

Crown Pastoral Land Tenure Review

Lease name :Grange Hill

Lease number :PT 096

Conservation resources report

As part of the process of tenure review, advice on significant inherent values within the pastoral lease is provided by Department of Conservation officials in the form of a conservation resources report. This report is the result of outdoor survey and inspection. It is a key piece of information for the development of a preliminary consultation document.

The report attached is released under the Official Information Act 1982.

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DOC CONSERVATION RESOURCES REPORT ON TENURE REVIEW OF GRANGE HILL PASTORAL LEASE

PART 1

INTRODUCTION

Grange Hill pastoral lease lies in the central portion of the Hunters Hills. The lease covers 1,495 hectares on the eastern slopes of the range. The lessee's homestead is on the eastern side of the hills some 35 km from Timaru.

Mt. Airini is the highest point on the lease at 1373 metres and the foot of the lease is at 300 metres. To the west is a Conservation Area surrendered from the Wairua pastoral lease and to the north is Stravon Station which is freehold. South of the lease is further freehold land. The homestead is just within the eastern boundary of the lease.

The pastoral lease lies in the Hunters Ecological District of the Pareora Ecological Region and is characterised by non-glaciated low ranges to 1525 metres a.s.l. No assessment has been made of the ecological district as part of the Protected Natural Areas programme.

PART 2

INHERENT VALUES: DESCRIPTION OF CONSERVATION RESOURCES AND ASSESSMENT OF SIGNIFICANCE

2.1 Landscape

The Grange Hill lease is, predominantly, the catchments of two tributaries of Elder Stream. The landscape changes from mountainlands at the head of the catchment to a series of dissected high hills in mid-catchment before flattening out at the bottom of the lease. 1

The lease can be divided into two landscape units.

Landscape Unit 1:

This unit encompasses the steeper hill country above 800m. Mt. Airini is the highest point and is a dominant part of the landscape particularly in the Maungati and Pareora valleys. Tall tussock grasslands are the dominant vegetative cover and are relatively natural in composition.

A large slip in the upper portion of the lease is now stable and is being quickly recolonised by native species. There is no other visual impact on the landscape.

Landscape Unit 2:

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Below 800m the slope is less steep. The two tributaries of Elder Stream converge near the bottom of the lease where the terrain flattens considerably. There is an interesting series of spurs that lead off the steeper mountain slopes and create varied small sub-catchment valleys.

The principal vegetative cover is short tussock grassland. Forest remnants occupy the colder southerly slopes of the valleys.

A track which circles the lower part of the lease does not create any visual impact and the only threat to the landscape is subdivision and intensification of grazing.

2.2. Landforms and Geology

The lease lies across the eastern face of the Hunters Hills. The Hunters Fault runs north/south on the eastern edge of the range and has been instrumental in causing the uplift of the range.

The underlying rock is predominantly dark greywacke, black argillite and conglomerate with interspersed beds of red and green spilite. These rocks belong to the Torlesse group from the Permian (Paleozoic) age and are about 270 million years old.

Soils are from the yellow-brown group and are predominantly Kaikoura steepland soils comprising silt, sandy and stony loams developed under snow tussock grasslands and Hurunui steepland soils developed under fescue tussock grassland. Both these types of soil are susceptible to wind and sheet erosion if the vegetation cover is reduced.

The two tributaries of Elder Stream create the main landforms – dissected hills with small gorges, steep on the south-facing slopes and rolling on the north-facing slopes. A couple of rocky knobs provide some variety.

2.3. Climate

The annual rainfall is between 1000 and 1100 mm and is mainly from the southerly quarter. Easterly cloud drift often results in fog remaining around the tops, providing cold, moist conditions. Heavy frosts are common during winter and the occasional snowfall may cover the whole area, but usually lies only on the higher faces. The area is exposed to strong, dry, north-west winds which dry the vegetation and soils and lead to wind erosion.

2.4 Vegetation

The upper slopes of Grange Hill are snow tussock-covered down to at least 900m and lower on south and south-east faces. Patches of *Cassinia* shrubland are prominent in places. They appear to be induced. Lower slopes are in hard tussock with increasing exotic grasses and shrubs at lower levels. Forest remnants extend from the foot of the lease up the steeper valley sides to merge with the tussock grasslands.

Snow tussockland

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The upper slopes down to 900m and lower on south and south-east slopes are covered with narrow-leaved snow tussock (*Chionochloa rigida*) and its associated species which here include *Celmisia spectabilis*, *Celmisia lyallii*, speargrass (*Aciphylla aurea*), *Dracophyllum uniflorum*, *Pimelea pseudolyallii* and *Gaultheria crassa*. The very top part of the run has a community dominated by the slim-leaved snow tussock (*Chionochloa macra*) with cushion plants such as *Dracophyllum muscoides*, *Celmisia sessiliflora* and *Phyllachne colensoi* on the deflated soils and rocky sections of the ridge crests. *Hebe lycopodioides* and unnamed species of *Hebe* aff. *H. odora*, are found on these upper slopes.

Below this there is a zone of mixed snow tussock with both species present before descending into pure narrow-leaved snow tussock. Mosses and lichens are important inter-tussock species in all communities with other common native plants such as bidi bidi (*Acaena* spp.), violet (*Viola cunninghamii*), geranium (*Geranium microphyllum*), woodrush (*Luzula rufa*), *Celmisia densiflora*, *Lagenifera cuneata* and *Rytidosperma pumilum*. Occasional wet ground and seepage areas have a different range of plants which include *Schoenus pauciflorus*, *Oreobolus pectinatus*, *Isolepis aucklandica*, *Juncus antarcticus*, *Colobanthus apetalus*, *Ranunculus royi*, *Agrostis pallescens* and *Epilobium minutiflorum*.

Numerous small slip scars and minor gulying occur on faces below Airini as well as several old blockfields or rock screes. Stony or rocky ground surrounding these areas have a more open snow tussock cover and the vegetation is more clumped but with a similar range of species as above. A few *Dracophyllum longifolium* and *Cassinia vauvilliersii* appear and *Coprosma cheesemanii* can be prominent. On the few small bluffs beneath Mt. Airini the rare *Helichrysum plumeum* is found together with several other plants not found in the snow tussockland. They include *Myrsine nummularia* and *Coprosma* sp. aff. *pseudocuneata*. A good snow tussock cover extends down to the fenceline which divides the top of the property from the lower slopes with *Dracophyllum uniflorum* often important especially where the soil is shallow.

At 950m an extensive area of *Cassinia* shrubland occurs with large clumps of *Celmisia*. Mosses are the main ground cover with blue tussock (*Poa colensoi*) and numerous seedling *Cassinia*. Sweet vernal and brown top and some chewed down hard tussock (*Festuca novae-zelandiae*) and scattered snow tussock are also found. On the other side of the fence there is a complete change to hard tussock grassland with *Celmisia*, sweet vernal, blue tussock, brown top and scattered snow tussock. Further from the fence the snow tussock becomes more dense and the community becomes snow tussock dominant but with hard tussock and the exotic species present as a component. This continues down to about 750 - 800m at least on the south and south-east faces.

Hard tussockland

Below about 750m hard tussock is dominant with increasing exotic grasses present with decreasing altitude. Blue tussock is less common and snow tussock is occasionally present, particularly on shaded slopes. Shrubs such as matagouri and *Coprosma* species increase from occasional to dominant in gullies and lower faces especially where stony.

Shrubland/forest

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Quite extensive areas of shrubland and regenerating hardwood forest, with broadleaf (*Griselinia littoralis*) the major forest species, extend up all major streams to at least 700 m. particularly on the damper south and south-east faces. These steeper valley bottoms are generally stony or rocky which, together with being wetter, has contributed to the retention and regeneration of the forest and shrubland. Bracken patches and areas of dense silver tussock (*Poa cita*) are also found.

As well as broadleaf, other forest species include cabbage trees, kowhai, putaputaweta (*Carpodetus serratus*), mahoe (*Melicytus ramiflorus*), mapou (*Myrsine australis*) lancewood, wineberry, peppertree and kohuhu (*Pittosporum tenuifolium*). The understorey is largely prickly shield and *Blechnum* ferns along with *Astelia*. Vines of *Meuhlenbeckia* are thick in places, particularly where the canopy has been broken at some stage. Bush lawyer is also scattered throughout.

The shrubland contains species such as matagouri, several *Coprosma* species, mountain wineberry (*Aristotelia fruticosa*) and *Melicytus* sp. In the more upstream sections there is bracken fern and flax additional to the *Coprosma*. These grade into silver tussock grasslands, except in the higher altitude (upstream) sections, where there is *Dracophyllum* shrublands on south facing slopes and scattered snow tussock and, in places, abundant *Celmisia spectabilis* where the *Dracophyllum* and tussock has been removed.

Exotic grassland

Below about 500m and higher on drier faces the cover is primarily exotic grassland.

2.5 Fauna

Birds appear to favour the shrubland areas with bellbird, tomtit, silver-eye and fantail noted. N Z falcon have also been seen and red polls and N Z pipit are seen in the open country. The forest remnants are similar to Mt. Nimrod and Matata Scenic Reserves which, as well as some of the above birds, contain rifleman, brown creeper and NZ pigeon.

There is a rich tussockland insect community with three species of grasshopper including *Sigaus campestris* which has a very scattered distribution and is known from only 10 sites of which the Hunters Hills is one. Other invertebrates noted include the tussock butterfly, several day flying moths, hoverflies and Katydid.

The streams contain numerous small fish including *Gallaxias*, upland bully (*Gobiomorphus breviceps*), longfinned eel and brown trout.

In the past, wallabies (*Macropus rufogrisea*) have been a problem with there being almost as many wallabies present as sheep. Poisoning and hunting have dramatically reduced the number of wallabies but they are still present. Hares, rabbits and possums are present and possums continue to be a problem in and around the bush remnants. Wild pigs and chamois have been occasionally seen in the area.

2.6 Historic

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The station started life as part of the Otaio run. In 1872 Charles Meyer added the area of land around Mt. Nimrod to Bluecliffs station and in 1879 this station was taken over by Robert Heaton Rhodes. The station probably came into it's own in 1898.

There is no known historic site on the lease.

2.7 Public Recreation

2.7.1. Physical Characteristics

The Grange Hill lease includes the headwaters of the Elder Stream. The environment of the lease has been modified but is generally dominated by natural vegetation or landscapes. Some of the lease is accessible by off road vehicles, mountainbikes, horses and walkers. The area qualifies as a Walk In Back Country Experience under the Recreation Opportunity Spectrum.

2.7.2. Legal Access

A legal roadline follows the driveway into the homestead from Back Line Road. The roadline finishes just inside the pastoral lease boundary.

A further legal roadline joins the pastoral lease to the Back Line Road north of the homestead. The roadline traverses the northern boundary of the lease and joins the road along the top of the Hunters Hills. This roadline does not follow a practical access route.

2.7.3. Activities

Wallaby hunting is carried out on the lease predominantly by the lessee. Pigs are also hunted in the area.

4wd vehicles use the track along the top of the hill and there is some limited use of the lease by walkers.

PART 3

OTHER RELEVANT MATTERS & PLANS

3.1. Consultation

NGO's were notified of the inclusion of Grange Hill in the tenure review process at meetings in August 1998 and August 1999. A submission has been received from the Federated Mountain Clubs, which calls for the retention of all legal access and the provision of public access for walkers and mountainbikers to Mt. Airini. Other comments included the need to protect any forest remnant on the Hunters Hills and the protection of access for hunting.

3.2. Regional Policy Statements and Plans

Not applicable.

3.3. District Plans

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Grange Hill lies within the Waimate District. The proposed District Plan was notified in April 1996 and decisions on the plan were released in May 1998. The lease is all on land zoned rural. The forest remnants are all listed as sites of natural significance.

Objectives of the Rural Zone include:

1. Enhancement and protection of the conservation values of areas of conservation significance;
2. High country land use to be managed to ensure a robust and intact vegetation cover is maintained to assist in sustaining the life supporting capacity of the soil;
3. Protection and enhancement of the outstanding landscape values of the district, and of those natural processes and features and cultural values which contribute to the overall character and amenity; and
4. Maintenance of waterways, wetlands and water supply intakes and their margins to avoid degradation of the natural values of these areas and their associated waterbodies.

There are controls over indigenous vegetation clearance, forestry, earthworks and the erection of structures in areas over 900 metres in altitude (principally the main summit ridge) and in areas identified as sites of natural significance

3.4. Conservation Management Strategies and Plans

The draft Canterbury Management Strategy recognises the Hunters Hills as the most seaward alpine area in Canterbury. An ecological survey of the Hunters Ecological District is recommended. Wallaby control is to be implemented in the future through a wallaby control plan.

3.5. Freshwater Fisheries Plans

Not applicable.

PART 4

MAPS ETC

4.1. Additional Information

- (i) Terms and conditions of qualified designations.

4.2. Illustrative Maps

4.2.1. Topo/Cadastral

4.2.2. Values.

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