

Crown Pastoral Land Tenure Review

Lease name: CLOUDY PEAK

Lease number: PO 104

Conservation Resources Report - Part 2

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.

Note: Plans which form part of the Conservation Resources Report are published separately.

These documents are all released under the Official information Act 1982.

February

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APPENDICES

APPENDIX ONE: Vascular Plants Recorded on Cloudy Peak PL

Exotic species are denoted with an asterisk.

Species	Common name	Plant type
		Dicot herb
Acaena buchananii	Bidibidi	Dicot herb
Acaena caesiiglauca	Bidibidi	Dicot herb
Acaena fissistipula	Bidibidi	Dicot herb
Aciphylla aurea	Golden Spaniard	Grass
Agrostis capillaris*	Browntop	Dicot herb
Anaphalioides bellidioides		Dicot herb
Anisotome flexuosa		Dicot herb
Anisotome imbricata		
Anthoxanthum odoratum*	Sweet vernal	Grass
Anthriscus caucaulis*	Beaked parsley	Dicot herb
Asplenium flabellifolium		Fern
Asplenium hookerianum		Fern
Blechnum penna-marina		Fern
Brachyglottis bellidioides		Dicot herb
Brachyglottis haastii		Dicot herb
Bulbinella angustifolia	Maori onion	Monocot herb
Capsella bursa-pastoris*	Shepherd's purse	Dicot herb
Carex breviculmis		Sedge
		Sedge
Carex buchananii	Coral broom	Shrub
Carmichaelia crassicaule	Native broom	Shrub
Carmichaelia petriei	1,44.7	Shrub
Carmichaelia vexillata	False Spaniard	Dicot herb
Celmisia lyallii	Tuise opasius	Dicot herb
Celmisia sessiliflora		Dicot herb
Celmisia viscosa	Mouse-eared chickweed	Dicot herb
Cerastium fontanum*	Widdse-cared emon	Fern
Cheilanthes sieberi	Slim snow tussock	Grass
Chionochloa macra	Narrow-leaved snow tussock	Grass
Chionochloa rigida	Narrow-leaved show tuescon	Shrub
Chionohebe densifolia	Californian thistle	Dicot herb
Cirsium arvense*		Dicot herb
Cirsium vulgare*	Scotch thistle	Dicot herb
Colobanthus acicularis		Dicot herb
Colobanthus apetalus		Dicot herb
Colobanthus strictus		Shrub
Coprosma cheesemanii		Shrub
Coprosma ciliata		Shrub
Coprosma perpusilla		
Coprosma petriei		Shrub
Coprosma propinqua	Mingimingi	Shrub
Leptinella pectinata subsp. villosa		Dicot herb
Crassula tetramera		Dicot herb
Crepis capillaris*	Hawksbeard	Dicot herb
Crepis cupinaris	Cocksfoot	Grass
Dactylis glomerata*		Dicot herb
Dichondra repens	Matagouri	Shrub
Discaria toumatou	1 2124119	Dicot herb
Donatia novae-zelandiae Dracophyllum politum		Shrub

		Shrub
Dracophyllum pronum		Dicot herb
Echium vulgare*	Viper's bugloss	Dicot herb
Epilobium alsinoides subsp. atriplicifolium		Dicot herb
Epilobium brunnescens	G. 1 131	Dicot herb
Erodium cicutarium*	Storksbill	Dicot herb
Euchiton traversii		Dicot herb
Euphorbia peplus*	Milkweed	Grass
Festuca matthewsii		Grass
Festuca novae-zelandiae	Hard tussock	Grass
Festuca rubra*	Chewing's fescue	Dicot herb
Galium aparine*	Cleavers	Shrub
Gaultheria depressa		Dicot herb
Geranium microphyllum		Dicot herb
Geranium sessiliflorum		Shrub
Hebe pauciramosa		Shrub
Hebe salicifolia	Koromiko	Dicot herb
Helichrysum filicaule		Dicot herb
Hieracium lepidulum*	Tussock hawkweed	Dicot herb
Higracium pilosella*	Mouse-eared hawkweed	Dicot herb
Hydrocotyle novae-zelandiae var. montana		Dicot herb
Hydrocotyle sulcata	1 5 7 1 1 2 2 2 2	Dicot herb
Hypericum perforatum*	St John's wort	Dicot herb
Hypochoeris radicata*	Catsear	Sedge
Isolepis aucklandica		Rush
Juncus articulatus*	Jointed rush	Rush
Juncus effuses*	Soft rush	Dicot herb
Kelleria dieffenbachii		Shrub
Leucopogon fraseri	Patotara	Dicot herb
Linum catharticum*		Rush
Luzula crinita		Rush
Luzula pumila		Fern
Lycopodium fastigiatum	D Cllow	Dicot herb
Malva neglecta*	Dwarf mallow Horehound	Dicot herb
Marrubium vulgare*	Porcupine shrub	Shrub
Melicytus alpinus		Dicot herb
Mimulus moschatus*	Musk	Vine
Muehlenbeckia australis		Vine
Muehlenbeckia axillaris	Muehlenbeckia	Vine
Muehlenbeckia complexa	Wall lettuce	Dicot herb
Mycelis muralis*	Grassland forget-me-not	Dicot herb
Myosotis discolor*	Grassiand forget-me-not	Dicot herb
Myosotis pulvinaris	Californian stinkweed	Dicot herb
Navarretia squarrosa*	Camornan sunkweed	Dicot herb
Neopaxia sessiliflora		Shrub
Olearia odorata	Combandas	Sedge
Oreobolus pectinatus	Comb sedge Tauhinu	Shrub
Ozothamnus leptophyllus	1 auninu	Fern
Pellaea rotundifolia		Shrub
Pentachondra pumila		Dicot herb
Phyllachne colensoi		Shrub
Pimelea aridula		Shrub
Pimelea oreophila	TP 1	Tree
Pinus ponderosa*	Ponderosa pine	Dicot herb
Plantago triandra	G13 /1-	Grass
Poa cita	Silver tussock	Grass
Poa colensoi	Blue tussock	Grass
Poa lindsayi		Grass
Poa maniototo		01433

Polystichum vestitum	Prickly shield fern	Fern
Psychrophila obtusa		Dicot herb
Pteridium esculentum	Bracken	Fern
Ranunculus gracilipes		Dicot herb
Ranunculus reflexus		Dicot herb
Raoulia australis	Scabweed	Dicot herb
Raoulia beauverdii		Dicot herb
Raoulia parkii		Dicot herb
Raoulia subsericea		Dicot herb
Raoulia youngii		Dicot herb
Ribes uva-crispa*	Gooseberry	Shrub
Rosa rubiginosa*	Briar	Shrub
Rubus schmidelioides	Lawyer	Vine
Rumex acetosella*	Sheep's sorrel	Dicot herb
Rytidosperma pumilum		Grass
Sagina procumbens *	Pearlwort	Dicot herb
Salix fragilis*	Crack willow	Tree
Sambucus nigra*	Elder	Shrub
Schoenus pauciflorus		Sedge
Scleranthus uniflorus		Dicot herb
Senecio lautus subsp. discoideus		Dicot herb
Senecio quadridentatus		Dicot herb
Stellaria gracilenta		Dicot herb
Taraxacum officinale*	Dandelion	Dicot herb
Trifolium arvense*	Haresfoot trefoil	Dicot herb
Trifolium dubium*	Suckling clover	Dicot herb
Trifolium fragiferum*	Strawberry clover	Dicot herb
Trifolium fragijerum Trifolium repens*	White clover	Dicot herb
Urtica urens*	Nettle	Dicot herb
Verbascum thapsus*	Woolly mullein	Dicot herb
Verbascum inapsus	Moth mullein	Dicot herb
Verbascum virgatum*		Dicot herb
Viola filicaulis Wahlenbergia albomarginata	Harebell	Dicot herb

APPENDIX TWO: Invertebrate List: Cloudy Peak

FAMILY CARABIDAE ITENEBRIONDAE ITENEBRIONDAE TENEBRIONDAE ITENEBRIONDAE CRAMBIDAE INCATUIDAE NOCTUIDAE				
DDEA OTERA CARABIDAE OPTERA TENEBRIONDAE OPTERA TENEBRIONDAE OPTERA TYCAENIDAE OPTERA IYCAENIDAE OPTERA NOCTUIDAE		COMMON	LOCATION	(M)
CARABIDAE CARABIDAE CARABIDAE CARABIDAE CARABIDAE CARABIDAE CARABIDAE TERA CARABIDAE A TENTEBRIONDAE A CRAMBIDAE A CRAMBIDAE A NOCTUIDAE A NYMPHALIDAE A NYMPHALIDAE			Goudy Peak, Dry	
CARABIDAE CARABIDAE CARABIDAE CARABIDAE CARABIDAE CARABIDAE CARABIDAE CARABIDAE TERA LEPTOPHIEBIIDAE A LEPTOPHIEBIIDAE A LYCAENIDAE A NOCTUIDAE A NYMPHALIDAE A NYMPHALIDAE		cockroach	Creek	650, 1400
CARABIDAE CARABIDAE CARABIDAE CARABIDAE CARABIDAE CARABIDAE COCCINELLIDAE TERA LEPTOPHLEBIIDAE A CRAMBIDAE A CRAMBIDAE A NOCTUIDAE A NYMPHALIDAE A NYMPHALIDAE		ground beetle	Dry Greek	550
CARABIDAE CARABIDAE CARABIDAE CARABIDAE COCCINELLIDAE SCARABAEIDAE TENEBRIONDAE TENEBRIONDAE A LYCAENIDAE A NOCTUIDAE A NYMPHALIDAE A NYMPHALIDAE		ground beetle	Goudy Peak	853
CARABIDAE CARABIDAE COCCINELLIDAE SCARABAEIDAE TENEBRIONDAE TERA LEPTOPHIEBIIDAE A LYCAENIDAE A LYCAENIDAE A NOCTUIDAE A NYMPHALIDAE		ground beetle	Dry Greek	550
CARABIDAE COCCINELLIDAE SCARABAEIDAE TENEBRIONDAE TETTOPHIEBIIDAE A LYCAENIDAE A NOCTUIDAE A NYMPHALIDAE A NYMPHALIDAE		ground beetle	Centre Spur	1115
COCCINELLIDAE SCARABAEIDAE TENEBRIONDAE TEPTOPHLEBIIDAE A LYCAENIDAE A NOCTUIDAE A NYMPHALIDAE A NYMPHALIDAE		ground beetle	Dry Greek	650
COCCINELLIDAE SCARABAEIDAE TENEBRIONDAE TERA LEPTOPHIEBIIDAE A CRAMBIDAE A LYCAENIDAE A NOCTUIDAE A NYMPHALIDAE A NYMPHALIDAE			Centre Spur, Dry	
SCARABAEIDAE TENEBRIONDAE TERA LEPTOPHLEBIIDAE A CRAMBIDAE A LYCAENIDAE A NOCTUIDAE A NYMPHALIDAE		Ladybird Beetle	Creek	650, 1115
TENEBRIONDAE ERA LEPTOPHI EBIIDAE CRAMBIDAE LYCAENIDAE NOCTUIDAE		green chafer	Dry Creek	650
ERA LEPTOPHI EBIIDAE CRAMBIDAE LYCAENIDAE NOCTUIDAE NYMPHALIDAE		0	Centre Spur, Goudy	500, 550,
ERA LEPTOPHLEBIIDAE CRAMBIDAE LYCAENIDAE NOCTUIDAE NYMPHALIDAE	Ministers oxaculus	darkling beetle	Peak, Dry Creek	1115
CRAMBIDAE LYCAENIDAE NOCTUIDAE NYMPHALIDAE	Deleatidium lillii	mayfly	Dry Creek	650
LYCAENIDAE NOCTUIDAE NYMPHALIDAE	Occumble condition	grassmoth	Dry Creek	1017
LYCAENIDAE NOCTUIDAE NYMPHALIDAE		undecraped		
LYCAENIDAE NOCTUIDAE NYMPHALIDAE		boulder copper		
NOCTUIDAE	Lyaena n. sp.	butterfly	Goudy Peak	853
NYMPHALIDAE	Birda defigurata		Dry Greek	580
NYMPHALIDAE	Meterana tantanea	Moth	Dry Creek	580
THE COURT OF THE PARTY OF THE P	Rassans consulla	Red Admiral	Goudy Peak	28
	0		Dry Creek, Cloudy	
ACK DEPAR	Sigus avstralis grp.	grasshopper	Peak	1017
AF	Stantonda madellani	green stonefly	Dry Creek	650
CRIDOPERICIDAE	+	stonefly	Dry Creek	650

APPENDIX THREE:

Bird List, Cloudy Peak PL

SPECIES	LOCATION	STATUS	CONSERVATION ASSESSMENT		
Blackbird	Dry Creek	Introduced			
Californian Quail	Dry Creek	Introduced			
Chaffinch	Dry Creek	Introduced			
Dunnock	Dry Creek	Introduced			
Goldfinch	Dry Creek	Introduced			
Greenfinch	Dry Creek	Introduced			
Grey Warbler	Dry Creek	Endemic			
Harrier Hawk	Dry Creek	Native			
Magpie	Dry Creek	Introduced	<u> </u>		
Mallard	Dry Creek	Introduced			
Paradise Shelduck	Dry Creek	Endemic			
Pipit	Dry Creek Basin,	Endemic			
P	Cloudy Peak				
Redpoll	Dry Creek	Introduced			
SI Pied	Dry Creek	Endemic			
Oystercatcher					
Skylark	Dry Creek Basin	Introduced			
Song Thrush	Dry Creek	Introduced			
Spur-winged Plover	Dry Creek	Native			
Starling	Dry Creek	Introduced			

APPENDIX FOUR: Fish Survey Records

Table 1 Department of Conservation fish survey Central Otago Survey 2001, Dry Creek and Wainui creek

Location	Grid Ref	Species recorded
Dry Creek	2226400 5585400	No Fish
Dry Creek	2232900 5580200	No Fish
Dry Creek	2230200 5582400	No Fish
Wainui Creek	2229200 5585600	Galaxias sp D, Brown trout, Upland bully

Table 2 Tenure Review Survey November 2002, Wainui Creek and Dry Creek

Location	G.P.S Reading	Species Recorded
Dry Creek	2232779 / 558095	No fish
Dry Creek	2229120 / 5583727	No fish
Wainui Creek	2231382 / 5584579	Upland bully, Brown trout
Wainui Creek	2231378 / 5584506	Galaxias sp D, Brown trout
Wainui Creek	2230701 / 5584885	Galaxias sp D, Brown trout, Upland bully
Wainui Creek (Water race)	2228241 / 5585632	No fish
Wainui Creek (Dry)	2227722 / 5586354	No fish

APPENDIX FIVE: Federated Mountain Clubs of New Zealand (Inc.) – Submission



FEDERATED MOUNTAIN CLUBS OF NEW ZEALAND (Inc.) P.O. Box 1604, Wellington.

PASTORAL LEASE TENURE REVIEW

Preliminary Report on Recreational and Related Significant Inherent Values

CLOUDY PEAK

January 2003

Compiled for Federated Mountain Clubs (FMC) of NZ (Inc.)

By Dr Michael J S Floate, High Country Consultancy,
and Casey Wellington

RECREATIONAL AND RELATED SIGNIFICANT INHERENT VALUES of CLOUDY PEAK

A Report for FMC based on field inspection and other research to assist in the Crown Pastoral Lease Tenure Review Process

January 2003

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- Fig.1 Walkers set out from Thomson Saddle, through the new conservation area which was formerly Ardgour pastoral lease, towards Mt Kamaka, the rocky knob in the distance and to the right of centre in this view. Beyond Mt Kamaka lies Cloudy Peak and the whole length of the Dunstan Mountains which provide a range of opportunities for recreation.
- Fig. 2 Looking towards Dunstan Pass (the low saddle in the middle distance) which gives access to Dunstan Creek and St Bathans, with the St Bathans Range beyond. Public access to Dunstan Pass is emerging out of the reviews of the Lindis pastoral leases and continuous public access from Dunstan Pass to Thomsons Saddle, including crossing Cloudy Peak, would greatly enhance the recreational opportunities in the area.
- Fig. 3 Not all of the properties along the range are yet under review and one is in freehold ownership. Nevertheless, it is important that a broad view is taken of the overall outcomes as each lease is reviewed. Lack of a formal access easement across freehold land should not inhibit the securing of access as opportunities arise. Hopefully the gaps can be filled in later.
- Fig. 4 Public use, on mountain bike, foot or horse, of the track along the back boundary of Cloudy Peak is the main issue in this tenure review. This view is looking south from near the summit of Cloudy Peak towards Mt Kamaka, the sharp rocky peak in shadow in the centre of this picture, which is situated on the boundary between Cloudy Peak and the former Ardgour leasehold land, now conservation area.
- Fig.5 Looking down the lower reaches of Dry Creek and the southern boundary of the property. The homestead is among the trees at the extreme right of this picture, on the valley floor of the Lindis River. The lease includes about 500ha of terraces and lower rolling land which can be managed in a way that is ecologically sustainable and is therefore suitable for freeholding.
- Fig. 6 A typical view of Cloudy Peak which is well named because of the persistent cloud cover on its summit. This view is looking up the right branch of Wainui Creek with Cloudy Peak obscured but just to the left of centre on the skyline. Note the contrast between the dry sunny faces with much scabweed and the greener shady faces.
- Fig. 7 Here, one of the Otago Goldfields Cavalcade Trails makes its way along the Dunstan tops between Cluden Pass and Cloudy Peak. This route is likely to become increasingly popular in future as traditional NZ trampers and outdoors people are displaced from National Parks and the increasingly well known 'Great Walks' which are becoming dominated by overseas visitors.
- Fig. 8 From the Dunstan Tops there are expansive views to the Manuherikia and Central Otago, to the Upper Clutha and, on a fine day, as far away as Mt Aspiring and even Mt Cook.
- Fig. 9 The higher parts of Cloudy Peak are characterised by Dunstan Steepland soils which cannot support ecologically sustainable pastoral use because of the losses of essential nutrients in animal products. Areas like the upper Dry Creek catchment, with significant landscape values and extensive tussock grasslands are better returned to full Crown ownership to be managed for conservation and recreation purposes.
- Fig. 10 Much of the mid-altitude country has been classified LUC Class VI or better and should be capable of being managed in a way that is ecologically sustainable. Such country should therefore, be suitable for freeholding.
- Fig. 11 In the vicinity of Cloudy Peak itself is an area of alpine herbfield with occasional plants of fine leaved snow tussock and drachophyllum. Such areas are not common on the Dunstan Mountains and therefore deserve to be protected, especially as they cannot support ecologically sustainable pastoral use.
- Fig. 12 Shrublands occur in deeply incised gullies where they are relatively protected from burning and grazing. Native shrublands below Mt Kamaka, near the head of Dry Creek, add to the biodiversity and significant inherent value of this area. They have the potential to recover their former ecological glory and could be added to the adjoining conservation land which was formerly part of Ardgour pastoral lease.

Fig. 13 One or more of the best examples of lowland shrubland, like this area near the Wainui Creek forks, could be protected under a binding conservation covenant registered on the freehold title. When allowed to recover it would demonstrate the former extensive shrubland cover.

Fig. 14 Occasional 'Old Man' matagouri bushes show something of the stature of former shrublands on the lower slopes. Areas protected under covenant could eventually reach a similar stature.

INTRODUCTION

This report has been prepared following the Early Warning Meeting in September 2002 at which the properties entering the tenure review process in 2002 were introduced. An inspection of the property was carried out in December 2002, with the kind permission of the runholder. This report is offered as a contribution to the statutory consultation process undertaken by the Department of Conservation.

The report focuses on those features of Cloudy Peak which are important for public recreational interests. It should be noted that while much of this interest focuses on access, the natural values and landscapes of the areas concerned have a fundamental impact on the recreational value of the property and greatly influence the quality of recreational experience enjoyed. It is for this reason that reference is also made to both natural and landscape values in this report.

This pastoral lease is situated in a critical position on the Dunstan Mountains between Thomsons Saddle on the Thomson Gorge Road (Fig. 1) to the south and the Lauder Basin Conservation Area and other features of the Dunstan Mountains further north. There are other pastoral leases along this ridge system which are, or have been, involved in the tenure review process. These include Ardgour, which adjoins Cloudy Peak to the South, and Mt St Bathans (including Dunstan Peak) and the Lindis Group of leases to the north of Dunstan Pass (Fig. 2). These latter properties provide access from the Lindis Pass highway (SH 8) and recreational use of this whole area is likely to increase in the future. It is important that a broad view of the overall outcomes be taken and as each lease is reviewed, and consideration be given to the emerging network of recreation opportunities (Fig. 3).

Mason (1988) has described the general area as follows:- "The Dunstans are tilted block mountains of schist, situated between the upper Clutha and Manuherikia valleys. The eastern escarpment rises moderately steeply from the Manuherikia basin. The western slopes have a rough, craggy appearance at their base (the Northburn and Bendigo localities are notable for these landforms), with a pattern of low, shallow valleys and ridges. With increasing altitude the landscape becomes progressively subdued and indistinct as the broad summit crests are reached.

The range crest lowers towards its centre to a narrow waist at Thomsons Saddle (900m) (Fig. 1) High tops extend to the northern end of the range above Dunstan Creek, undulating between 1370 and 1676m. There are relatively few tors at this extent of the range. Several nivation cirques have cut into eastern faces within the Lauder Creek catchment and periglacial soil hummocks are widespread over the summit area.

The Dunstan Mountains are connected to the Lindis country by the relatively low Chain Hills divide between the Lindis and Dunstan Creek catchments."

Public use of the track along the back boundary of Cloudy Peak and along the length of the Dunstan Mountains is the main issue in this tenure review (Fig. 4).

METHODS OF SURVEY AND ASSESSMENT

A site visit and field inspection was carried out in December 2002. This report is based on the field inspection and in part, on information gathered from other sources. The other sources include studies of topographical and Land Use Capability (LUC) maps, consultation with recreational user groups and a knowledge of the landscapes seen from the Upper Clutha area. A study of "Outdoor Recreation in Otago" was undertaken by Mason (1988) and published by FMC. Reference is made to this Recreation Plan for Otago in the recreation section below. The Conservation Management Strategy for Otago has also been used as a source of reference.

GENERAL DESCRIPTION OF CLOUDY PEAK

Cloudy Peak is a relatively small pastoral lease of a little over 4,000ha, which is very similar in size to the neighbouring Ardgour Station. Cloudy Peak homestead is situated in the Ardgour Valley at about 300m and the property extends from the Lindis River to Cloudy Peak (1,526m) on the crest of the Dunstan Mountains (Fig. 5).

Cloudy Peak is well named because if there is a single cloud in the district it is more likely to be on Cloudy Peak than anywhere else (Fig. 6). Despite its only modest altitude, the summit area is quite montane in character which may be due to the frequent cloud cover. The upper catchments of both Wainui Creek and Dry Creek are important for their landscape values.

The recreational significance of Cloudy Peak is that it is situated to the north of Thomsons Saddle and a new conservation area, formerly part of Ardgour (Fig. 1). The track along the back boundary of Cloudy Peak continues north over The Point and Cluden Station, around the rim of the Lauder Creek catchment, and onwards to Cluden and Dunstan Passes. Public access is available to Mt Kamaka at the southernmost point of Cloudy Peak and the route all along the Dunstan Mountains is likely to become increasingly important for recreational use in the future (Fig. 7).

Conservation interests (associated with enhancing the recreational experience) are primarily focused on the landscape values of the higher country including the crest of the Dunstan Mountains, Mt Kamaka, Cloudy Peak and the upper catchments of Wainui Creek and Dry Creek. There are expansive views from the ridgeline, including the summits of Mt Kamaka and Cloudy Peak, which add greatly to the quality of the recreational experience (Fig. 8). There are also extensive areas of remnant shrublands and degraded scrub which adds to the biodiversity of the property. These are of interest because they contain a much higher proportion of Olearia than most other such shrublands in the Upper Clutha area. Some of these in Dry Creek and Wainui Creek may have potential for recovery if protected from burning and grazing.

There are some 500ha of rolling and terrace land below about 500m and most of the property lies between about 500m and 1000m, although about one quarter of the lease extends upwards from about 1,000m to just over 1,500m. A large part of the higher country (above about 1,000m) on Cloudy Peak Station is characterised by Carrick High Country Yellow Brown Earth soils and the closely related Dunstan Steepland soils (Fig. 9). Much of this land has been classified in Land Use Capability (LUC) Class VIIe. This land is therefore rated with a low suitability for pastoral use. It may not be capable of being managed in a way that is ecologically sustainable because it may not be justifiable economically to replenish (in the form of fertiliser) the nutrients which are removed in animal products (meat and wool). Where such losses are not replenished, the system cannot be sustainable and sooner or later soil degradation will occur. On lower country where pasture growth rates are higher, topdressing is worthwhile, but at higher altitudes pasture growth and hence response to fertiliser is limited by climate. Under these circumstances conservation values need to be assessed and considered as an alternative to unsustainable pastoral use.

Most of the mid-altitude country is characterised by Arrow and related Blackstone Hill Yellow Grey Earth soils most of which have been classified LUC Class VI (Fig. 10). The mid-altitude country and the lower rolling and terrace country which has been classified in higher LUC Classes is capable of being managed in a way that is ecologically sustainable, and should therefore be suitable for freeholding.

RECREATIONAL ACTIVITIES AND POTENTIAL

The recreational significance of this pastoral lease lies in its position (or at least the position of its back boundary) along the crest of the Dunstan Mountains between Mt Kamaka and Cloudy Peak (Fig. 4). The ridge system leads further north over The Point and Cluden Station to Cluden Pass, Dunstan Pass and the Lindis group of pastoral leases which are also currently under tenure review (Figs. 7 and 8). If the Preliminary Proposals for these properties are eventually gazetted they will provide public access to Dunstan Pass (Fig. 2) and the upper reaches of the Dunstan Creek catchment. The linkage between this North Dunstan area and Thomsons Saddle (and the Thomson Gorge Road) is likely to become increasingly important as a recreational resource in future (Figs 1, 2, 3 and 4).

Traditional NZ trampers and other outdoor enthusiasts are increasingly seeking new recreational opportunities as the more popular National Parks and 'Great Walks' are more and more becoming dominated by overseas tourist visitors. As this happens the traditional NZ users are being displaced and are seeking opportunities in new areas such as those likely to become available through the tenure review process.

Another reason for increasing demand has been provided by Mason (1988) who stated: "The Northern Dunstan PNA [Protected Natural Area at the head of Lauder Creek] is an unknown as far as the recreational public is concerned, although no doubt this situation will change with greater awareness of its natural values and its potential for cross country skiing." Mason also observed that with greater awareness of the same features, it could be anticipated that summer visitation will also increase.

Mason (1988) has observed that there may be some potential for cross country skiing on parts of the Dunstan Mountains but that the amount of snowfall is frequently limited by the orientation of the range to the southerlies which bring most of the snow. In some years however snow does lie long enough for recreational use.

The location of Cloudy Peak on the Dunstan Mountain crest is closely parallel to the situation of Glenfoyle and Sandy Point on the 'Grandview Range'. All these pastoral leases occupy key locations in mid-way positions along ridgetop routes where public access has recently been provided or proposed at one end of the ridge system. In relation to the tenure reviews of Glenfoyle and Sandy Point FMC submitted that:-

This ridge system (from Breast Hill and Grandview to Tarras and Lindis Peak) and its associated tracks provide easy travel and excellent views of the surrounding area as far afield as Mount Aspiring National Park, the Remarkables, Lindis Pass, and the St Bathans Range. It is ideal for tramping, mountain bike trips, and horse riding and should also be considered for 4WD use with the runholders consent. Through trips to the Lindis area should become available over time through tenure reviews of neighbouring properties. Nine Mile is one of a group of 6 properties currently in the tenure review process in the Lindis Pass area. It is therefore important to make appropriate access provisions at this stage at the Hawea end of the system (eg. Glenfoyle) so that provision for through trips can be completed as other tenure reviews proceed."

The FMC report on Sandy Point similarly stated:- "The significance of the track system from Grandview and Bluenose, to Trig Hill (on the northern boundary of Sandy Point) and beyond, is that it allows the recreational visitor to continue enjoying this panorama from changing perspectives along the ridges. It provides a wide range of options for walkers, trampers, mountain bike users and possibly horse riders and 4WD enthusiasts.

Sandy Point is important because, like Glenfoyle, it provides a key section in the centre of this ridge system. Access to the central part is important because the distances to the extremities of the system are considerable, and access to the central part of the system opens up a greater number of alternative trips for day or overnight travel."

The case for public recreational use of the ridge track along the back boundary of Cloudy Peak is similar in that it occupies a key position between the new public access over former Ardgour leasehold land and the Lauder Basin Conservation Area further north along the Dunstan Mountains. It would be good for tramping trips and possibly even better for mountain bike use.

The recreational significance of pastoral leases like Cloudy Peak should be assessed not only on their present usage but also on potential. This is because current usage is much less than its potential for a number of reasons. Partly because of lack of awareness and partly because of the current land tenure under pastoral lease, and access to some parts of the ridge system has not been easy in the past, the recreational use of the ridge system described in this report is less than it might have been if access was freely available. There is significant potential for greater use and it is the full range of possibilities which should be considered during this tenure review.

An increasing problem for people wishing to do trips involving overnight stays in the backcountry is security of car parking at road ends. Consideration should be given during the tenure review process to making

provision where possible for car parking off highways, and in the most secure places possible near the start of new easements over land which becomes freehold through tenure review. In the case of Cloudy Peak, consideration should be given to future opportunities for off-road parking in the vicinity of Wainui Creek bridge.

In summary, this assessment indicates that there is considerable scope along the ridge system for mountain bike trips, tramping, and possibly horse riding. It is recommended that public access for all these activities should be secured as an outcome of tenure review. The riverside also offers opportunities for more gentle day walks and if it does not already exist a marginal strip or easement along the true left of the Lindis River should be included.

SIGNIFICANT INHERENT VALUES AND THEIR IMPORTANCE FOR RECREATION

This report focuses on those features of Cloudy Peak Station which are known to be important for public recreational interests. It should be noted that while much of this interest focuses on access, the natural values and landscapes of the areas concerned and views to be had from the key vantage points have a fundamental impact on the recreational value of the property and greatly influence the quality of recreational experience enjoyed. It is for this reason that reference is also made to both natural and landscape values of this property.

Mason (1988) has commented on the vegetation of the Dunstan Mountains as follows: "Tall tussock grassland has a more complete presence north of Thomsons Saddle although this is moderately to severely depleted. Only a relatively small area of alpine herbfield occurs on the northern crest. Short fescue and silver tussock grassland cover lower slopes. Pockets of shrubland occur throughout this half of the range, being mainly confined to deeply incised gullies." [see Figs. 12, 13 and 12]

As noted in the general description of Cloudy Peak, a large part of the property has been classified LUC Class VI which should be capable of supporting sustainable pastoral use with appropriate development and maintenance. As a result of past burning and grazing by both sheep and rabbits, most of the vegetation has been much modified from its natural state, but there are some areas of scrub especially on the lower shady hill slopes. These are of interest because they contain a much higher proportion of Olearia than most other such shrublands in the Upper Clutha area. Although there is currently little vegetation of significant inherent value there is potential for recovery in the absence of grazing and burning and an eventual return to mature native shrubland. The combined worth of the landscape values, the existing shrublands and their potential for recovery (Figs. 9 and 12), together with recreational value and location adjacent to the conservation area around Mt Kamaka, suggest that the upper Dry Creek catchment is a strong candidate for return to full Crown ownership and control and to be managed by DOC for conservation and recreation purposes.

Additional support for such a proposal comes from the probability that this area cannot be managed in a way that is ecologically sustainable and that it is already fenced on three sides, requiring little extra fencing to protect the proposed conservation area.

The highest ground along the ridge crest, in the vicinity of Cloudy Peak summit there is an area of alpine herbfield (Fig. 11) which Mason (1988) reported was not common on the northern crest of the Dunstans. This area therefore has high inherent natural value and is not capable of being managed in a way that is ecologically sustainable. It could be included in a corridor along the crest of the range between Mt Kamaka and the boundary of the property near Cloudy Peak itself, which would then provide for both conservation and recreation needs. It could be a 'pan-handle' like extension to the proposed conservation area in the upper catchment of Dry Creek.

On a number of the lower slopes, on shady faces, there are remnant shrublands which have an unusually high content of Olearia and significant potential for recovery to their former ecological glory (Figs. 13 and 14). One example occurs near the fork in Wainui Creek. Others occur on the shady faces of the lower slopes in the valley of Dry Creek. The best example (or examples) of such shrublands might be considered for protection under a binding covenant registered on the new freehold title.

AREAS TO BE PROTECTED

Because of the past history of pastoral use on Cloudy Peak, most of the vegetation has been considerably modified and little of significant inherent value remains. However, there are some areas of scrub which contain much Olearia and have potential to revert to mature native shrublands of significant stature. FMC has argued before that it is not only current vegetative state which should be considered during tenure review but also the potential of communities to revert to their native state.

There are two contiguous areas along the back boundary of Cloudy Peak which FMC recommends for return to full Crown ownership and control, to be managed by DOC for conservation and recreation purposes. The first of these is the upper catchment of Dry Creek which has high inherent landscape values and a significant potential for shrubland recovery. It is an area that cannot be managed in a way that is ecologically sustainable for reasons discussed above. Furthermore, it would provide recreational access northwards from Mt Kamaka and enable the recreational public to enjoy the significant natural values of the upper Dry Creek catchment and the views to be had from the track along the ridgeline.

The other area proposed for return to full Crown ownership on the back boundary of Cloudy Peak is a corridor along the ridge, running from the northern boundary of the proposed conservation area in the upper Dry Creek, over Cloudy Peak summit and on to the property boundary with The Point, north of Cloudy Peak. This area contains an important area of alpine herbfield which is not common on the Dunstans and would also provide public access along the crest of the range and include the spectacular views from the ridge and from Cloudy Peak itself.

Consideration should also be given to protecting some of the lowland shrublands which include a lot of Olearia and occur in places on the lower shady faces, as for example near the Wainui Creek forks, and in Dry Creek. The best example(s) could be protected under a binding covenant registered on the new freehold title.

ACCESS REQUIREMENTS

The following access provisions will be required:-

Walking access is required along the bank of the Lindis River. There should already be a marginal strip along the true left bank of the Lindis River which could be used by locals and others for a gentle riverside walk. If a marginal strip does not already exist one should be laid off as part of the tenure review process.

Public access for foot, mountain bike and possibly also horse riding will be required along the crest of the Dunstan Mountains northwards from Thomsons Saddle. The first section of the crest is now conservation land which was formerly part of Ardgour Station. This provides public access to Mt Kamaka. What is required out of this review is public access along the crest from Mt Kamaka to the northern boundary of Cloudy Peak with The Point. There is an existing track along the ridge for all but about one kilometer of the crest near Mt Kamaka. This would serve ideally for recreational purposes. FMC is aware that The Point is freehold property and access further north towards the Cluden and Dunstan Passes will depend on consent from the owner. It is to be hoped that in the future an easement for public recreational use might be negotiated across land on The Point.

If the areas proposed above for return to full Crown ownership do in fact become conservation land, public access as far as The Point boundary will be assured. If the ridge crest does not become conservation land then a formal easement along the crest will be required as described above for foot, mountain bike and equestrian use.

The fact that a right of way across The Point does not yet exist should not be a reason for not making provision for access over Cloudy Peak. It does mean however, that some other arrangement will be needed for recreational users to exit from the Dunstan Mountains. A number of possibilities exist:

(i) A public access easement for foot, mountain bike and possibly equestrian use could be negotiated during the tenure review of Cloudy Peak. A suggested route would be down Centre Spur and the

- Wainui Creek valley. The upper part of the spur, locally known as Tongue Spur, provides great views over the Upper Clutha area. An alternative route would be down the valley of Dry Creek.
- Temporary public use of the Tongue Spur route could be negotiated during tenure review of Cloudy
 Peak with a sunset clause that this be phased out when public access along the crest through The
 Point land becomes available. It would however, be very desirable to retain access down Tongue
 Spur as this provides options for round trips.
- (iii) In the future it may be possible to gain access via Beggs Creek and the Thomson Gorge Road to Matakanui.

CONSERVATION MANAGEMENT STRATEGY FOR OTAGO

There are important statements in the Conservation Management Strategy (CMS) for Otago, in which the North Dunstan Mountains are recognised as a Special Place. It is noted in the CMS that the Lauder Basin Conservation Area is landlocked and that public access to the area is required. The objective for this Special Place is:- "To extend protection in the area to cover the remaining higher altitude areas of nature conservation importance, and to secure appropriate public access."

Implementation includes:-"Pastoral lease tenure review on properties in the area may provide opportunities to negotiate to protect the areas of interest. Overall management of these new areas with the existing conservation areas will confer net conservation and management benefits."

This objective and intended implementation accords very closely with the recommendations made in the present report. Furthermore, it should be noted that the priority for the North Dunstan Mountains Special Place is:- "The negotiation of protection arrangements for areas of biodiversity importance and recreational opportunities and access are the priority activities in this Special Place."

CONCLUSIONS

The tenure review of the Cloudy Peak pastoral lease presents an important opportunity to enhance the recreational potential and use of the Dunstan Mountains area. There is also an opportunity to enhance the quality of recreational experience on those lands by recognising and protecting the significant landscape and other natural values described above.

This property occupies a key position in the central part of the range between Thomsons Saddle and the Lauder Basin Conservation Area, and the Cluden and Dunstan Passes which provide access to Dunstan Creek and St Bathans, and to the Lindis group of pastoral leases currently under review. If the recommendations in the Preliminary Proposals for the Lindis leases are gazetted, the need for secure access between Thomsons Saddle and the Lindis area increases in importance.

Most of the Cloudy Peak pastoral lease is likely to become freehold as a result of tenure review. Consequently, secure public access for foot and mountain bike use, and possibly horse riding is the most important recreational issue in the tenure review of this property.

The outcome of the tenure review of Cloudy Peak, if it includes the important recreation and conservation recommendations included in this report, could contribute significantly to the achievement of the objectives declared for the North Dunstan Mountains Special Place in the Conservation Management Strategy for Otago.

<u>ACKNOWLEDGEMENTS</u>

FMC is grateful for assistance from authorities in making the assessment possible. The site inspection was carried out in December 2002 and FMC is grateful to DTZ New Zealand staff for making the appropriate arrangements, and to the runholder for co-operation and granting permission for access.