Toitu te whenua
Land Information
New Zealand

Crown Pastoral Land Tenure Review

Lease name: Obelisk Creek

Lease number: Po 377

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.

Copied September 2003

OBELISK CREEK PASTORAL LEASE
CONSERVATION RESOURCES REPORT
(Revised May 1999)

BACKGROUND

The lessees of Obelisk Creek Pastoral Lease, Peter and Jennifer Dunbier, have applied to the Commissioner of Crown Lands for a review of tenure. The property has been inspected and reported on by relevant DOC staff and their assessments have been incorporated into this conservation resources report.

Some of these individual assessments were undertaken in 1988 during the implementation phase of the Protected Natural Areas Programme following survey of the Old Man Ecological District. This activity resulted in the successful negotiation of a conservation covenant over the Obelisk Creek portion of the large RAP located on the Old Man Range summit. Recent staff assessments have included both the existing protected natural area (ie, the covenant area), and the balance of the pastoral lease.

Obelisk Creek is a small pastoral lease of approximately 530 ha on the eastern faces of the Old Man Range, located at Fruitlands, 16 km south of Alexandra. It encompasses the majority of the Coal Creek catchment.

ECOLOGICAL FEATURES

1 PHYSICAL DESCRIPTION

a Altitude

The property varies in altitude from 650 metres to 1630 metres asl at its highest point, being the summit ridge of the Old Man Range.

b Climate

Marked differences in altitude result in wide variations in climate. The summit ridge has a mean annual temperature close to freezing point and the low country experiences sweltering summer temperatures. The climate is strongly continental and whilst days can be very warm, frosts can and do occur throughout the year. Mean annual precipitation varies from 400 mm at Fruitlands to over 1800 mm per annum on the summit ridge, mostly falling as snow. Snow forms a near continuous cover for four to six months and some snowbanks persist throughout summer and autumn, especially in leeward cirques. Wind speeds recorded at the summit have reached a comparatively high average velocity of 20 km per hour and is predominantly from the north-west or south-west.

The summit plateau is regarded as being one of the harshest alpine environments in New Zealand.

2 LANDFORM

The property was investigated as part of the 1984/85 PNAP survey of the Old Man Ecological District. That survey identified a large recommended are for protection (RAP OM 1/7) on the

Obelisk-Old Man Ranges. A small part of this RAP is located on the upper portion of the pastoral lease.

The property comprises part of the eastern-most portion of the uplifted alpine schist plateau of the Old Man Ecological District. The cryoplaned summit plateau incorporates active and relict periglacial features, eg, numerous tors, prominent solifluction terraces, lag surfaces, soil hummocks and stripes.

3 VEGETATION

East facing catchments such as Coal Creek contain a full altitudinal sequence of tussock grasslands, alpine cushion and herbfield communities from montane to high alpine zones.

The top of the Old Man Range here is at 1630 m. This is an area of cushionfields and patterned ground some of which is very lumpy, due to past periglacial climate. *Dracophyllum muscoides* is the dominant plant here with *Poa colensoi* (blue tussock), *Raoulia hectori, Chionohebe thomsonii, Koeleria* sp., *Celmisia sessiliflora, C. viscosa, C. brevifolia, Gentiana divisa, Phyllachne colensoi, Kelleria childii,* mosses and lichens.

Large patches of *Celmisia viscosa* occupy much of the patterned ground with the cushion plants but in places it dominates to the exclusion of other plants.

With descending altitude, the cushions gradually merge with the short blue tussock grassland and herbfields. As well as blue tussock the main plants in this community are *Rytidosperma pumilum, Raoulia subsericea, Carex wakatipu, Luzula* aff. *rufa, Scleranthus uniflora* with *Kelleria villosa, Celmisia densiflora, Pimelea oreophylla, Leucopogon pasert* and *Hebe lycopodioides.*

The vegetative cover over these communities is 100% with no bare ground. A few rock tors and patches of *Chionochloa macra* rise above the low surface cover.

Below 1450 metres there is increasing tussock cover with *Chionochloa rigida* replacing *C. macra* and becoming very thick and difficult to move through. The cover here is 80% to 90% with a thick litter layer. This continues down to the fenceline at 1220 metres. Wetlands occur in hollows and small gullies or depressions in the slope. *Carex hectori* was one plant of note here. Other wetland plants include *Caltha obtusa, Oreobolus pectinatus,* sedges and rushes. The grazing pressure on these areas appears very light, particularly when compared to those lower down. Young tussocks are common in the inter-tussock spaces down to about 1100 metres. The thick, tall tussock continues below the fence for a further 100 metres or so, to about 1100 metres. It then gradually opens out to form a cover of about 40% to 50%. Hard tussock, blue tussock and other native grasses and herbs including the fine hookgrass, *Uncinia purpurata* fill in the spaces. Sweet vernal appears and the effects of grazing start to show up with occasional chewed tussocks. Recruitment of young tussocks still occurs.

At 950 metres grazing is obviously heavier with snow tussocks only providing 20% to 30% cover and the inter-tussock plants chewed right down. Clovers, exotic grasses as well as native species occupy the spaces. Hard tussock is prominent and often dominates. Some silver tussock *Poa cita* is found and the now widely scattered snow tussock is up to 1.5 metres tall.

Some speargrass is found and matagouri appears at 920 metres. The red drooping heads of *Carex 'tenuiculmis'* were found in a damp gully at 870 metres.

Further downhill, native species largely give way to exotic plants.

The summit of the Obelisk-Old Man Range hosts the most accessible, best representative and most spectacular variety of periglacial landforms in the ecological district. Landform variation is closely reflected by changing vegetation community structure and composition.

The variety and fragility of this summit ecological system warrants protection along the entire length of the range above 1400 metres. The RAP supports a flora exhibiting a high degree of endemism.

The RAP is ranked high for its diversity, especially alpine plant communities, its naturalness and viability due to intact and extensive communities.

The upper portion of the property, ie, above the new fence at 1200 metres is protected by a conservation covenant. Continued grazing as provided in the covenant has been reduced from an agreed block limit to a system where stock drift uphill through the open gateway as they wish. The result of this practice has been a lower level of grazing evidenced by little sign of grazing effect on the vegetation within the covenant area. Much of the tall tussock is too thick for sheep to penetrate easily. Grazing has tended to concentrate on wetlands and cushionfields but the grazing pressure is relatively low and recruitment of young plants is obvious.

4 FAUNA

a Invertebrates

Summit high-alpine cushionfield and herbfield areas in Central Otago characteristically have a rich invertebrate fauna with diurnal beetles, a large ground weta, a cockroach, brightly coloured diurnal moths, hairy blow-flies and a bulky grasshopper the most conspicuous. All of these species are widely distributed over the Old Man Range summit and most are also found on other Central Otago ranges. Surprisingly a brand new species of flightless stonefly associated with *Chlonochloa macra* has only recently been discovered at 1600 metres on this property. It is in the genus *Apteryoperla* and unknown elsewhere. This highlights the importance of the crest of the Old Man Range for biodiversity of invertebrates and that different species occupy different parts of the summit plateau and they are not evenly distributed over it.

Dense snowgrass below this zone supports a diverse insect fauna also. Most species have a wide distribution but one brightly coloured moth species *Asaphodes cinnabari* is very local but has a population here at around 1250 metres in damp gullies.

The aquatic insect fauna in the Coal Creek tributaries is rich and typical of the Old Man Range with a suite of caddis, mayfly and stonefly species in addition to our only scorpionfly species.

b Vertebrates

A diversity of habitats for birds and reptiles occurs on the Old Man Range. Low altitude scrub provides food and nesting resources for the native grey warbler and silvereye, and the introduced chaffinch, greenfinch and hedge sparrow. The open tussocklands are frequented by skylark, pipit, redpoll and yellowhammer. Californian quail are common in sheltered gullies.

Harriers are common over open, mid-altitude tussock slopes. An occasional New Zealand falcon, a threatened species can be seen and another threatened species, the kea, has been recorded very infrequently.

The only reptiles recorded are the common skink, *Leiolopisma nigriplantare maccanni* and common gecko, *Hoplodactylus maculatus*, which are abundant amongst rock outcrops on the low-mid altitude slopes.

5 LANDSCAPE ASSESSMENT (REFER TO MAP 3)

Field assessments of areas for natural landscape protection have been completed for all pastoral leases in the Old Man Ecological District.

Two landscape management zones cover the property:

a Old Man Crest-Dome Landscape Management Zone

This zone includes all land above 1150 metres asl and overlaps the upland parts of all properties along the range.

The summit dome is gently undulating. The surface terrain is even with cushionfield-herbfield vegetation providing an overall smooth flowing appearance. Rock tors of dynamic and angular shape jutting upward contrast sharply with the smooth rolling topography. The summit is exposed, isolated, remote and barren. Impressive views are obtained along the Old Man Crest-Dome and to the surrounding mountains and valleys. The sky and weather patterns dominate on this high altitude summit. The landscape features and characteristics, and the vulnerability of these features, makes this zone a key feature to retain these indigenous or natural qualities. Its significance for recreation is also of major importance.

Threats to the landscape character are:

introduction of further cultural elements, eg, structures, transmission lines;
further roading modification to existing vegetation;
tree planting, oversowing and topdressing and mining; and
change to the broad character of upper eastern slopes.

b Eastern Slopes-Old Man Landscape Management Zone

This zone includes land below 1150 metres asl. With descending altitude, native vegetation persists but is increasingly replaced by pasture species, and the landform features remain largely uncluttered by intrinsic elements. The eastern slopes form a major part of the Old Man Range. These slopes contribute significantly to the character of the Old Man Range providing the context and the setting for areas of key importance to retaining inherent values, eg, the Old Man Crest-Dome Landscape Management Zone. The Eastern Slopes-Old Man Landscape Management Zone is less sensitive to change and can absorb considerably more change than the Old Man Crest-Dome Landscape Management Zone. It is however important to maintain the broad character of the mid to upper eastern face by maintaining the primary characteristics, ie, the dominant gold tussockland cover above an altitude of 700 metres asl.

In order to retain the landscape character of this zone, some constraints over unsympathetic man-made impacts or changes in land use should apply. For example, careful planning and development should be applied to the following activities:

tree planting;
earth disturbance including mining and tracking; and
the construction, design and siting of buildings and structures.

The lower eastern slopes are considerably modified. Tussock is significantly depleted and exotic grasses predominate. Grazing is more intensive and the gold tussockland has been replaced by a dominant green exotic sward.

CULTURAL FEATURES

1 MAORI PERSPECTIVE

This area has a lot of significance in very old traditional lore based around the traditions relating to a giant or monster-type being called Kopuwai. The landscape features associated with Kopuwai also spread into other areas of Otago.

Firstly the Old Man Range carries the traditional name of Kopuwai. Retention by the Crown of the higher altitude lands would give body to this association.

The areas identified, eg, Old Man Crest-Summit, from an iwi perspective are important in the sense that the native cover is still on the land - Te Kakahu o Papatuanuku. Holistically though, retention of the cloak/Kakahu on Papatuanuku is considered important by Kai Tahu whanui. Areas retained as Crown land through the tenure review process should be managed in accordance with tikanga because of the high traditional values associated with the area.

2 ARCHAEOLOGICAL AND HISTORIC FEATURES

The only historic sites known on Obelisk Creek Pastoral Lease are parts of the two historic races, Dr Hydes Race at 1200 metres and the Last Chance Race at 610 metres. The latter has been heavily modified by bulldozing in the last decade, and it is doubtful if any of the nineteenth century formation still exists. The race as formed in 1892 would have run only from Shingle Creek to about Coal Creek. (Simmons and Hesson's Last Chance Claim lay behind and downstream of Cape Broom Hotel.) The goldfields warden says they had 300-320 feet of head, and since the Last Chance Race lies 800 feet above the flat they must have dropped the water down a creek. The warden also comments that they had built a large dam, which presumably supplied the intake for the pipes and would also lie about 300 feet above their claim, placing it just above Dunbier's freehold.

Dr Hydes Race must have been formed before 1890, possibly as early as 1872, since it was used by the Bald Hill Sluicing Company from the start of its work. gt may in fact be quite a lot older since a January 1891 renewal mentions licences dates 1872 and 1884 (Alexandra Wardens Court records, Application book 1882-1892)). It is a large race, up to 80 cm deep and two metres across and about seven kilometres long. It is intact within the Dunbier lease, except where a farm road crosses it about 50 metres north of the southern boundary of the lease. Here it is also dropped about 40 metres in a lazy zigzag, cutting a channel 1.5 metres deep, traverses a boggy section at the head of Coal Creek before continuing along the 1200 metre contour. Only about a kilometre of the race lies on Obelisk Creek lease, from where it runs north to cross Symes Road and drops into Butchers Creek (McGovern-Wilson 1991). The topographic map NZMS 1 S143 shows a large race coming out of Butchers Creek heading for the northern part of Fruitlands and the Bald Hill Sluicing claim, which was presumably the lower section of Dr Hyde's race.

3 RECREATIONAL USE

The alpine portion of the property is small in relation to the total expanse of the Old Man-Obelisk Ranges summit. However, recreational use tends to occur irrespective of property boundaries in many instances. The proximity of the property's alpine country to Symes Road, a major recreational access entry route plus suitable terrain, would indicate that recreational uses of the alpine country would occur on Obelisk Creek Pastoral Lease as well as adjoining properties.

The major winter activity both for existing and potential use is cross-country skiing. The activity is usually confined to land above 1200 metres asl, where snow cover is reliable. The easy access at several points of entry to the snowline makes the Old Man, Obelisk and Old Woman Ranges a very desirable destination for day trips from enthusiasts in Central Otago as well as Dunedin and Invercargill. The expanse of undulating natural country is ideally suited to this type of activity.

The main limitation on this use is the severity of the weather. Frequent and rapid changes in weather occur and there are comparatively few huts or natural shelter available. Experience in alpine travel and survival are essential for safe use for extended trips in winter.

Summer recreation of the alpine country is largely dominated by the use of off-road vehicles, and frequently involves traverses of the ranges. Damage to tracks and adjacent land occurs when used by vehicles when ground conditions are wet or subject to freeze thaw cycles. As one route becomes impassable, new routes through fragile cushion and herbfields are developed, creating further impacts. The track around the back boundary of the property which is located on Earnscleugh Station, has not been constructed to a standard capable of sustaining use in such conditions.

There is no known recreational use of the remainder of the pastoral lease.

4 RECREATIONAL ACCESS (REFER TO MAP A)

An unformed legal road leading southwards from Symes Road is located along the eastern boundary of the pastoral lease. There are no legal roads, formed or unformed, within the lease. The vehicle track along the Old Man Range Summit and which provides access to the alpine boundary of the lease is not legal from its point of commencement off Symes Road. This track is located on Earnscleugh Pastoral Lease. Access issues are being dealt with through the tenure review of that lease, and it is expected that an acceptable arrangement for this purpose will be agreed to. It will not therefore be necessary to provide separate legal public access to any land on Obelisk Creek lease that may be retained in Crown ownership. Its proximity to Symes Road which is legal formed access will ensure that public access requirements will be adequately provided.

There are currently no marginal strips on any waterways on the lease. It is likely that the lower part of Coal Creek may warrant the creation of marginal strips.

MANAGEMENT CONSIDERATIONS

1 WILD ANIMALS

The property is free of wild animals except perhaps for an occasional feral goat sighting. Goats occur on the adjacent Gorge Creek Pastoral Lease in small numbers. No specific control measures are warranted.

2 ANIMAL PESTS

Rabbits are present in lower parts of the lease. They are well controlled and do not represent a significant management problem for conservation.

3 PLANT PESTS

The pastoral lease is virtually free of any weed species.

4 FIRE

Areas of dense snow tussock have a potentially high fire risk during summer but the risk of an accidental fire starting within the lease would be low given the distance of such tussock areas from the traditional public use areas.

DOC is the rural fire authority for land within the 1 km fire safety margin of state areas, eg, the Crown land being proposed conservation area in the Fraser Basin, ex Barnscleugh tenure review. The remainder of the property is located within Central Otago District Council area of rural fire authority.

CONSERVATION PROPOSALS (Refer to Map C)

The key significant conservation features on Obelisk Creek Pastoral Lease are as follows:

a The landform and native plant communities identified within that part of the Obelisk-Old Man Ranges RAP OM 1/7 contained within the pastoral lease.

b The high natural landscape character which occurs on that part of the pastoral lease located above the 1150 metre contour.

c The contribution the alpine land, ie, the land above 1200 metre contour makes to the recreational setting and recreation opportunities on the Old Man-Obelisk Ranges.

d Historic sites, in particular, Dr Hydes water race and any unmodified parts of the Last Chance water race.

NB: Apart from the Last Chance water race, virtually all of the above features are located within the existing conservation covenant which includes all land on the lease above the 1200 metre contour.

CONSULTATION

Early warning meetings with NGOs on 28 February 1995 and 14 September 1995 briefly discussed this tenure review. The consensus view was that the existing conservation covenant area should become conservation land. No separate access requirement was identified.

PT RUN 498
606.5924
Obelisk
Creek
Fruitlands
Gorge Creek
Pt 2
1068.3701
1
882.2147
RUN 496
530.1382
RUN 497
920.6598
RUN 499
OLD
MAN
RANGE
OBELISK
RANGE
Obelisk No 2
Obelisk
RUN 425B
760 000
755 000
215 000
220 000
225 000
2 220 000
2 210 000
5 630 000
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Map A.