, Upper Waitohi
Location: Rolling hill country between Upper Waitohi, Kakahu Bush and Hilton
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 dissected rolling hill country in the Upper Waitohi area in South Canterbury, comprising loess-covered limestone hills. It includes the catchments of small streams that flow east to the Kakahu River and Rangatira Creek. 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 limestone 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 limestone bluffs, with some larger areas of younger regenerating forest.

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. The property lies at the edge of the known range of the South Canterbury population of long-tailed bat. This species is regarded as nationally-endangered.

Indigenous vegetation on the property comprises areas of kanuka forest, mixed hardwood forest and small patches of cabbage trees. The property lies close to a protected area of indigenous forest at Waitohi Scenic Reserve and areas of indigenous forest on nearby limestone scarps.

SIGNIFICANT AREAS ON THE PROPERTY:

The property was surveyed as part of the District-wide survey of Significant Natural Areas during July 2008. All parts of the property were visited and assessed. Three areas, totalling approximately ? 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
203	South Boundary Road Kanuka	J38: 597-684	?	kanuka forest
204a	Draffin Road Forest	J38: 603-684	?	kanuka forest; hardwood forest
204b	Draffin Road Forest	J38: 606-684		kanuka forest; 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). 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.

OTHER AREAS INSPECTED ON THE PROPERTY:

Other areas of indigenous vegetation and habitat on the property were inspected but are not regarded as significant when assessed against the criteria on pages B18-B20 of the Timaru District Plan. Failure of an area to meet the significance criteria does not necessarily mean that it is not important for nature conservation or the protection of indigenous biodiversity; it simply means that the area (as assessed at this time) does not meet the criteria in the Timaru District Plan.

Other areas of indigenous vegetation on the property include small patches of cabbage trees along streams and a small patch of kanuka-mahoe forest near the northern corner of the property. These areas are too small and/or modified to meet the District Plan criteria. However, they do have potential value and, if protected or managed, may eventually become significant.

TIMARU DISTRICT SNA SURVEY

AREA 203

Area Name: South Boundary Road Kanuka
Location (central map reference): J38: 597-684
Ecological District: Geraldine
Surveyors: Mike Harding

Property: Clay Downs 2 (GR & MA Chapman)
Nearest Locality: Upper Waitohi
Area Size (ha): **Altitude (m):** 200-220
Survey Time: 1 hour **Survey Date:** 22-07-08

General Description:

This SNA is located on a moderately-steep south-facing slope of a small valley near the crest of the rolling hill country between Upper Waitohi and Hilton. It is long and narrow, adjoins a pine plantation at one end and is otherwise surrounded by pasture.

Plant Communities:

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

The canopy of this forest is dominated by kanuka. Trunk diameters (at breast height) of the larger kanuka trees range from 35 to 45 cm. Other canopy species present are cabbage tree, mahoe, matipo, mapou, lancewood, the climbers pohuehue and native jasmine, and single trees of broadleaf, five-finger, matai and totara. The trunk diameter of the totara tree is 29 cm. Trunk diameters of the multi-trunked matai tree are 19 and 22 cm. The broadleaf tree is very large, with a trunk diameter of 78 cm.

The forest understorey is relatively open. Understorey species present are occasional fuchsia, mahoe, broom*, gorse*, *Coprosma rhamnoides*, *Coprosma areolata* and *Coprosma rigida*.

The ground-cover is dominated by bare ground or pasture. Plant species present are necklace fern, *Hypolepis ambigua*, foxglove* and pennywort.

Birds/Fauna Observed:

Native birds observed during this brief inspection were grey warbler, fantail and bellbird.

Notable Flora, Fauna and Habitats:

Notable features of this SNA are the presence of podocarps (totara and matai), the extent of the forest and the contribution it makes to the network of fauna habitat in the wider area.

Notable Plant and Animal Pests:

No significant plant pests are present. There is potential for the native climber pohuehue (*Muehlenbeckia australis*) to smother trees, though it is not causing a major problem at present. Animal pests were not surveyed though possum sign was observed.

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

There are fences along or near to the two longer edges of the forest, though the forest is in a larger paddock. It is buffered by its location on a moderately-steep south-facing slope. It does not adjoin other areas of indigenous vegetation, though is near to Area 204 and another SNA on an adjoining property.

Condition and Management Issues:

The understorey of this kanuka forest is quite open and substantially depleted, presumably from years of grazing pressure. There is little regeneration of canopy species and, when opened by wind or snow damage, the forest risks being replaced by pasture.

Property Owner Comment:

ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:

Primary Criteria	Rank	Notes
Representativeness	M/H	An example of indigenous vegetation typical of the ecological district and containing species representative of the original canopy species (notably totara and matai).
Rarity	M	At the edge of the local range of long-tailed bat (a 'nationally endangered' species) and may provide some habitat for bats.
Diversity and pattern	L/M	Species diversity is substantially reduced from that originally present.
Distinctiveness/special features	L/M	The presence of matai, totara and the large broadleaf tree are special features.
Other Criteria		
Size/shape	M	A moderate-sized area for the ecological district, and relatively well buffered.
Connectivity	M	Isolated from other indigenous vegetation but a useful part of the network of fauna habitat in the wider area.
Long-term Sustainability	L/M	Better regeneration of canopy species will be necessary to maintain the ecological value 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 and by its location on a steep south-facing slope. It is presently grazed and has limited potential for further development.

Discussion:

This area meets the District Plan criteria for a Significant Natural Area. Important features of the area are the presence of podocarps (totara and matai), the extent of the forest and the contribution it makes to the network of fauna habitat in the wider area.

TIMARU DISTRICT SNA SURVEY

AREA 204

Area Name: Draffin Road Forest	Property: Clay Downs 2 (GR & MA Chapman)
Ecological District: Geraldine	Nearest Locality: Upper Waitohi
Area 204a: Location (central map ref.): J38: 603-684	Area Size (ha): ? Altitude (m): 180-200
Area 204b: Location (central map ref.): J38: 606-684	Area Size (ha): ? Altitude (m): 170-190
Surveyors: Mike Harding	Survey Time: 1 hour Survey Date: 22-07-08

General Description:

This SNA is located on a moderately-steep south-facing slope of a small valley near the crest of the rolling hill country between Upper Waitohi and Hilton. It comprises two areas of forest separated by an area of pasture. It adjoins a pine plantation to the west and Draffin Road to the east.

Plant Communities:

The main plant communities in each area are kanuka forest and mixed hardwood forest. These plant communities are described separately below. Naturalized (exotic) species are indicated with an asterisk*.

Area 204a:

The forest canopy on the upper slopes is dominated by kanuka. Trunk diameters (at breast height) of the larger kanuka trees are between 35 and 45 cm. The forest canopy on the lower slopes is dominated by mahoe. Other canopy species present are cabbage tree, pohuehue, lawyer, *Calystegia tuguriorum* and single trees of lancewood and totara.

The forest understorey and ground-cover is mostly very open. Plant species present are poroporo, foxglove* and grasses.

Area 204b:

The forest canopy in this area is similar to that in Area 204a: on the upper slopes it is dominated by kanuka and on the lower slopes it is dominated by mahoe. Other canopy species present are cabbage tree, five-finger, mapou, matipo, lemonwood, lancewood, pohuehue, native jasmine, lawyer and bush lawyer.

The forest understorey and ground-cover are mostly very open. Plant species present are *Coprosma propinqua*, *Coprosma rhamnoides*, *Coprosma crassifolia*, *Coprosma areolata*, *Hypolepis ambigua*, necklace fern, *Asplenium hookerianum*, *Asplenium richardii*, pennywort and moss.

Additional species present at the forest margin are fuchsia, elderberry*, broom*, gorse*, bracken and blackberry*.

Birds/Fauna Observed:

Native birds observed during this brief inspection were kereru, brown creeper, grey warbler and bellbird. Harrier and South Island pied oystercatcher were observed nearby.

Notable Flora, Fauna and Habitats:

Notable features of this SNA are the presence of a podocarp (totara) tree, the extent of the forest and the contribution it makes to the network of fauna habitat in the wider area.

Notable Plant and Animal Pests:

No significant plant pests are present. There is potential for the native climber pohuehue (*Muehlenbeckia australis*) to smother trees, though it is not causing a major problem at present. Animal pests were not surveyed though possum sign was observed.

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

There are fences along or near to the upper edge of the forest. It is buffered by its location on a moderately-steep south-facing slope. It does not adjoin other areas of indigenous vegetation, though is near to Area 203 and to other patches of indigenous forest down valley.

Condition and Management Issues:

The understorey of this forest is open and substantially depleted. There is little regeneration of canopy species and, when opened by wind or snow damage, the forest risks being replaced by pasture.

Property Owner Comment:**ASSESSMENT AGAINST DISTRICT PLAN CRITERIA:**

Primary Criteria	Rank	Notes
Representativeness	M/H	An example of indigenous vegetation typical of the ecological district and containing species representative of the original canopy species (notably totara).
Rarity	M	At the edge of the local range of long-tailed bat (a 'nationally endangered' species) and may provide some habitat for bats. Provides habitat for kereru (threat status: 'gradual decline').
Diversity and pattern	L/M	Species diversity is substantially reduced from that originally present.
Distinctiveness/special features	L/M	The presence of totara is a special feature.
Other Criteria		
Size/shape	M	A moderate-sized area for the ecological district, and relatively well buffered.
Connectivity	M	Isolated from other indigenous vegetation but a useful part of the network of fauna habitat in the wider area.
Long-term Sustainability	I/M	Better regeneration of canopy species will be necessary to maintain the ecological value 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 and by its location on a steep south-facing slope. It is presently grazed and has limited potential for further development.

Discussion:

This area meets the District Plan criteria for a Significant Natural Area. Important features of the area are the presence of totara, the extent of the forest and the contribution it 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)	
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>
cabbage tree/li rakau	<i>Cordyline australis</i>
elderberry*	<i>Sambucus nigra</i>
five-finger	<i>Pseudopanax arboreus</i>
foxglove*	<i>Digitalis purpurea</i>
fuchsia	<i>Fuchsia excorticata</i>
gorse*	<i>Ulex europaeus</i>
kanuka	<i>Kunzea ericoides</i>
lancewood	<i>Pseudopanax crassifolius</i>
lawyer	<i>Rubus schmidelioides</i>
lemonwood	<i>Pittosporum eugenioides</i>
mahoe/whiteywood	<i>Melicytus ramiflorus</i>
mapou	<i>Myrsine australis</i>
matai/black pine	<i>Prumnopitys taxifolia</i>
matipo/kohuhu	<i>Pittosporum tenuifolium</i>
native jasmine	<i>Parsonsia</i> sp.
necklace fern	<i>Asplenium flabellifolium</i>
pennywort	<i>Hydrocotyle</i> sp.
pohuchue	<i>Muehlenbeckia australis</i>
poroporo	<i>Solanum laciniatum</i>
totara	<i>Podocarpus totara</i>