Toitu te Land whenua Information New Zealand

Crown Pastoral Land Tenure Review

Lease name :

ALLANDALE / GREENVALE

Lease number : PS 068 / PS 067

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.

April 07

'lain a low broad glacial outwash plain extends out from the eastern boundary. Fire, sheep and cattle grazing have reduced beech forest cover which is now confined to narrow sheltered gullies. Thus, native grass and shrub communities now extend well below natural tree line. This includes pasture elements on the hill country and is virtually entirely converted for pasture on the plain. Elevations span from 350 m - 1426 m asl. The insects of this lease contain elements associated with North Fiordland and associated with mountainous areas of western Otago and Northern Southland (see Mark et al. 1989). Insects widespread in South Island streams, forests and tussock grasslands were also recorded.

Eastern slopes, Allen Creek drainage

Carabid beetle *Mecodema chiltoni* remains in the mixed beech and shrubland remnants here. This very large bodied beetle is close to the type locality (slopes to Mt Dick) which was probably approached from Kingston. *M. chiltoni* has a threat status of "C" - third priority for conservation (Molloy and Davis 1994) but such populations (now fragmented and isolated) are in a number of places in the region. Two more carabid beetle species and the leaf veined slug *Pseudaneitea mamorea* add value to these forests. With the retention of a riparian canopy cover, the stream reaches on the lower slopes are less disturbed. This is indicated by the forest aquatic stonefly *Spaniocerca longicauda*, caddis *Hydrochorema crassicaudata* and aquatic carabid beetles. The mayfly *Atalophlebiodes cromwelli*, stonefly *Zelandobius uniramus* and caddis *Psilochorema cheirodes* are characteristic of cold, low nutrient streams.

At the foot of these slopes, grasslands contain representative insects such as cicada *Kikiha* species, bugs *Nabis maoricus*, *Stenotis binotatus* and *Stenotis norvegicus*. However, the lower slopes have areas of rock outcrop and a history of fire followed by regeneration of mixed shrub/grassland. These habitats are extensive with sources of insect colonists from fire refugia among the bluffs. This patchy community type is widespread on the adjacent lake faces (L. Wakatipu); with patches of inaka *Dracophyllum longifolium*, speargrass *Aciphylla glaucescens*, snow tussock *Chionochloa rigida*, bracken *Pteridium esculentum* interspersed with shrublands of kohuhu *Pittosporum tenuifolium*, manuka *Leptospermum scoparium* and *Coprosma propinqua*. A small isolated shrubland of *Olearia lineata* at Bushy Creek hosts the moths *Declana floccosa* and *Harmologa oblongana*. These moths and shrub are not rare but the community type is poorly represented in the region and in reserves generally. Rock bluffs were not sampled for insects but will retain a community associated with open lichen crusted sites. This includes lichen feeding moths and beetles.

Western faces, from Mitchells Hut to ridge crest

The extensive gentle slopes above 900 m are essentially tussock *C. rigida* grassland. Rock outcrop is rare and small streams dissect slopes rippled by mass movement. Shrub cover remains in some areas and appears to be actively extending. Areas of bare soils, heaths and herbfield are common and along the ridge top are some cushionfield and rock/fellfield. Sheet and gully erosion are extensive between 1250 m and 1000 m and expose areas of thin soils but also soft deep colluvium where tussock, tutu *Coriaria plumosa* and herbs are invading. The widespread pattern of open basking sites adjacent to host plant patches is ideal for grasshoppers *Alpinacris tumidicauda*, *Sigaus campestris*, cicadas *Kikiha rosea*, *Maoricicada nigra* and *Maoricicada otagensis* which are very common. This community mosaic also suits the basking day active moths *Notoreas elegans* and *Paranotoreas brephosata*. These insects and the community represented are extensive above 900 m in the eastern Eyre Mountains. The stream insects also form a rich assemblage with five stonefly species being swept including *Halticoperla tara*, a jumping stonefly which lives specially in thin water films at waterfalls. This is the southeastern most record for the species. Wet flush areas are the most modified communities present and are more extensive below 900 m.

A contrast in vegetation is apparent between drier western faces and wetter slopes to the east of the ridge crest where shrub and tussock cover has greater stature and flushes are more extensive and less trampled or invaded by exotic grass. Communities with high natural character are best represented by wet habitat with craneflies including flightless species (families Tipulidae and Tanyderidae) and midges (families Chironomidae and Sciaridae). Also communities on decaying vegetation will be more complex (than on western slopes) and include small snail, beetle and moth species.

Summary
The natural character of communities in sheltered and shaded sites, both at low elevation (beech forest and some shrublands) and at high elevation (eastern and southern aspects and incised gullies) is high. Invertebrates representative of Western Otago and Fiordland being present here (eg. *M. chiltoni* and *H. tara*; and see Mark et al. 1989). In addition, rock bluffs, and fire induced shrub and grasslands retain high inherent value for invertebrates which are characteristic for the region and likely formerly less extensive.

2.5.2.2 HERPETOFAUNA

Lizards were recorded by hand searching for droppings, shed skins and individuals. Cool conditions meant lizards were mostly secretive and hard to find.

West facing slopes above 900 m in Robert Creek and the summit ridge
These slopes had ideal lizard habitat, with food sources among rich shrubland and grasslands, which are adjacent to bare soil and rock for basking. Green skink *Oligosoma chloronoton*, Maccan's skink *O. nigriplantare maccanni* and common skink *O. nigriplantare inconspicuum* are basking on thinly vegetated soils and are also found under rock slab. Two forms of gecko are present in rock outcrop. They are provincial forms of common gecko, a complex of species with affinities to *Hoplodactylus maulatus*. *Hoplodactylus* "West Otago" is widespread in west Otago and parts of Southland. The second species noted, *Hoplodactylus* "mini" is more local but in the same range.

Shrubland and rock bluff south of Bushy Creek
All the above species apart from green and common skink were found here,

The five lizards noted above are representative of drier schist terrains in southern New Zealand and may well be represented at lower elevation in Robert Creek. However, they are relatively abundant in the alpine zone.

2.5.2.3 AVIFAUNA

Birds recorded during the inspection and known from recent historical records are:

NZ falcon	recorded on the slopes north of Bushy Creek and in the vicinity of Mitchells Hut
NZ pipit	common throughout open areas; particularly common along the 4WD track to Mitchells Hut with >20 being seen in a c.3 km stretch
Australasian harrier	throughout
Paradise shelduck	common about pasture areas
Kea	known from historical records, most recently in the early 1990s

Grey warbler	common in forest at Bushy Creek and near Mitchells Hut
South Island tomtit	common in forest at Bushy Creek and near Mitchells Hut
Rifleman	several seen in Bushy Creek catchment
South Island fantail	common in forest at Bushy Creek
Bellbird	several about Bushy Creek
Silvereye	several in and about Bushy Creek forest and shrublands
Grey duck	two in wetland to north of Bushy Creek
Redpoll	common throughout
Chaffinch	common in shrubland and the Bushy Creek forest areas
Yellowhammer	several in shrubland on lower slopes in Robert Creek
Skylark	several in vicinity of the Robert Creek – Mitchells Hut track
Blackbird	common in shrubland in forest areas
Greenfinch	several in the homestead to Bushy Creek area
Thrush	common about Bushy Creek
Goldfinch	group of five near Bushy Creek
Mallard	six in wetland north of Bushy Creek
Starling	flock of >12 above Robert Creek ford

NZ falcon and kea are Category B species for conservation (Molloy and Davis 1994).

All species listed above can be reasonably expected to be breeding within the property.

2.5.2.4 FRESHWATER FISH

Introduction

At the time of survey, river water levels were low and the lower braided reaches of Bushy Creek were dry. A total of 10 reaches or sites were sampled from two river systems within the property boundaries. One site from the mainstem of the Mataura river directly above and below the Cainard Road bridge at the entrance to Mataura Valley Station was also surveyed to provide a context for these systems. In addition, following preliminary results of genetic analysis by Otago University of fish collected from the Greenvale property additional sites were surveyed on the farm and neighbouring Lorne Peak Station to put the results into context.

Methods

All sites were fished using a back pack DC "Kaianga" electric fishing machine. Reaches were sampled with a single pass into a stop net, set down stream. Individually stunned fish were also collected by hand net. Stream side observations of larval fish and abundance were also noted. Type specimens were collected and preserved in formalin for confirmation of species identifications. These preserved fish were sent to Dr R Allibone (NIWA) for confirmation. All sampling was qualitative, with data recorded on NIWA database forms. Abundance was assessed in a standard 50 m reach of river, and recorded as rare, occasional, common or abundant, where rare = 1 fish; occasional 2-5 fish; common 6-10 fish; and abundant greater than 10.

Results

Fauna

A limited fauna of eight fish species were recorded from the 15 reaches sampled (Table 1), although three of these species (upland bullies, longfinned eels and alpine galaxiids) were not recorded on the property. A roundhead morphotype (*Galaxias* spp) galaxiids was the most

idespread native fish species recorded at five sites. Many streams had no fish present or only a single species.

The second most widespread species on the property was an unusual Galaxiid that morphologically appears to differ from previously recognised species in the "*Galaxias vulgaris*" complex. This species (Galaxias sp. Table 1) has a rounded head form similar to but shorter than *G. anamalus*, but with a very elongated body particularly in the caudal (tail) region. Body colour was pale grey or opaque compared to the *G. anomalus* in the same stream which tended to be brownish and with distinct patterning and the dorsal midline discontinuity. No evidence of a discontinuity was observed on the unidentified galaxiid (G. sp.), which also lacked any obvious patterning, with the exception of a few small flecks, or blotches.

Galaxias sp. was present in Bushy Creek and the large tributary of the Robert Creek (Site 5) just above the ford crossing on the way to Mitchells Hut. It was present in steep, step stair systems, with numerous small plunge pools, shoots and torrents. Substrate was dominated by large boulders, and the fish were present in small pools, typically under bank overhangs or substrate cover.

Roundhead type galaxiids were present in Bushy Creek, one other small tributary flowing into a wetland/swamp that entered Allen Creek on the eastern side of the property, and two tributaries of the Robert Creek. The upper reaches of other tributaries appeared devoid of fish. Genetic analysis suggests that some of the smaller roundhead forms particularly those fish collected at Site 1 are the recently described *Galaxias gollumoides*. This species has previously only been described from two sites on Stewart Island. Similar looking fish were also located in the old Mataura River channels on Lorne Peak Station, but genetic analysis is required to confirm the identity of these fish.

The mainstem of Robert Creek contained large numbers of brown trout, ranging in size from 65 mm size class to 160 mm size class with a third group of fish around the 120 mm class. No other species of fish were observed, although there are records of alpine galaxiids and a "vulgaris" type fish further down the river (Stuart Sutherland, Southland Fish and Game; pers. comm.). These are probably flathead galaxiids, given their presence in the Mataura River below the confluence of Robert Creek.

Discussion

The elongate galaxiid collected from a tributary of Robert Creek and also Bushy Creek is potentially highly significant. The morphology of these fish is unusual (R Allibone, pers. comm.) and it also seems to occupy a habitat which differs from typical roundhead habitats. This fish may be an as yet unrecognised species, or alternatively it may be a variant form of roundheads (*G. anomalus*) or a hybrid between flathead types (G. sp. nov. southern) and roundhead types. More formal examination and genetic tests will be necessary to establish its taxonomic status. However, given the recent recognition of a number of new species within the "*Galaxias vulgaris*" complex the significance of these populations is uncertain, and in the interim they should be considered to represent significant genetic diversity.

It is likely that this fish is also present in the lower reaches of the larger tributaries of the Robert Creek which were not surveyed in this study. Similarly flatheads may also be present in many of the lower reaches of these tributaries. they are present in the mainstem of the Mataura and within the upper Mataura catchment they have usually been found downstream of roundhead galaxiids (eg, Bushy Creek and Thompson, Mullocky, Pig Creeks on Mataura Valley Station).

.pine galaxiids are also known to be present in lower reaches of Robert Creek (Stuart Sutherland, pers. comm.) and may inhabit some of the lower tributary areas.

Sympatric populations of the two non migratory galaxiids (roundhead and flathead galaxiids) is unusual (Allibone, pers. comm.). Typically these species are not encountered together. The healthy population in Bushy Creek is therefore significant. The absence of trout within this system ensures that this population is reasonably secure. If flatheads are present in the lower reaches of tributaries of Robert Creek then this may be a feature of the Mataura catchment.

Absence of fish in upper reaches of the streams at or upstream of Mitchells Hut, is probably a result of the steep nature of these streams, hence the fisheries values are probably restricted to the lower reaches and larger tributaries.

In addition the *Galaxias gollumoides* is the only known mainland population. It is therefore highly significant. The small stream and wetlands around site showed significant damage from cattle grazing in the winter visit. It is clearly very susceptible to damage from grazing.

Issues

Little evidence of stock damage was observed except in the wetter seepages during the inspection in summer. However, during the winter follow-up, there was significant damage to the northern-most wetland areas around Site 1 particularly associated with the small stream containing the *G. gollumoides*.

Cattle grazing and burning pose the largest risk to the integrity of these systems, with potential impacts upon bank stability and water quality, including sediment, clarity, temperature and eutrophic community development.

Table 1:
Species present, relative abundance and site locations of all fish taxa collected from Greenvale Station, January 1999

	Site Numbers											
Species	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Galaxias sp. (round head type)	C	C	C		C		A					R
Galaxias sp. nov southern (flathead type)		A	C								C	R
Galaxias paucispondylus (alpine galaxiid)											A	
Galaxias sp. ("*G. vulgaris*" complex)		O	C		C							
Galaxias gollumoides	C										O	
Gobiomorphus breviceps (upland bully)											P	
Anguilla dieffenbachii (longfinned eel)											C	
Salmo trutta (brown trout)				A								

R = rare(1) O = occasional (2-5)
C = common (6-10) A = abundant (> 10)
P = present but not recorded this survey

Site Names:
1 Tributary Allen Creek, associated with wetland
2 Bushy Creek – farm track crossing
3 Bushy Creek – within beech forest
4 Robert Creek – mainstem, above Mitchells Hut ford
5 Tributary Robert Creek – first major tributary @ 200 m from ford (site 4)
6-10 Tributaries of Robert Creek
11 Mataura River (at road bridge)
12 Allen Creek

5.3 PROBLEM ANIMALS

ALLANDALE AND GREENVALE

Wild Animals Present
Red deer – very low numbers
Chamois – low numbers but slowly increasing

Red Deer
Red deer are in very low numbers and occupy bush areas. These animals are not considered a threat, as commercial and recreational shooting will control remnant populations.

Chamois
These animals have colonised the whole of the Eyre Mountains and are present in the scrub belts and higher basins on to the alpine areas. Previously control was by DOC Te Anau, but control is now by recreational shooting and some commercial recovery. Interest is evident in guided hunting for chamois in this area.

Chamois have been slowly increasing over the last few years and if allowed to increase will have impacts on the area's vegetation. Control by commercial harvesting is possible and with better access, recreational shooters could be used for control. The department should monitor chamois population and distribution, possibly in conjunction with goat control programmes.

Pests
Animal pests present on these two stations are possums, hares, feral cats, stoats, ferrets and hedgehogs.

Possums
Possums have colonised the whole of the pastoral areas except high alpine areas, and large populations have been observed in the past, particularly on the lake faces above Kingston.

Previously commercial trappers contained possums but since the market for possum fur is very poor, on the Animal Health Board has targeted possums for Tb control. Areas of defoliation caused by possums have been noted on beech forests, particularly during winter. It is assumed that the possum population fluctuates over a number of years depending on the seasons and spasmodic control programmes. The impacts of possums definitely influence vegetation but in this area the impacts are not known.

Rabbits
Pockets of rabbits occur on the flats of both properties. It is unknown if the RHD virus is present in the population, but generally populations are low and only monitoring is required.

Hares
Hares are present over the entire tussock grasslands and occupy scrub and bush areas in winter. Hares have been observed in the high basins even in winter. Their impacts are unknown.

Feral cats, stoats and ferrets
These animals are present throughout the station areas with preference for rabbit areas, and impacts are unknown.

.edgehogs

Hedgehogs are present in these areas but impacts are unknown. Hedgehogs are mentioned due to predation on insects, notably native beetles.

SIGNIFICANCE OF THE FAUNA

Invertebrate Fauna

The invertebrate fauna of Greenvale are significant for the following reasons:

- presence of *Mecodema chiltoni*, a Category C species for conservation (Molloy and Davis 1994)
- the stonefly *Halticoperla tara* reaches its southeastern distribution limit
- rich non-forest communities of insects and plants have been retained and are recovering after fire
- *Olearia lineata* shrubland at Bushy Creek is an invertebrate habitat under-represented in protected areas elsewhere in the ecological district
- the diversity and representativeness of major invertebrate groups is typical of the Eastern Eyre Mountains.

Herpetofauna

The five lizard species on the upper west facing slopes of Robert Creek are regionally representative and the skink species are relatively abundant at the site.

Avifauna

The property contains large intact valley systems with a full complement of rangeland wildlife. Species of note are New Zealand falcon and kea, both Category B species for conservation (Molloy and Davis 1994). There is evidence that these species of rare endemic birds breed on the property.

Several forest bird species are at their distributional limits, eg, bellbird, tomtit, rifleman and fantail. Kea is also at its distributional limit.

Freshwater Fish

The freshwater fishery values are significant for the following reasons:

- The unidentified species of galaxiid recorded from the tributary of Robert Creek and Bushy Creek is potentially a new species (J Waters, Otago University, pers. comm.). If confirmed by the genetic assessment, it is of major importance for galaxiid taxonomy.

- Sympatric populations of the two non migratory galaxiids (round heads and flatheads) is unusual and not normally found. Their presence in Bushy Creek is therefore notable.

- The new record of *Galaxias gollumoides* is the first mainland record of this species (previously only recorded from two sites on Stewart Island).

- Cattle trampling and fouling represent major threats to fishery values, especially *G. gollumoides*.

_.6 HISTORIC

The Greenvale and Allandale pastoral leases were surveyed as part of the tenure review process in February 1999.

Maori Sites

The existence of Maori ovens has been reported from both Greenvale and Allandale but this information has not been confirmed archaeologically. Nor were any oven sites located during the survey.

European History and Sites

The first Europeans to enter this area were explorers whose main motive was the search of new land for grazing sheep. The first to visit Lake Wakatipu were John Morrison, John Chubbin and Malcolm Macfarlane who reached the shores of the lake in the vicinity of Kingston in late 1856. Apart from being the first Europeans to reach the lake their other claim to fame was to have to retreat to the waters of the lake to escape a large scrub fire that they accidentally started (Beattie 1947:47). They seem not to have been interested in the farming potential of the area but were soon followed by others who were and a steady flow of would-be pastoralists reached the area over the next few years.

Greenvale/Allandale

In February and March 1859, W S Trotter and a companion were at the southern end of the lake looking for grazing country (ibid. 49). As a result of this visit Trotter applied for and received three occupational licences; 323 and 323A which he named Greenvale, and 359 (Rockyside) in the upper Nevis (Beattie 1979:333 and 355). Trotter was one of the first settlers of Otago in the post whaling period. In 1840 he was among those brought out by the whaler Johnny Jones from Sydney on the *Magnet* to work his Waikouaiti estate (Thomson 1998:520).

Trotter's initial Greenvale homestead was where the Allen Creek emerges from the foothills of the Eyre Mountains. There is some debate as to what form this residence took. Beattie (1979:428) mentions a small hut with a thatched roof as the initial home. This was soon replaced by a wooden residence with stone chimneys. However, Florence Mackenzie (1948:57) states that the first residence was "... a stone hut; finally it became a long stone building not built to any plan ... One had to go outside to pass from the kitchen to the dining room, and from the living room to the dining room one traversed a bedroom". It was this latter building that was then replaced by a wooden dwelling with stone chimneys. Nor can the authors agree on the description of the woolshed. Beattie says it was mainly of stone but Mackenzie says it was of wood with an iron roof. But both do agree that the men's huts were of stone.

The location of the homestead at Allen Creek was of short duration only; by 1871 the homestead was shifted down the valley to near Cainard Road. This second homestead was occupied up until the early 1950s. It is now a ruin consisting of some stone walls and a chimney set amongst mature exotic trees and is located within the Glen Allen Scenic Reserve. It was also during the 1950s that Allandale was separated from the remains of the Greenvale lease. The spelling of Allandale with an "a" rather than the "e" of Allen creek was the result of a spelling mistake by the Automobile Association when sign posting the new Allandale Homestead (M Lott – former lessee).

Recorded Sites

Only two definite sites were recorded on Greenvale/Allandale.

Hut site (grid ref. E43 691 292). This is a stone chimney located on the true left of Bushy Creek within an area of remnant beech forest. The chimney is approximately 2 m high and 2 m wide and was originally part of a hut about 3 m by 4 m in area. The hut was either built of wood or corrugated iron and has either decayed or been removed. There is evidence of milling within the surrounding bush, presumably for posts and the hut site may have been associated with that. Alternatively a previous lessee, Murray Lott, believed that it was a rabbiters' camp,

2 Second Greenvale Homestead (grid ref. E43 688 253). The remains of the second homestead are located in an area of large trees behind the current Greenvale Station buildings. Large sections of plastered stone walling and a chimney and fireplace still stand.

2.7 PUBLIC RECREATION

2.7.1 PHYSICAL CHARACTERISTICS

In 1992 DOC completed a Recreation Opportunity Spectrum for the entire conservancy whereby all areas regardless of land tenure, were classified and mapped according to setting, activity and recreational experience characteristics.

This exercise included both Allandale and Greenvale, and the zonings made reflect the wide variety of terrain and recreational opportunities present.

The flats and terraces between Kingston and the Mataura River are zoned Rural, which is characterised by "a feeling of being away from urban areas, but in a strongly human-modified setting."

This zone includes the developed farmland ... "close to good road access".

The lake faces of Allandale are zoned Backcountry 4x4 drive-in, which "is characterised by a feeling of relative remoteness from populated areas. The highly natural setting is a valued part of the experience and may be associated with motivations of escape from town, education, exercise, and/or a sense of being close to nature. Four-wheel drive vehicles are desirable to give access to high country tussock grasslands ... and more remote areas".

The Robert Creek and Allen Creek catchments of Allandale and all of the hill country of Greenvale is zoned Backcountry Walking, which "is characterised by a feeling of relative remoteness from populated areas. The highly natural setting is a valued part of the experience and may be associated with motivations of escape from town, education, exercise, and/or a sense of being close to nature. Although relatively close to visitor facility developments, access to these areas is only possible on foot and is often associated with tramping tracks or routes".

In winter, the summit area of Mt Dick takes on the characteristics of a "Remote Experience Area. This opportunity is characterised by a sense of complete isolation from human interaction and activity. The naturalness of the setting is an important part of the experience. Outdoor survival skills and experience will be essential to minimise risk. A high degree of self-reliance will be necessary".

The Te Kere Haka Scenic Reserve is often used for short walks, accessed from Kingston township. Glen Allen Scenic Reserve is less frequently used.

7.2 LEGAL ACCESS

ALLANDALE

The pastoral lease is accessed by a 4WD standard legal road along the western side of the Kingston Branch Railway. This road formation ends near the mouth of Allen Creek but there is an unformed section of this road which travels northwards to join up with formed legal roads in the Kingston township.

Marginal strips extend along the eastern bank of Robert Creek, adjoining the western boundary of the property, and both sides of Allen Creek.

There is also a marginal strip along the Wakatipu lakeshore.

GREENVALE

Cainard Road provides formed legal access to homestead and flats.

Allen Creek and Waterwheel Creek have marginal strips on both banks, and the western boundary of the lease adjoins the marginal strip along Robert Creek. There is a registered public access easement through the adjoining Cainard Farm, owned by Landcorp Farming, which gives access from the end of Cairnard Road to the marginal strip along Robert Creek. The easement provides for public foot and vehicle access up the valley to the boundary of the existing Eyre Mountains Conservation Area.

2.7.3 ACTIVITIES

Recreational use of Allandale is largely centred around the Kingston township and Te Kere Haka and Glen Allen Scenic Reserves. There are short walks opportunities along the lakeshore and stock track through Te Kere Haka Reserve and day walking to Glen Allen Reserve. Mt Dick, a long day tramp is occasionally done, with the best access being up the vehicle track and along the ridge north of Allen Creek.

A recreation permit for cross-country skiing existed, utilising the Mt Dick summit slopes but this activity has lapsed. the lack of extensive suitable terrain limits this use.

Greenvale receives little recreational use, apart from occasional tramping parties moving through the Robert Creek catchment and possibly some limited hunting of bush areas.

There is significant potential for recreational use but the absence of identified public access, the relative remoteness of the Eyre Mountains combined with a general lack of awareness of the region's attributes have tended to result in a traditionally low level of use to date. Use has, however, noticeably increased in recent years.

PART 3

3.1 CONSULTATION

The properties were commented on by umbrella groups at an early warning meeting on 3 December 1998.

Key points raised were:

- Wakatipu lake faces are important visually and are actively regenerating to forest. This process should continue to be encouraged for landscape protection reasons.
- Legal public foot access needs to be provided for along the Lake Wakatipu shoreline and to Te Kere Haka Scenic Reserve from Kingston township.
- The High Country Block should become conservation land and public access provided via the 4WD access track up the ridge north of the Glen Allen Scenic Reserve.
- Beech forest remnants along Robert Creek and the upper part of the catchment above the top fence should become conservation land.
- Public access needs to be secured up Robert Creek and above the Landcorp-Greenvale boundary to the tops.
- The Kingston faces, south of Glen Allen Scenic Reserve should become conservation land with public access provided for from Cainard Road.
- Important geomorphological features at or near the outlet of Lake Wakatipu have value as public attractions and for educational purposes. These features should be protected by covenant with provision for public access.

A written record of the above interests has been supplied by Mike Floate on behalf of Federated Mountain Clubs and Bruce Mason on behalf of Public Access New Zealand. FMC has also supplied a Preliminary Report on the Recreational and Related Significant Inherent Values of Allendale and Greenvale Stations.

Copies of these supplied written materials are attached.

3.2 REGIONAL POLICY STATEMENTS

Two-thirds of Allandale is located within the Otago Region and Queenstown Lakes District. The balance of the property and all of Greenvale are located within the Southland Region and Southland District.

3.2.1 OTAGO REGIONAL POLICY STATEMENT

The Regional Policy Statement for Otago provides a policy framework for all of Otago's significant regional resource management issues. It does not contain rules. District Plans shall

ɔt be inconsistent with the Regional Policy Statement. In respect of natural values the Regional Policy Statement includes the following policy and method:

> Policy: "To maintain and where practicable enhance the diversity of Otago's significant indigenous vegetation and significant habitats of indigenous fauna, trout and salmon...".
>
> Method: "Identify and protect Otago's significant indigenous vegetation and significant indigenous vegetation and significant habitat of indigenous fauna, trout and salmon, in consultation with relevant agencies and with Otago's communities.

It also includes the following policy in respect of landscapes and natural features:

> Policy: "To recognise and provide for the protection of Otago's outstanding natural features and landscapes..."

3.2.2 SOUTHLAND REGIONAL POLICY STATEMENT

The Regional Policy Statement for Southland provides a framework for all of Southland's significant resource management issues. It does not contain rules. District plans shall not be inconsistent with the Regional Policy Statement. In respect of natural values the Regional Policy Statement includes the following objectives and policies:

Objectives

- To protect areas of significant indigenous vegetation and significant habitats of indigenous fauna within Southland where this will maintain and enhance biodiversity of indigenous ecosystems.

  To maintain and enhance the biodiversity of indigenous species within the Southland Region.

  Policy:
- Identify and encourage the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna which maintain or enhance the biodiversity of indigenous ecosystems within Southland.

It also includes the following objectives and policies in respect of natural features and landscapes.

Objectives

- To protect outstanding natural features and landscapes of the region.
- To avoid remedy and mitigate adverse effects on ecosystems which contribute to the diversity of landscapes in the region.

  Policies:
- Identify and encourage the protection of outstanding natural features and landscapes within Southland.

Promote, and where appropriate provide for, the protection of significant trees, areas of indigenous forests and scrublands, groups of trees, wetlands and tussocklands which contribute to the diversity of landscapes within the region.

3.3 DISTRICT PLANS (Matters of National Importance)

3.3.1 QUEENSTOWN LAKES DISTRICT

Approximately two thirds of Allandale Station is located within the Queenstown Lakes District which is currently subject to the amended Proposed Queenstown Lakes District Plan (1998). The 1995 version of the Proposed Plan was amended in 1998 to incorporate the Councils decision on submissions received and heard. The amended Proposed Plan is now the principal planning document in the Queenstown Lakes District except where provisions are subject to appeals lodged to the Environment Court. The Minister of Conservation has appealed provisions in respect of significant natural areas. Appeals are currently in the process of being heard or negotiated and will take at least another 12 months. The plan will not become fully operative until these appeals have been resolved. During this period the Transitional District Plan is also relevant.

Under the amended Proposed District Plan the entire property is zoned Rural General. The Rural General Zone includes the majority of the District's rural lands and is characterised by farming activities, diversification to activities such as viticulture and includes the vast majority of the Districts natural areas.

Section 6(c) of the Resource Management Act 1991 requires the Council to recognise and provide for the following matters of national importance:

(a) The preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use and development.

(b) The protection of outstanding natural features and landscapes from inappropriate subdivision, use and development

(c) The protection of significant areas of indigenous vegetation and significant habitats of indigenous fauna

The amended Proposed Queenstown Lakes District Plan includes the following policies:

(i) To promote the long term protection of sites and areas with significant conservation values.

(ii) To encourage the protection of sites having indigenous plants or animals with significant nature conservation values

(iii) To avoid any adverse effects of activities on the natural character of the District's environment and on indigenous ecosystems; by ensuring that opportunities are taken to promote the protection of indigenous ecosystems, including at the time of resource consents.

(iv) Encouraging the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna.

(v) To maintain or enhance the natural character and nature conservation values of the beds and margins of lakes, rivers and wetlands.

(vi) To encourage and promote regeneration and reinstatement of indigenous ecosystems on the margins of lakes, rivers and wetlands.

The amended plan includes the following objective for landscapes:

(i) Subdivision, use and development being undertaken in the District in a manner which avoids potential adverse effects on landscape values.

Only those significant natural areas with current formal protection have been identified as areas of significant natural value in the plan. The plan does not identify outstanding natural features and landscapes. For these reasons no such areas on Allandale Station are recognised in the amended District Plan.

Controlled activities in the amended Proposed Plan for the Rural General Zone are buildings, retail sales, commercial recreation, mineral exploration and residential flats. Discretionary activities are residential units, commercial activities, visitor accommodation, structures and moorings, forestry activities, factory farming, mining activities, ski areas outside special ski area sub-zones and including breaches of site standards for significant indigenous vegetation, earthworks and forestry and shelterbelt planting. Non-complying activities include power generation facilities and commercial activities, factory farming and residential units that do not meet other activity categories. There are no rules protecting outstanding natural features and landscapes, clearance of indigenous vegetation in general and significant natural areas in the interim (ie until they have all been identified in the plan). These matters are all under appeal.

Due to these appeals the landscape and significant natural value provisions of the amended Proposed Plan are likely to be amended. The department has negotiated a settlement (not yet lodged with the Court) in respect of the identification of significant natural areas. Matters in respect of an indigenous vegetation clearance rule and interim rule protecting significant natural areas remain unresolved.

3.3.2 SOUTHLAND DISTRICT

The Resource Management Act 1991 requires territorial and regional authorities to take into account section 6 *Matters of National Importance* when exercising their functions, powers and duties under the Act.

The Southland District Council has recently made their district plan operative in part. However, the *Heritage* section of the plan, which addresses the principles of section 6 in the Resource Management Act 1991, including protection of significant habitats of indigenous fauna and areas of significant indigenous vegetation is still the subject of outstanding references by the Minister of Conservation and other parties. These outstanding references were the result of the proposed plan having few rules to act as a trigger for protection of values of significance to the department in areas such as the area under review. The appeal process for the *Heritage* section has been in effect for over three years and is unlikely to be resolved in the near future. Until the references are resolved there are almost no rules that could act as a trigger for protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna for this area. The

.ception is that a forestry plantation in excess of at least 100 hectares requires a landuse consent.

3.4 CONSERVATION MANAGEMENT STRATEGIES

3.4.1 OTAGO CONSERVANCY

The Eyre Mountains (Takerehaka) is identified as a Special Place in the Otago Conservancy CMS. Allandale is located within the Special Place.

As a whole, the Eyre Mountains contain a wide range of natural and historic values from the alpine tops to the grassed valley floors. Scenic values are high and recreational opportunities are available in backcountry drive-in and walk-in, and remote settings if permission is obtained. Natural values are significant because the Eyre Mountains are a centre for endemism for both native plants and invertebrates. These mountains have an unusually diverse range of lizard species, several of them at the limits of their distribution. Kea, falcon and rock wren have populations here which have significance on account of their distribution.

That part of the Eyre Mountains in Southland Conservancy contains large areas of land administered by the department, with high nature conservation values, which have informally been proposed for conservation park status. These areas are immediately adjacent to Otago Conservancy and Otago has carried out goat control in adjoining catchments (with land occupiers' approval) to prevent infiltration into conservation areas.

The Takerehaka area was traditionally used by Kai Tahu for the seasonal hunting of weka. There are said to be waahi tapu and waahi taoka in the area.

Relatively few people visit the Eyre Mountains, but many people enjoy their striking scenic attributes from the highways and settlements on the eastern side of Lake Wakatipu. In particular, parts of the Eyre Mountains visible from SH 6 between Queenstown and Kingston have not been affected by farm development. This is the major tourist route to Milford.

Objective for Eyre Mountains (Takerehaka)
To protect, on a landscape scale, the natural resources of the Eyre Mountains, and to improve public access to and enjoyment of those resources.

Key Implementation statements to meet this objective that are relevant to this tenure review include the following:

- Further survey of the Eyre Mountains will be carried out to check the distribution of rare, local and endemic plants, indigenous fish, invertebrates and other fauna.

- Research into the biology and conservation needs of *Mecodema chiltoni* will be encouraged.

- Information about natural resources that will assist in appropriate management being applied will continue to be collected.

- Negotiate a public walking opportunity along the shore of Lake Wakatipu through and beyond Te Kere Haka Scenic Reserve and improve public access provided to Glen Allen Scenic Reserve including signposting and track development or route marking.

The co-operation of adjacent farmer will be sought to limit stock access to parts of Glen Allen Scenic Reserve that is impractical to fence.

- Tenure review of pastoral leasehold properties will be used as appropriate to provide opportunities to negotiate protection of and access to areas with high natural and recreational values.

- Ongoing liaison will be maintained with Southland Conservancy to ensure complementary management of protected areas in the Eyre Mountains, and to support an extensive conservation park if initiated.

- Advocate landscape protection in particular for scenically important parts of the Eyre Mountains not affected by farm development.

- Promotion of the correct use and spelling of traditional place names.

Priorities for Eyre Mountains (Takerehaka)
Improving the formal protection over the spectacular indigenous landscapes of the Eyre Mountains will be the priority in this Special Place.

3.4.2 SOUTHLAND CONSERVANCY

The Eyre Mountains are identified as a significant landscape unit in the Southland Conservancy CMS. Greenvale is located within the Eyre Mountains landscape unit.

ECOLOGICAL VALUES

The vegetation of this unit is dominated by tussock grasslands, with large areas of beech forest and alpine communities. Much of the natural character is intact, particularly the forest and higher altitude communities. There is a high degree of endemism of indigenous plant species, and a large number of threatened species which are reliant on tussock habitats. Greenvale hosts the endemic plant species *Hebe biggarii*, threatened plant species *Celmisia hookeri, Uncinia purpurata* and *Alepis flavida* (beech forest). Threatened animal species include the beetle *Mecodema chiltoni* and bird species, kea and New Zealand falcon.

Ecological Objectives Relevant to Greenvale

- *To investigate options for a conservation park for the Eyre Mountains and adjoining land administered by the department and implement if feasible.*
- *To survey for new galaxiid species in the subalpine areas in the northeast of this unit.*
- *To monitor and/or inspect the population status of endemic and other threatened plant species.*

RECREATION AND TOURISM

The Eyre Mountains are possibly the most under-utilised backcountry recreation area in Southland. They provide for extensive backcountry and remote recreation opportunities.

Public access rights are via an easement into the Mataura Valley.

.ıere is considerable potential for the area as the forested and open valleys and open tops are attractive and the terrain is easily navigated.

The unit plays an important role in the spectrum of recreation opportunities available in Southland, particularly as it is easily accessible but remote, with low levels of facilities and use and can cater for those people desiring a more traditional style New Zealand backcountry recreation opportunity.

Opportunity Objectives

- *To provide opportunities for visitors to explore readily accessible mountain lands with only basic facilities. An area utilised for low impact recreation by low numbers of self reliant parties.*
- *To provide opportunities for recreational activities involving the use of vehicles (including mountain bikes) while avoiding possible conflicts with other recreation opportunities available in the area.*

The following Implementation statements apply to meeting these objectives:

- mountain biking will be allowed on all formed roads.
- In order to protect the quiet nature of the area and to advance an atmosphere of remoteness, aircraft landings will only be allowed for management purposes.
- In order to maintain the current low level of use and remote opportunities provided in the Eyre Mountains, no concessions will be granted.

3.5 STOCK WATER SUPPLY

A gravity feed system of an intake, pipeline, storage tank and 4WD access track draws water from Bushy Creek for reticulation to the adjoining paddocks on the flats.

PART 4

4.1 ADDITIONAL INFORMATION

4.1.1 REFERENCES

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4.1.2 ATTACHMENTS

i Department of Conservation (1998) Otago Conservancy Conservation Management Strategy. pp 368-373.

ii Department of Conservation (1996) Southland Conservancy Revised Draft Mainland Southland/West Otago Conservation Management Strategy. pp 273-278.

iii Floate M, Federated Mountain Clubs. Notes on NGOs' Early Warning Meeting, December 1998.

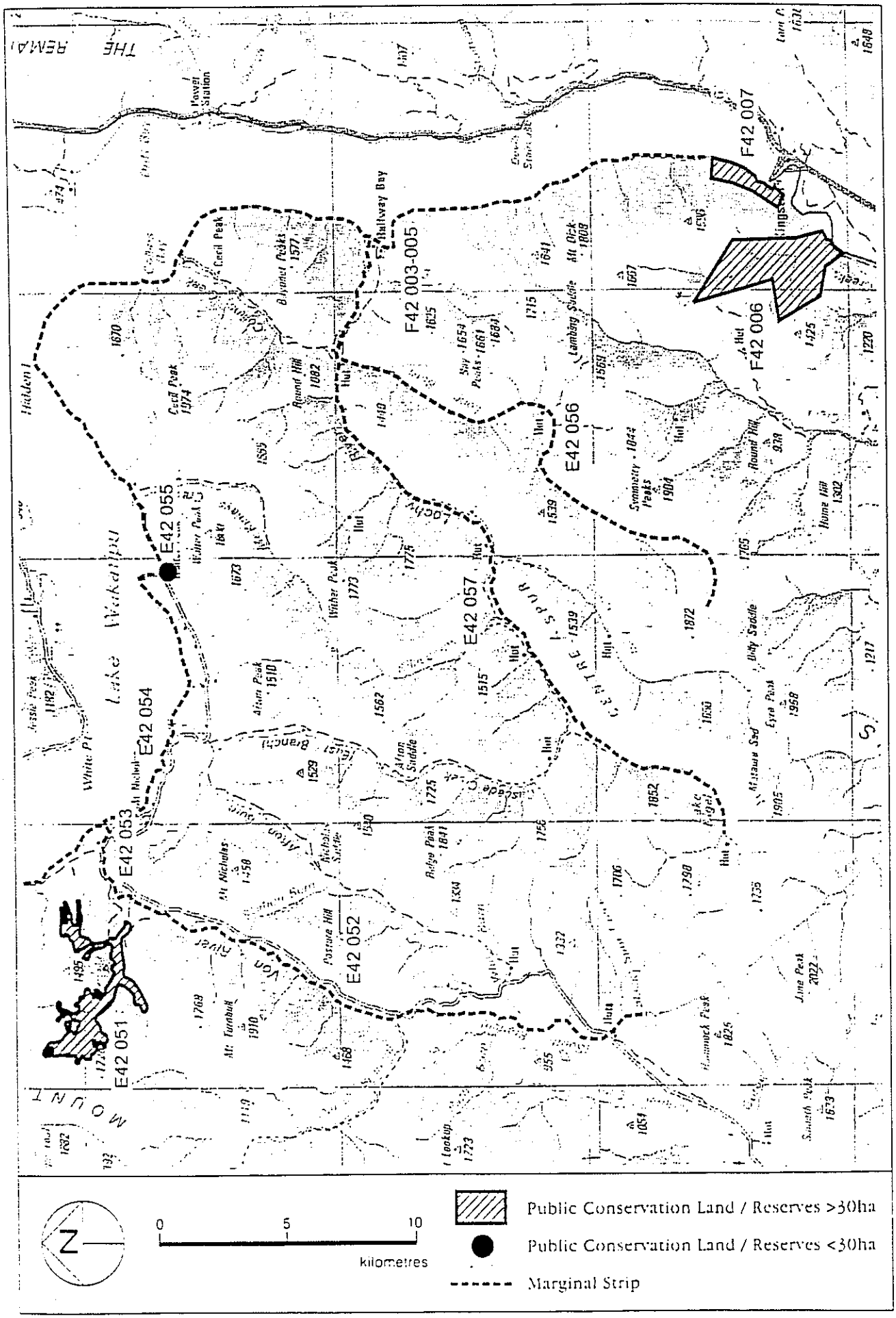
iv Floate M, Federated Mountain Clubs. Preliminary Report on Recreational and Related Significant Inherent Values, Allandale and Greenvale Stations, April 1999.

v Mason B, Public Access New Zealand. Notes on NGOs' Early Warning Meeting December 1998.

4.2 ILLUSTRATIVE MAPS

4.2.1 Topo/Cadastral
4.2.2 Values – Landscape/Landform
4.2.3 Values – Vegetation/Fauna

Map 5-31
Eyre Mountains



10.31 EYRE MOUNTAINS (TAKEREHAKA)

CONS.UNIT NO.	NAME	STATUS	AREA
F 42 007	Te Kere Haka	Scenic Reserve	195.91 ha
F 42 006	Glen Allen	Scenic Reserve	998.84 ha
E 42 055	Walter Peak-Beach Bay	Recreation Reserve	9.81 ha
F 42 003-5 / E42 054	Lake Wakatipu	Marginal Strip	100.00 ha
E 42 057	Lochy River	Marginal Strip	115.00 ha
E 42 056	Long Burn	Marginal Strip	40.00 ha
E 42 051	Mt Nicholas	Conservation Area	627.50 ha
E 42 052	Von River	Marginal Strip	110.00 ha
E 42 053	Hut Burn	Marginal Strip	5.00 ha

10.31.1 Ecological District

Eyre

10.31.2 Local Authority

Queenstown Lakes District Council

10.31.3 Land Administered by DOC

The northern part of the Eyre Mountains is within Otago Conservancy. In this area only two forested scenic reserves, a beech forest conservation area in the lower Von catchment, a small recreation reserve and several marginal strips are the responsibility of the Department of Conservation. Much larger blocks of the Eyre Mountains are the responsibility of the department in Southland Conservancy, adjoining the area covered by this CMS.

10.31.4 Other Land

Pastoral leasehold land covers all of the remaining Eyre Mountains area, but large parts of the rugged mountain lands are not suitable for grazing. The economics of some of the properties increasingly involve aspects of tourism or enjoyment of a secluded lifestyle in magnificent surroundings. Some properties have entered the tenure review programme.

10.31.5 Description

The majority of the Eyre Mountains is steep mountain land with several peaks over 1,900 metres, and beech forested valleys with some open tussock grassland slopes.

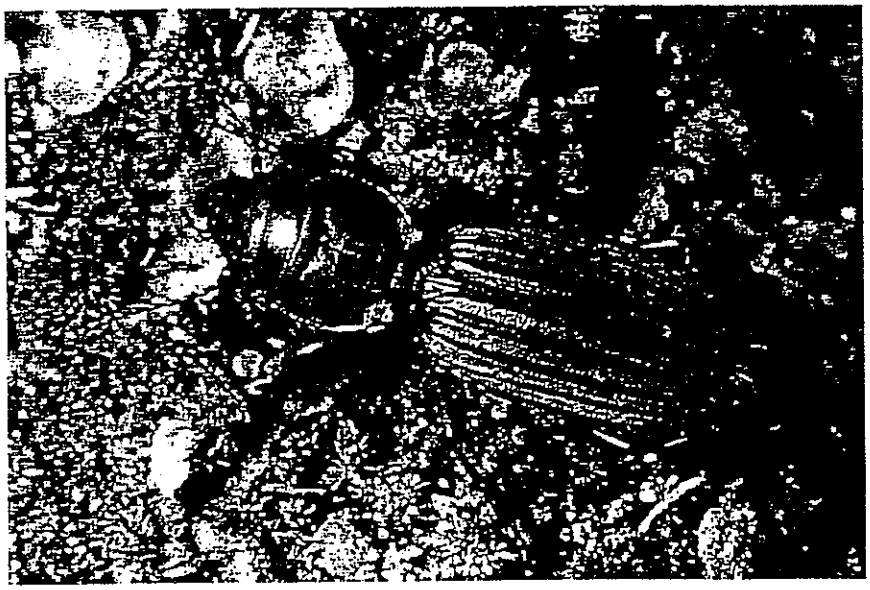
Otago schist is the basement rock but here it does not form broad block mountain ranges. Instead, the rugged crests which stood above the eroding glaciers during glaciation comprise bare rock and fellfield. Valleys have the smooth sides and relatively flat floor of typical U shaped glaciated valleys. Vegetation consists of sparsely vegetated fellfield, dwarfed herbfield and

cushion plants with snow tussock grassland at lower altitude. Varying amounts of shrubland and wetland are found above the upper limit of beech forest. Alpine tarns and steep streams provide habitat for aquatic organisms.

10.31.6 Values

Te Kere Haka Scenic Reserve is important as a steep rocky broadleaved forest containing refugia for rare palatable plants such as the cress *Ischnocarpus novae-zelandiae*, as well as an assortment of native shrubs, ferns and forest tree species including southern rata, matai, the only tree fern (*Dicksonia squarrosa*) so far seen in the Wakatipu Basin and the rare *Olearia fragrantissima*. Tracks within it provide recreation for fit walkers direct from the township of Kingston and rewarding views are obtained from the top of the climb. Three species of beech are found here; red, silver and mountain. The reserve is important for its diversity of plant species.

In contrast the Glen Allen Scenic Reserve protects a complete ecosystem at the base of the Eyre Mountains. Of importance is a sequence of vegetation from the base of Mount Dick at 365 metres through a mosaic of three beech forest species, subalpine shrubland and herbfield/grassland to 1,220 metres. A key conservation value present is a large carabid beetle *Mecodema chiltoni* that is local in occurrence but appears to have a stronghold in the many beech forests flanking the Eyre Mountains.



Mecodema chiltoni.

As a whole, the Eyre Mountains contain a wide range of natural and historic values from the alpine tops to the grassed valley floors. Scenic values are high and recreational opportunities are available in back country drive-in and walk-in, and remote settings if permission is obtained. Natural values are significant because the Eyre Mountains are a centre of endemism for both native plants and invertebrates. The rare mountain daisy, *Celmisia thomsonii* and the blue cushion speargrass *Aciphylla spedenii* are both endemic species found in the alpine rocklands of the Longburn and northern Eyre Mountains. These mountains have an unusually diverse range of lizard species, several of them at the limits of their distribution. Kea, falcon and rock wren have populations here which have significance on account of their distribution.

The part of the Eyre Mountains in Southland Conservancy contains large areas of land administered by the department, with high nature conservation values, which have been informally proposed for conservation park status. These areas are immediately adjacent to Otago Conservancy and Otago has carried out goat control in adjoining catchments (with land occupiers' approval) to prevent infiltration into conservation areas.

The Te Kere Haka area was traditionally used by Kai Tahu for the seasonal hunting of weka. There are said to be waahi tapu and waahi taoka in the area.

The Lochy is an important "wilderness" fishery particularly popular with overseas anglers who are generally taken to the river by professional fishing guides.

Although less remote, the Von also has value as a wilderness trout fishery with about one-third of its anglers brought in by professional guides.

The draft Water Conservation Order for the Kawarau River and its tributaries found the mainstems of both the Lochy and the Von "Outstanding" for characteristics of their "fishery; recreational purposes, in particular fishing".

The Walter Peak Recreation Reserve is small and infested with broom. It contains some notable specimen exotic trees. It is used infrequently, mainly by boaties looking for a picnic spot in the sheltered cove south of Walter Peak Station, and receives little maintenance.

Relatively few people visit the Eyre Mountains, but many people enjoy their striking scenic attributes from the highways and settlements on the eastern side of Lake Wakatipu. In particular, parts of the Eyre Mountains visible from SH 6 between Queenstown and Kingston have not been affected by farm development. This is the major tourist route to Milford.

10.31.7 Management Issues

- Management of the small existing reserves is relatively straightforward but could be enhanced by acquisition of adjacent alpine areas.
- Wild animal control (eg, goats, possum, chamois and thar) and wilding conifers.

Wilding conifers spreading on Cecil Peak Station, beech forest remnant at left.

- Plant pest control along forest and lake fringes.
- Survey, monitoring and research of trends in biological values with priority for *Mecodema chiltoni* populations.
- Improved public access and signposting to Glen Allen Scenic Reserve.
- Landscape protection in the Eyre Mountains, particularly of scenically important areas not currently affected by farm development.
- Lakeside walkway from Te Kere Haka Scenic Reserve.
- Improved fencing of Glen Allen Scenic Reserve.
- Whether or not to retain the Walter Peak Recreation Reserve.
- Coordination of Eyre Mountains activity with Southland Conservancy.

Objective for Eyre Mountains (Takerehaka)

To protect, on a landscape scale, the natural resources of the Eyre Mountains, and to improve public access to and enjoyment of those resources.

Implementation

(a) Appropriate wild animal and plant pest control work will be carried out to protect natural resources in protected areas managed by the department in both Otago and Southland.

(b) Further survey of the Eyre Mountains will be carried out to check the distribution of rare, local and endemic plants, indigenous fish, invertebrates and other fauna.

(c) Research into the biology and conservation needs of *Mecodema chiltoni* will be encouraged.

(d) Information about natural resources that will assist in appropriate management being applied will continue to be collected.

(e) Negotiate a public walking opportunity along the shore of Lake Wakatipu through and beyond Te Kere Haka Scenic Reserve and improve public access provided to Glen Allen Scenic Reserve including signposting and track development or route marking.

(f) The cooperation of adjacent farmer will be sought to limit stock access to parts of Glen Allen Scenic Reserve that is impractical to fence.

(g) Tenure review of pastoral leasehold properties will be used as appropriate to provide opportunities to negotiate protection of and access to areas with high natural and recreational values.

(h) Ongoing liaison will be maintained with Southland Conservancy to ensure complementary management of protected areas in Eyre Mountains, and support an extensive conservation park proposal if initiated.

(i) To rationalise the Walter Peak Recreation Reserve, and dispose of the surplus.

(j) Advocate landscape protection in particular for scenically important parts of the Eyre Mountains not affected by farm development.

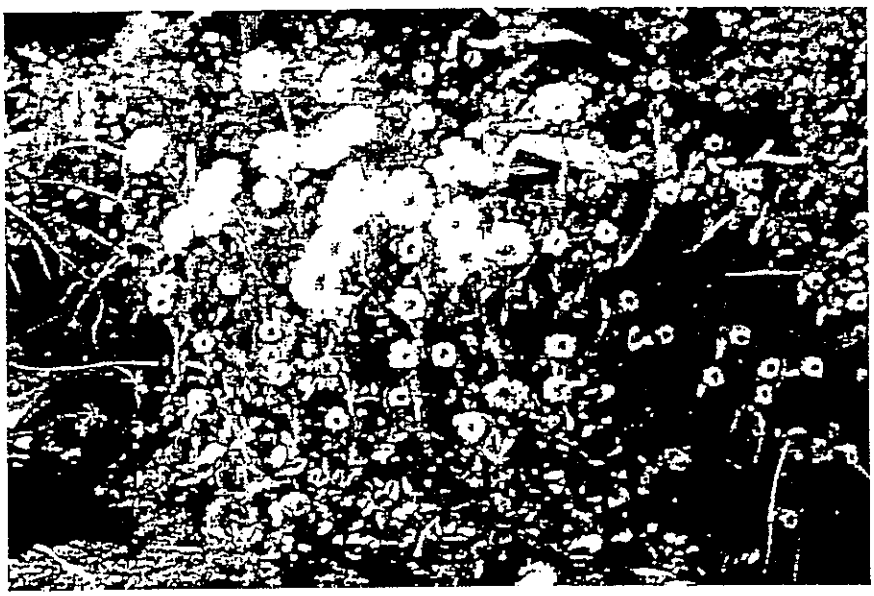
(k) Promotion of the correct use and spelling of traditional place names.

(l) When informed of the nature and location of waahi taoka and waahi tapu on land administered by the department, consult with Kai Tahu about the appropriate management of that site.

(m) The protection of significant natural and historic resources will be advocated through Resource Management Act and other statutory processes.

Priorities for Eyre Mountains (Takerehaka)

Improving the formal protection over the spectacular indigenous landscapes of the Eyre Mountains will be the priority in this Special Place.



Celmisia thompsonii, near Billy Saddle.

6.18 Eyre

Physical Description

This landscape unit is centred on the steep and dissected Eyre Mountains. The altitude climbs from approximately 600m in the narrow valleys to 2050m on Jane Peak. There are both natural screes and man-made erodible areas with ultramafic soils found in West Dome. The climate is cool temperate, with a rainfall of 800-2400mm and snow may lie for several weeks above 1000m.

The vegetation of this unit is dominated by tussock grasslands, with large areas of beech forest and alpine communities. Much of the natural character is still intact, particularly the forest and higher altitude communities. There is a high degree of endemism, meaning the existence of species in this unit which are found nowhere else in New Zealand.

Generally the valley floors, lowlands and gentle slopes have been modified by pastoral use. Some extensive areas of red tussock remain around West Dome and the Oreti Valley.

There are extensive forest areas in the south and forest remnants further to the north. This forest is mainly mountain beech. There are shrublands scattered throughout the unit. Some of these shrublands represent a successional stage to beech forest, if they are not burnt.

This unit is part of the Eyre Ecological District.

Areas Managed By The Department

A little under half of this landscape unit comprises lands administered by the Department. Several of the areas contain intact sequences of vegetation through a variety of ecosystems. The largest protected area is Eyre Forest Conservation Area. Other significant conservation areas include the upper Eyre Creek, land at the head of the Matuura catchment, West Dome, south-western Eyre Mountains and Ashton Flats.

At present a large area of unallocated Crown land is in the process of being transferred to the Department. It includes the unshaded land between the two major conservation areas identified on the map. The area contains significant natural values, and will enable a more holistic management regime for the Eyre Mountains to be implemented.

Ecological Management

Ecological Values

The Eyre Mountains are very important and contain a number of features special to this unit. There are several local endemic species including plants *Brachyscome "Westdome", Carex uncifolia, Celmisia thomsonii, Hebe biggarii, Ranunculus scrithalis, Aciphylla spedeni, Myosotis "Mossburn", Celmisia philocrenina*, and

Celmisia spedeni. The vegetation represents a transition between wet Fiordland and dry Central Otago.

Around Eyre Creek and the upper Mataura River there are extensive and diverse alpine communities and large areas of snow tussock grassland. Eyre Creek has significant natural scree communities and a large diversity of shrublands. Apart from the endemic plants there are a number of other threatened plant species which are reliant on alpine conditions. These include *Celmisia hookeri, Cheesemania wallii, Epilobium purpuratum, Hebe dilatata, Pimelea poppelwellii, Ranunculus haastii subsp pililferus* and *Senecio dunedinensis*. Intact altitudinal sequences are evident in Eyre Forest, Eyre Creek and the upper Mataura River valley. The Eyre Forest is significant in that it contains large tracts of unmodified indigenous forest.

This unit contains a large number of threatened species many of which are reliant on tussock habitats. Some not mentioned include plants *Uncinia purpurata, Ourisia spathulata, Myosotis "glauca"*, and *Deschampsia caespitosa*, the green-backed skink and the snail *Powelliphanta spedeni spedeni*. The only population of rock wren known to exist outside the Southern Alps is found in this unit. Yellowheads and the mistletoe *Alepis flavida* are found in beech forest, other bird species such as NZ falcon, NZ pigeon, kea, banded dotterel and yellow-crowned parakeet, and the mistletoe *Ileostylus micranthus*, are found in a number of habitats. The large beetle *Mecodema chiltoni* has been found under dead trees in the Irthing Valley. The priority A threatened species *Olearia hectori* is found in primary shrubland off lands administered by the Department in this unit.

At West Dome there are large areas of red tussock and ultramafic soils which contain plant species restricted to these types of soils.

Ecological Issues

An investigation of conservation park status for the Eyre Mountains has been proposed. There are a number of separate pieces of land in the Eyre Mountains that are all administered as conservation areas. Managing this area as one unit will help ensure integrated management. The special features such as the high level of endemism and ultramafic rocks, would be given more recognition.

Other smaller protected areas in the Eyre Mountains fall into the Otago CMS area, but these could be incorporated into the Conservation Park. Management co-ordination is necessary, particularly for pest control.

Seasonal grazing still occurs in the valley floor of Eyre Creek in the Eyre Valley. Monitoring is undertaken to assess the effects of exotic grasses in the tussock grasslands. Burning of tussock and oversowing occurs outside of lands administered by the Department. Current evidence suggests that limited grazing may be necessary in some lowland areas to control the spread of exotic grasses. In the higher areas it was determined that grazing was not necessary to control exotic grasses and was in fact having a detrimental effect on the tussock. Grazing of these areas has ceased.

At Mount Bee, exotic tree species including *Pinus contorta* were planted for land stabilisation on natural scree communities. Some of the species planted have the ability to spread into indigenous habitats. It can be argued that these trees were not necessary

for stabilisation as the scree slopes are a natural feature of this unit. It is generally agreed that these trees should be removed.

The University of Otago has been investigating new galaxiid species including those from the Taieri river catchment. It is suspected that they will be found in some areas adjoining the Otago CMS area. These areas have been identified as a priority for survey. This includes the sub-alpine areas of the north eastern regions of this unit.

Generally, the Eyre Mountains are relatively weed free, though control is undertaken in some areas. At West Dome control of gorse and broom is undertaken, and at Mt. Bee control of *Pinus mugo* and broom is undertaken.

Agricultural development and burning of tall tussock grasslands poses the greatest threat to *Powelliphanta spedeni spedeni*. There is a need to survey areas to ascertain the location of these snails and to assess their population status.

Ecological Objectives

1. To continue monitoring the effects of grazing on lowland tussock systems on lands administered by the Department. Should continued degradation occur cease all grazing.

2. To investigate options for a Conservation Park for the Eyre Mountains and adjoining land administered by the Department and implement if feasible.

3. To survey for new galaxiid species in the sub-alpine areas in the north east of this unit.

4. To survey habitats and populations of the snail Powelliphanta spedeni spedeni.

5. To remove the exotic trees at Mount Bee.

6. To monitor and/or inspect the population status of endemic and other threatened plant species.

Resource and Estate Use

Currently three grazing concessions have been granted in this unit. One is along the Eyre Creek, and the other two are located in the Oreti Forest (refer 5.6).

One telecommunication facility is located on land administered by the Department at West Dome. This is unlicensed (refer 5.11).

Historic Conservation

The Beech Hut in the Upper Mataura Valley is the only actively managed site on lands administered by the Department in this landscape unit. It dates from at least 1913 and was built as a shelter for musterers from Fairlight and Mount Nicholas Stations. This use has continued until recently. It is one of the oldest mustering huts in Southland. Proposed management of this site is outlined in Part 3.

There are no other known protected sites on lands administered by the Department in this unit.

Recreation and Tourism

Visitor Use

The Eyre Mountains are possibly the most under-utilised backcountry recreation area in Southland. Although there are several huts and a system of marked routes, largely as a result of earlier wild animal control operations, few hunters and trampers make use of the area. Some huts receive as few as 4 visitors per year. Low numbers of red deer, chamois and wild pig are found in the area.

Most major catchments have legal access; elsewhere, access is over private roads or runhold land. There is some local use of the periphery for 4WD. Mount Bee hut can be reached by off-road vehicles and has potential for access by mountain bike.

A picnic and camping area on a riverside clearing in the Lower Irthing receives use mainly from local people.

Nearby West Dome provides a marked contrast to the Eyre Mountains. A road runs around West Dome. Some use has been made of the area for trail riding, though on the upper sections of the Dome there have been problems with use in fragile areas off the road. Off-road use will be actively discouraged.

Recreation Facilities

Eight marked routes are currently maintained in this unit.

4WD Tracks	Marked Routes
Five Rivers Station - Cromel Hut Irthing Rd - Mount Bee Ridge	Cromel Hut - Acton Junction Acton Hut - Island Hut Cromel Branch Hut - Cromel Bivvy Irthing Valley Track Mount Bee - Irthing Bivvy Acton Hut - Cromel Junction Mount Bee - Cromel Branch Hut Cromel Hut - Acton Hut

Fourteen huts and shelters administered by the Department are scattered throughout the Eyre Mountains with one or more in every catchment, some within a few hours of road ends. Other tracks and huts will be signposted as not being maintained. Offers by local clubs or groups to maintain these facilities will be considered. Huts not being maintained may be removed or relocated to other areas only after public consultation.

Category 4 (Basic) Huts	Bivvies / Shelters
Cromel Hut Mount Bee Huts Complex	Irthing Bivvy Mansion Bivvy

Cromel Branch Hut	Cromel Bivvy
Oreti Hut	Lincoln Bivvy
Shepherds Creek Hut	Windley Bivvy
Island Hut	
Windley Hut	
Beech Hut	
Ashton Burn Hut	

A small picnic and camping area is located on a riverside clearing in the Lower Irthing. This is maintained by the Lumsden Lions Club in agreement with the Department. Access is by an all weather vehicle track off Irthing Road.

Recreation Opportunities

The Eyre Mountains provide for extensive backcountry and remote recreation opportunities. The area is easy to navigate and allows good opportunities for inter-valley and open tops walking and camping. Roads through bordering exotic forests enable good all-weather access to the Windley and Acton Catchments.

As the Eyre Mountains are dry by Southland standards the opportunity to develop a good mountain bike track may exist, though currently the best opportunity is along the Mount Bee access and in bordering production forests. Current access rights are via easements in the Cromel, Acton, Eyre Creek and Mataura Valleys and on West Dome Road.

There is considerable potential for the area as the forested and open valleys and open tops are attractive and the terrain is easily navigated.

Along with the Takitimu and Snowdon Mountain areas the Eyre Mountains have sometimes been suggested as areas to promote for absorbing some of the pressure on high use areas in Fiordland and Mount Aspiring National Parks. This fails to acknowledge the important role they play in the spectrum of recreation opportunities available, particularly their importance as easily accessible but remote areas, with low levels of facilities and use, and their role in catering for those desiring a more traditional style New Zealand backcountry recreation opportunity. In the Eyre Mountains an important opportunity exists to maintain easily accessible lowland areas relatively free of marked routes. It is for these reasons that concessions will not be allowed in this unit.

The Southland Fish and Game Council identifies the upper reaches of the Mataura River as having good fishing opportunities and high game bird numbers.

Opportunity Objectives

1. To provide opportunities for visitors to explore readily accessible mountain lands with only basic facilities. An area utilised for low impact recreation by low numbers of self reliant parties.

2. To provide opportunities for recreational activities involving the use of vehicles (including mountain bikes), while avoiding possible conflicts with other recreation opportunities available in the area.

3. To provide an informal picnicking and camping site beside the Irthing Stream.

Implementation

1. The more remote huts were once interconnected by well maintained tracks that have generally become overgrown with the end of wild animal control operations. These huts are rarely visited and the potential high cost of their upkeep is difficult to justify. Therefore the Department will put its resources into maintaining five tracks as marked routes, with huts provided for overnight accommodation. They are those in the Acton, Cromel and Irthing Valleys. Beech Hut in the Mataura Catchment will be maintained for its historic value and the Shepherds Creek Hut shall be maintained because it is an easily accessible location. The other seven huts and bivvies will receive only minimal maintenance. Assistance will be sought from user groups to keep these facilities in good repair. Priorities for resourcing will be reviewed if there is a marked increase in use. No increase in track or hut facilities will be allowed.

   The Southland Tramping Club has assisted with the maintenance of routes in this area especially the marked route from the Acton to Island Hut.

2. The Windley Burn Catchment will be provided as an area free of marked routes.

3. Mountain biking will be allowed on all formed roads. Specifically, access to Mt. Bee Hut, along Mt. Bee ridge and around West Dome by mountain bikes will be allowed.

4. In order to protect the quiet nature of the area and to advance an atmosphere of remoteness aircraft landings will only be allowed for management purposes . This is in contrast to most other areas managed by the Department around the Wakatipu region to where helicopter access is allowed.

5. Horse riding will be allowed in the Eyre Creek and Upper Mataura Valley only. No other areas may be used. Stock holding paddocks at Shepherd Creek Hut should be used.

6. In order to maintain the current low level of use and remote opportunities provided in the Eyre Mountains, no concessions will be granted.