

Crown Pastoral Land Review of Other Crown Land

Property name : AWAKINO

Conservation Resources Report Part 1

As part of the process of review of other Crown land, advice on significant inherent values within the land 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.

They are released under the Official information Act 1982.

August

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DOC CONSERVATION RESOURCES REPORT ON AWAKINO PASTORAL OCCUPATION LICENCE

PART 1 INTRODUCTION

This report describes the significant inherent values of Awakino Pastoral Occupation Licence. The occupation licence is over 800 hectares

The Awakino Pastoral Occupation Licence (POL) includes some of the headwaters of the Kurow River and the Awakino River (East Branch) and ranges in altitude from 800m to over 1400m.

The licence is run in conjunction with Awakino Station (freehold) and Sunny Peaks Pastoral Lease. The Awakino homestead is on Awakino Road, 5 kms from Kurow. The Awakino Road provides legal access to the lease and through the lease to the Occupation License.

Awakino lies within the St Mary's Ecological District which is part of the Waitaki Ecological Region. There has been no Protected Natural Area survey (PNA) carried out in this district.

PART 2 DESCRIPTION OF CONSERVATION RESOURCES

2.1 LANDSCAPE AND LANDFORM

The Awakino POL takes in the headwaters of the Kurow River. The landform is complex with an assortment of natural features that include the deeply etched side slopes that overlook the East Branch, the low saddle that forms the watershed between the East Branch and the Kurow River, while the balance of the unit consists of a series of steep short valleys that penetrate into the St Marys Range and are clad in large patches of scree and stone pavements.

The vegetative cover is influenced by slope stability and aspect. On the sunnier dry faces overlooking the East Branch the primary vegetative cover is spasmodic tall tussock which gradually improves both in density and condition in change of aspect towards the darker faces. Over much of the more "tender" land the vegetative cover is a mosaic of grey lichen, Raoulia, tufts of both fescue and blue tussock and a scattering of snow tussock.

Surrounding the Tin Hut, a mixture of various conifers have been planted for utility reasons, unfortunately these pines have started to cone with wildings now being relatively well established by the prevailing wind.

Landscape Values

This area contains a diversity of natural features and processes that are associated with the St Mary's Range. The dynamic processes that have helped to forge the shape of this country are highly legible with scree chutes, patches of scree and patterned ground being conspicuous. The low saddle that forms the watershed between the two local rivers is a distinctive landform and a key focal point.

2.2 GEOLOGY AND SOILS

Schistose rocks of low metamorphic grade compromise most of the basement in which the St Marys Range is cut. Non-foliated greywackes lie to the north-west of Mt Bitterness. In addition to ancient shearing and faulting, a well-developed block faulting episode postdates the widespread Cretaceous-Tertiary peneplanation of much of Otago, producing thick fault pugs which are liable to severe gully erosion.

Apart from the physically unstable fault pugs, the hard basement rocks are unlikely to erode at rates fast enough to cause concern. However, most of the long mountain slopes are mantled, particularly at lower levels, with thick colluvial deposits which are liable to catastrophic failure in particularly severe storm events.

Alpine soils on the steep mountain slopes and bluffs over 1650m altitude are lithosols, which in the recent past have only supported the sparsest vegetation. Mechanical breakdown of rock is often rapid, with daily freeze and thaw playing an important role.

Soils are predominantly hygrous high country yellow brown earths of low fertility. At higher altitudes there is a high susceptibility to wind and sheet erosion.

2.3 CLIMATE

Mean annual precipitation ranges from some 600 mm at lower levels to an estimated 1200 mm along the range summit. Snow lies above 1350 metres for six months of the year, with regular winter falls on lower areas. Cold temperatures occur year round, and very strong winds from the north-west and south occur frequently.

2.4 VEGETATION

2.4.1 Original vegetation

McGlone (2001) suggests that the prehuman vegetation of the intermontane basins of South Canterbury were dominated by grassland and scrub with low stature forest on the range slopes. The low altitude grasslands were dominated by *Poa*, *Festuca*, *Elymus* and *Rytidosperma* species. *Coprosma* and *Myrsine* scrub species and mountain totara (*Podocarpus hallii*) were the main forest species. It is likely that *Plagianthus regius*, *Hoheria angustifolia* and kowhai (*Sophora microphylla*) were also present especially on fertile soils and along river and stream courses. Snow tussock would generally have occupied higher altitude sites.

It is likely that the hill slopes of the licence would have supported short tussock grassland (dominated by silver tussock (*Poa cita*) and fescue tussock (*Festuca novae-zelandiae*) and shrubland, with snow tussock at higher altitudes. Low stature forest including kowhai and totara is likely to have existed on stream banks and protected valleys.

2.4.2 Indigenous plant communities

The steep slopes of the POL have a homogeneous cover of snow tussock apart from intermittent long screes which often extend from ridge to valley floor. Common intertussock species include fescue tussock, snowberry, golden spaniard, tauhinu, *Geum lieospermum* and *Rytidosperma pumila*. On the dry exposed spurs the vegetation is more open with some cushion plants covering the rocky substrate. They include *Dracophyllum muscoides*, *Celmisia sessiliflora*, and *Kelleria dieffenbachii*. Blue tussock, *Luzula pumila*, *Leucopogon fraseri*, woolly moss (*Racomitrium lanuginosum*) and lichens are also common on exposed sites.

A solitary tree was sighted from some distance away in a steep gorge of the Kurow River. It appeared to be a totara but time did not allow verification of this. Totara is present on other parts of the property in the Awakino River (West Branch).

A grove of cone producing *Pinus contorta* surrounds the Tin Hut in the Awakino River (east branch) and wildling trees are establishing on nearby snow tussock slopes. Around the hut browntop, sweet vernal and lotus (*Lotus pedunculatus*) are common. There is an occasional patch of mouse-ear hawkweed on the track but apart from the hut paddock the whole of the POL is free of any major exotic weeds.

2.5 FAUNA

2.5.1 Birds

A total of thirteen bird species (listed below) have been recorded in the area comprising 1 endemic species, 4 native species and 8 introduced species.

Endemic species

Paradise shelduck *Tadorna variegata*

Native species:

Australasian harrier *Circus approximans*
 Black backed gull *Larus dominicanus*
 Pipit *Anthus novaeseelandiae*
 Pied oystercatcher *Haematopus ostralegus finschi*

Introduced species

Hedge sparrow *Prunella modularis*
 Blackbird *Turdus merula*
 Starling *Sturnus vulgaris*
 Chaffinch *Fringilla coelebs*
 Redpoll *Carduelis flammea*
 Yellow hammer *Emberiza citrinella*
 Skylark *Alauda arvensis*
 Welcome swallow *Hirundo tahitica neoxena*

Other bird species that likely utilize Sunny Peaks include: Banded dotterel, Grey warbler, NZ Falcon, Spur winged plover, Silvereye, Song thrush, Californian quail, Goldfinch and Greenfinch.

2.5.2 Invertebrates

The licence has several invertebrate communities established in small streams, open tussock grasslands, shrublands and sub-alpine environments

Remnant shrublands are scattered throughout the pastoral lease. Two species of darkling beetles are found on the property, one species under stones and the other on pine trees near the hut in the East Branch of the Awakino River (Morris, 2002).

Several large mountain toatoa (*Phyllocladus* sp) are found throughout this area. Toatoa are essential for boring and ground living invertebrate communities to live in this area.

The grasslands on the property support a diverse grasshopper/kawhitiwhiti fauna. Four species of grasshoppers are found throughout the grasslands, they are *Phaulacridium otagoense*, *Phaulacridium marginale*, *Paprides dugdali* and *Sigauss australis*. The grasshopper *Phaulacridium otagoense* is commonly found on all areas that are hot and dry and below 900 metres. This grasshopper is endemic to Central Otago and Mackenzie Country (Morris 2002 & 2002). The grasshopper *Paprides dugdali* was recorded in the southern part of the pastoral lease. This new site extends the known range of this species a further 44 kilometres north from the previous site at Round Hill, Shag River. Three species of copper butterflies (*Lycaena* spp) commonly fly over both shrubland and grassland areas. Several diurnal (day time) moths were seen flying over grassland.

2.5.3 Reptiles

Skinks/mokomoko and geckos were commonly seen within the area

2.5.4 Freshwater Fish

Canterbury galaxiid and upland bully are found in the streams. Rainbow and brown trout can also move up into the lower reaches of streams on the property.

2.5.5 Problem Animals

Introduced animals noted on the lease have included red deer, possums and pigs.

2.6. HISTORIC RESOURCES

Sunny Peaks was originally part of the large Rugged Ridges Run. The boundary of this run was the East Branch Awakino River and fencing in this area may be historic. The Munro family held the lease until 1992 when it was transferred to Awakino Station Ltd. The Conservation Area in between the two portions of the lease was surrendered from the lease in 1992 and gazetted as Conservation Area in 1999.

2.7 PUBLIC RECREATION

2.7.1 Physical Characteristics

The licence area lies within the "Natural" and "Open Space" zonings of the Department's Recreation Opportunity Spectrum and would be covered by the 4x4 Drive In, Back Country physical setting. The environment is modified by tracking and farming development, particularly in its lower reaches. However, natural vegetation cover has been retained at higher altitudes and in more remote areas.

The streams and rivers on the license area are mainly well incised with some interesting gorges and waterfalls. Side streams can cause large washouts. There are some wetlands associated with the streams and with catchment areas on the plateaux and in gullies within the area

2.7.2 Legal Access

The Awakino Road provides legal access to the eastern edge of the adjoining pastoral lease. A legal road continues up the East Branch Awakino River providing legal access through this portion of the pastoral lease. The legal road does not give access to the Pastoral Occupation License.

2.7.3 Activities

There is some hunting carried out in this area while the 4WD track up the East Branch Awakino River and over to the Otematata River is popular as it can be linked with through trips onto Rugged Ridges, Kyeburn and Mt Ida. This route is also an attractive walking opportunity and can be linked with the Pastoral Occupation Licence area

PART 3 OTHER RELEVANT MATTERS AND PLANS

3.1 CONSULTATION

At a meeting held with Non-Government Organisations in Timaru on 26 September, 2001 the following comments were made:

- The historic pack track to Sergeant Garvey's Cairn has the potential for ongoing use.
- Public access is needed to the St Mary's Range.
- 4WD access needed for hunting on St Mary's Range.

3.2 DISTRICT PLANS

The licence lies within the Rural S (Rural Scenic) Zone in the Waitaki District. The Rural Scenic Zone contains areas of the District which have significant scenic values – the high country, rangelands and inland basin areas. The majority of this zone lies above the 400 m contour (a.s.l).

PART 4 MAPS

4.1 Topo Map - attached

2. Areas of high natural value assessed using PNAP criteria for identifying significant natural areas.
 - The snow tussock slopes dissected by long screes form a natural extension to the St Marys Range Conservation Area.
 - The snow tussock grasslands are high in natural values. The snow tussock is in excellent condition providing good cover and a good diversity of intertussock species with few exotic weeds.
- 3 Settings of high natural or historic value for outdoor recreation opportunities.
 - The area is a natural extension to the St Marys Range and Mt Domett Conservation Areas and is used for recreational activities such as walking and hunting.

Management and boundary issues:

- This area should be totally destocked and added to the existing St Mary's Range Conservation Area.
- The *Pinus contorta* near the hut should be removed to prevent wildling spread.

2.2 Land Being Disposed of Subject to a Protective Mechanism

2.2.1 Tin Hut Block

Existing Status: Pastoral Occupation Licence

Authority: s.88(a) CPLA

Proposal: That an area of approximately 50 hectares be disposed of as freehold subject to an easement for public foot, mountainbike and horse access and Department of Conservation vehicle access for management purposes.

Description: An area based around Tin Hut on the East Branch of the Awakino River with the River and POL boundary being northern boundary of the area to be disposed. The eastern boundary is an existing fence, the southern boundary is a saddle above the hut and the western boundary a line that links with land proposed as Conservation Area on the adjoining pastoral lease

Justification: The area around the hut is principally short tussock grasslands. There is an increasing spread of wilding trees from pines planted around the hut. The hut is used by the

Management and boundary issues:

- Fencing will be needed on the southern and western boundaries of this area (800 metres approximately).
- The *Pinus contorta* near the hut should be removed to prevent wildling spread.

Recommendations Map - Attached