

Crown Pastoral Land Tenure Review

Lease name : ORCHARD ESTATE

Lease number : PT 092

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.

They are released under the Official information Act 1982.

March 05

DEPARTMENT OF CONSERVATION RESOURCE REPORT

TO KNIGHT FRANK LIMITED ON TENURE REVIEW

OF OMAHAU STATION PASTORAL LEASE

PART ONE: INTRODUCTION

Omahau Station is split into two distinct and separate management units. Firstly, the "Flats" lie between the Twizel and Ohau Tekapo Rivers, and also encompasses a triangle of land on the true left of Twizel River at the confluence of the Ohau and Tekapo Rivers. This area is located on the outskirts of Twizel.

Secondly, the "Back Block" is located west of Twizel on the eastern flank of Ben Ohau Range. The Back Block is some six kilometres west of the Twizel township and the range runs parallel to the Ohau Canal.

The majority of Omahau Station is located in the Pukaki Ecological District (ED), while some 300 ha, being the headwaters of the Gretas Stream catchment is in the Ben Ohau E.D. These districts were surveyed as part of the Protected Natural Area Programme (PNAP) in 1983. This survey identified two recommended areas for protection (RAPs) on the property. These are Ben Ohau RAP7 Upper Gretas Stream, and Pukaki RAP 7 The Pyramid.

As part of the Mackenzie/Waitaki Basins, Omahau Station forms part of a nationally recognised and regionally outstanding landscape.

PART TWO: CONSERVATION RESOURCE DESCRIPTION

2.1 Landscape

The Mackenzie Waitaki Basin is New Zealand's largest intermontane basin. It is nationally unique and retains a number of predominantly natural values, including

- the scale, diversity and extent of its glacial topography
- a number of geopreservation sites
- characteristic inland intermontane basin micro-climate
- it constitutes its own Ecological Region
- habitat to a number of endangered and rare fauna species
- scenery
- location and setting of Mount Cook
- highly values natural setting and location for a range of tourist attractions and recreation pursuits

These natural features are highly valued for visual and scenic reasons. Many of the pastoral leases in the basin are visible from state highways, canal and minor roads, settlements, tourist destinations and flight paths. The combination of physical feature, diversity and distinctiveness of the area all contribute to the high inherent scenic and visual values.

Omahau Station forms two distinct and separate physical and landscape blocks, each with a different natural character type. These are

a) Ben Ohau Range and catchments

- very steep slopes rising almost directly from outwash plains
- visually very dramatic backdrop to Twizel and lower Mackenzie Basin (much of detail being lost from a distance because SE facing, it is frequently in shadow, however, this does not lessen its visual impact).
- shrubland and tussock grassland associations
- beech remnants

b) Flats

- remnant moraine features, tarns and wetlands
- matagouri
- highly visible outwash plain

2.2 Landforms and Geology

The broad flats made up primarily of a thick layer of free draining Pleistocene fluvioglacial outwash gravel over lying tertiary sediments. The overlying soils are shallow, stony and have low fertility. While the Ben Ohau Range is folded greywackes. Pleistocene deposits cover the lower slopes. The hills of the Ben Ohau Range run in a SW/NE direction and range in height from 540m - 1430m. A fault line runs in a similar direction at the base of the main ridge. This is characterised by gentle slopes and fans.

2.3 Vegetation

There are six distinct vegetation types on Omahau Station. Two types are found on the Mackenzie Basin Flats and the other four vegetation types are located on the "Back Block".

A) Mackenzie Flats

i) Short tussock grasslands

- These depleted and patchy hard tussock (*Festuca novae-zelandiae*) grasslands dominate most of the outwash gravel surfaces. In moister places, or in very localised areas, the native species are more prolific, mainly being *Poa cita*,

Carex coriacea, *Carex breviculmis* and *Rytidosperma pumilum*. Die back of the hard tussock is evident in places and in many areas exotic species dominate the ground cover. Mouse-ear hawkweed, (*Hieracium pilosella*) cover varies from 5-25% with numerous other exotic grasses. In some areas the ground is well covered while in others there is up to 25% bare ground. Matagouri (*Discaria toumatou*) and briar (*Rosa rubiginosa*) is scattered throughout the area, along with as few plants of tauhinu (*Cassinia leptophyll*).

(ii) **Matagouri shrubland**

This occurs on the dry river gravels alongside the Bendrose Stream and Twizel River. Some of these matagouri bushes are over two metres tall. The condition of the matagouri shrubland, and the native species diversity improves with distance down the Twizel River. Scattered throughout the matagouri shrubland is exotic broom, cracked willow, *Muehlenbeckia axillaris*, *Poa colensoi* and *Coprosma atropurpurea*.

On the flats the only community of any significance is the matagouri shrubland in the stream bed and the cassinia shrubland, both of these communities are under represented in the Pukaki Ecological District.

B) **Back Block:**

This upper montane to sub-alpine area contains the following communities:

i) **Short tussock grassland**

The induced grasslands of mainly hard tussock are characteristic of the lower hill slopes and fans up to about 1,000m. At this upper altitudinal zone the occasional narrow leaf snow tussock, (*Chionochloa rigida*) occurs, remnants of a previous plant community. Some areas have a component of exotic pasture grasses either from stock movement or OSTD. While others have a moderate indigenous plant diversity with *leucopogon fraseri*, *Anisotome aromatica*, *Poa colensoi* and *Celmisia gracilentia*, Hawkweed, *Hieracium pilosella* and *H praealtum* often dominate the vegetation especially on the outwash plains at the south west end of the Big Slip Block. This hard tussock community also grows in association with the Manuka and Matagouri Shrublands.

ii) **Shrublands**

These are predominantly matagouri, cassinia and manuka shrubland communities. These shrublands are confined predominantly to the shady faces of the main ridge above the Ohau Canal. On the Big Slip Block matagouri shrubland extends in narrow strips up the gullies to 1,000m. This shrubland supports a diverse range of species: mountain ribbonwood

(*Hoheria lyallii*), weeping matigouri (*Myrsine divaricata*), mountain wineberry, (*Aristotelia fruticosa*) and *Coprosma* species.

In other areas the matigouri is mixed with the *Cassinia* and manuka shrublands. The former occur mainly on the gentler pan slopes while the latter, manuka, occurs on the south-east facing slopes of the main ridge. There are three distinct stands of manuka and these are the only recorded communities in the Pukaki Ecological District. The northern most stand is on the northern end of the property and is relatively small. Blight has reduced its area and in places the dieback varies from 60-100% of the cover. There are, however, signs of active regeneration.

The largest stand is located on a fan near the middle of the south-east face. While blight is present it is not as prevalent and the overall vigour and diversity of this community is excellent. Sweet briar and short tussock and the occasional *Chionochloa rigida* are the taller plants, while a good diversity of ground cover plants, nestled under the manuka. These include: *Viola cunninghamii*, *Raoulia subsericea*, *Wahlenbergia albomariata* and blue tussock (*Poa colensoi*). This large manuka stand grades into a small wetland.

This stand of manuka was identified as a RAP (RAP 7 The Pyramid) during the PNAP survey of the Pukaki Ecological District. It was identified as the only significant manuka community in the ecological district and covered 300 ha.

The southern most manuka stand is quite extensive and is located in the Big Slip Block on hummocky lateral moraines. This stand lacks the species diversity of the larger manuka area.

Alongside Darts Bush Stream extensive matigouri also occurs along with *Hoheria lyallii*, *Cassinia leptophylla*, manuka, *Dracophyllum longifolium*, *Hebe salicifolia* and *Hebe subalpina*. Further up Darts Bush Stream there is a mountain beech remnant of approximately 20 trees.

(iii) Tall Tussock Grasslands

These grasslands of *Chionochloa rigida* extend from 660 m on the shady face of the main spur to around 1,200 m on the ridge tops. On the sunnier faces this community is primarily found above the 900-1,000 m contour. At the lower to mid altitudes the tussock vigour and density is good with up to 40% ground cover of tall tussocks. The tussock size decreases with altitude along with a slight increase of bare ground.

Inter tussock species diversity is moderately high with the main species being *Poa colensoi*, *Blechnum penna-marina*, *Celmisia gracilentia*, *Helichrysum filicaule* and speargrass *Aciphylla aurea*. Matigouri is scattered throughout

at the lower altitudes along with *Carmichaelia petriei*, and coral broom *Corallospartium crassicaule*.

At the upper extent of the *Chionochloa rigida* tussock grassland at about 1,250 m there is a zone of hybridisations between *C rigida* and slim leaved snow tussock, *C macra*, along with *Festuca mathewsii*, *Poa colensoi* and *Rytidosperma pumilum*. Above this zone of hybrid snow tussocks *Chionochloa macra* occupies a relatively extensive area on the northern slopes up to the main ridge at about 1,400 m. The *C macra* was possibly more extensive in the past, but is still significant on Omahau Station. The ridges and spurs show signs of heavy grazing with few *C macra* surviving. *Festuca* and *Poa* species along with an induced cushion field occupy this niche. Mountain flax, (*Phormium cookianum*) is scattered throughout the *C. macra* in some areas.

Two types of cushion fields occur, one dominated by *Celmisia sessiliflora* and *Kelleria dieffenbachii*, and the other associated with blocky fell-fields dominated by *Dracophyllum prunum*. The latter occur in the upper Gretas Stream catchment on the shady faces of the main ridge from about 1,250 - 1,380 m. Other species found include *Phyllachne colensoi*, *Celmisia laricifolia*, *Pimelea traversii*, *Hebe buchananii* and *Luzula pumila*.

(iv) Rock Outcrops

Rocky greywacke bluffs at 1,390m above the Gretas Stream support a distinct plant community, which grows in loose debris and cracks of the rocks. Plants include snow totara (*Podocarpus nivalis*), *Pimelea traversii*, *Gaultheria crassa*, *Pentachondra pumila* and a variety of lichens.

The upper Gretas Stream catchment was identified as a RAP during the PNAP survey. An area of 800 ha was identified which included narrow leaved and slim leaved snow tussock along with *Dracophyllum prunum*.

2.4 Fauna

The braided waterways, swamps, gravel beds, and tributary streams of Omahau are important habitats for the black stilt, banded dotterels, pied stilt, South Island pied oystercatcher, brown bittern, marsh crake, grey duck, New Zealand shoveler, New Zealand scaup and the occasional white heron. The flats are important for black stilt management. The aviary near the main road is on ECNZ land. And a new wetland complex adjoining the aviary is on Omahau under a covenant with the lessees. Juvenile black stilts are released on Omahau Station and "wild" black stilts feed on the wetland areas. The lower Twizel River is an important nesting area for river bed birds, eg black stilts, wrybills, and banded dotterels.

On the "Back Blocks" the wetlands at the base of the Ben Ohau Range are also utilised by the above species. On the hills the New Zealand pipit, skylark and

Australasian harrier are common, along with the New Zealand falcon, quail and chukor.

Three species of freshwater fish are found in the "Ruataniwha Springs" near the Ohau River. These are Koaro *Galaxias brevipinnis* (category C for conservation) upland bully, brown trout, and the common river galaxias. The latter is found in the lower Twizel River.

A rare minute grasshopper (*Sigaus minutus*) is common in the depleted grasslands along with *Sigaus australis* and *Phauliaridium marginale*.

The common gecko and McCanns skink are found on the river flats.

2.5 Historic Values

Omahau Station was formerly a part of the Ben Ohau run that was applied for by H and S Fraser in 1857. In 1918 Ben Ohau was sub-divided into Bendrose, Rautaniwha and Omahau Station. No historic buildings are located on Omahau Station. The only site of historic interest is part of the old wagon track that crosses the flats to Lake Tekapo, and this can be seen behind the Omahau Woolshed.

No information is known on Maori cultural values on the property.

2.6 Existing Land Status

Omahau Station is in two separate blocks. The flats are bounded by Crown land strips alongside the Ohau, Twizel and Pukaki Rivers. An unformed legal road runs off the Rhoboro Downs Road and up Dart Bush Stream. This paper road also branches off to the south and becomes a boundary between Omahau and Ben Ohau Stations, and it links in with the Glen Lyon Road.

The Mackenzie District Scheme became operative in 1986. This scheme identified most of the property as being Rural 1 which is a general farming zone, with the only condition being commercial forestry that is in excess of 50 ha. At the western end of the property (Gretas Stream catchment) this land is zoned Rural 2 (Erodible High Country) being class VII or Class III land that is unsuitable for grazing or commercial forestry.

The proposed Mackenzie District Plan which is to replace the district scheme is to be publicly notified in October 1996.

2.7 Recreation/Access

2.7.1 Access

Marginal strips and unformed legal roads have been dealt with in 2.6 Omahau Station is relatively accessible from farm tracks and a road alongside the Ohau

River. Roads alongside the Ohau Canal provide access to the Glen Lyon Road and from there farm tracks provide access on to the Ben Ohau Tops. Access is also available from the adjoining conservation land (ex Ruataniwha Station) on to the tops via a ridge line track and a track up Gretas Stream. Tracks on the adjoining Bendrose and Ben Ohau Stations also provide access points.

2.7.2 Uses

The fringes of the flats receive a variety of use: fishing, horse riding, limited four wheel drive and trail bike use, passive recreation and natural history activities. The hill block receives some use paragliding, mountain biking, running and tramping. Some commercial use already exists in the form of heli-biking along with endurance events.

Being close to Twizel the hill country could provide for a wide range of activities especially if tenure review proceeds on adjoining properties.

Through routes on existing tracks along the tops have exciting potential mountain biking and tramping along the range would provide some interesting traverses as well as spectacular views.

2.7.3 User Issues

One commonly re-occurring issue is the maintenance of the four wheel drive farm tracks if vehicle access is allowed. Foot, mountain biking and horse access should not cause any undue concern. However, any access easements requires a level of commitment with regards to signs, and styles. Controlling access to the flats in order to prevent disturbance to farming activities or wildlife needs consideration and management.

2.8 Existing Management

Management issues that affect the high inherent values on Omahau Station are:

i) *Weeds:*

Broom is prevalent in the Twizel River along with the Sweet brier Control of these species in the matagouri shrubland areas is difficult. *Hieracium* is present to varying degrees and poses problems from a farming and conservation perspective. Tenure Review should allow natural processes to occur and may allow development of other areas to proceed. Sweet brier is prevalent on the hill country and can be considered to be only part of the existing shrublands. Wilding pines are not an issue now, but their presence still needs careful observation and management. Management of willow, to improve the situation for wildlife survival in the river beds, will be an ongoing issue.

ii) *Pests:*

Omahau Station has been part of the Rabbit and Land Management Programme. Rabbit numbers can be high on the flats and lower hill slopes. Any commitment to rabbit control will depend on the values being protected, and changes in management may provide a less attractive habitat.

iii) Continued grazing could have a detrimental affect on the high inherent ecological values as well as the fauna. Fencing will be required to protect areas of ecological values.

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PART THREE: CONSULTATION

On 28 November 1996 an NGO meeting was held in Timaru. This meeting was attended by representatives from Forest and Bird, Public Access New Zealand, tramping clubs, deer stalkers associations and Aoraki Conservation Board.

The questions/issues arising from the discussions on Omahau Station were:

- is the property sustainable?
- could the Crown purchase Omahau?
- if some land is not reclassifiable under the Land Act can the RMA cope with the issues?