

DOC REPORT TO THE COMMISSIONER OF CROWN LANDS ON TENURE REVIEW OF ISLAY DOWNS PASTORAL LEASE

PART I

INTRODUCTION

Islay Downs is a 1510 ha pastoral lease on the western slopes of the Kakanui Mountain range. It runs north-east from the Red Cutting Summit on State Highway 85, "The Pigroot", and is 37 km inland from Palmerston.

The property lies within the Dansey Ecological District which was surveyed under the Protected Natural Areas programme in 1989/90. Approximately 120 ha of the highest country running up to Kakanui Peak (1528 m) is included in the 700 ha Dansey RAP 6 Kakanui Peak area. The upper part of the property is bounded by the 690 ha Kakanui Peaks Conservation Area.

Approximately 400 ha show evidence of oversowing and topdressing, mainly within an area of 600 ha which is significantly modified from the original cover. Around 900 ha of the higher country plus the colder lying eastern side of the lease still retain much of the original vegetation values.

There are no reserves or formally protected areas on the lease other than the marginal strips on the Shag River which runs up the western boundary.

The lease which has no farm buildings is farmed in conjunction with other land. It was inspected by DOC staff in October 1996 to assess the conservation resource. There is a usable hut on the property dating from when a ski club operated.

PART II

CONSERVATION RESOURCE DESCRIPTION AND ASSESSMENT OF SIGNIFICANCE

2.1 LANDSCAPE

Islay Downs is located on the western face of the Kakanui Range. The higher country, which is still largely tussock covered, is highly visible from much of the Mamototo while the lower country is a prominent view at times from highway 85. This lower country is heavily modified and apart from small areas of copper tussock and matagouri dominated shrubland near the road, has predominantly a green pasture appearance.

SIGNIFICANCE

The narrow strip of copper tussock adjacent to the road just north of the summit has significant landscape value as well as the vegetation aspect but other than this the lower country in the Shag catchment has no major landscape importance. The higher country (above 1000 m) together with the neighbouring properties is part of a high country landscape which is of ecological district significance. The Pigroot Creek catchment in particular is highly visible from a frequently used rest area and still represents a vista similar to the original cover in the locality.

2.2 LANDFORMS AND GEOLOGY

The property runs from the crest to the valley floor on the western face of the Kakanui block mountain range and varies between 560 m and 1528 m in altitude. This western face represents the dissected scarp of the Waihemo fault system along which the Kakanui Mountain block has been uplifted.

Bedrock is schist or semi-schist and the soils are high country yellow brown earths of the Kaikoura and Tangawai sets.

SIGNIFICANCE

The soils and geology are typical examples for the locality. The highest part of the property has extensive areas of eroded country and also screes. While screes are generically significant in that

they are uncommon on Otago block ranges except in the Kakanui Mountains, there are better examples than these nearby. There are no geopreservation sites on the property.

2.3 CLIMATE

The property lies in the transition zone between Central Otago and coastal Otago climates. The rainfall varies between 700 mm and 1000 mm depending on altitude. The winters are cold and snowfalls are common though the snow only lies for any length of time above 1000 m. Summers are mild and affected by cool easterly winds from the coast. Despite this however, because of the rainfall patterns and nor-west winds, plant growth is restricted by moisture deficiency between January and March on the lower country.

2.4 VEGETATION

The property is bisected longitudinally by a ridge. The back (higher altitude) part of the property and the colder aspect country to the east of the ridge, although modified to varying degrees, is still predominantly native. The country to the west of the ridge is heavily modified and has an increasing proportion of exotic species with decreasing altitude.

The lease subdivides into a number of distinct vegetation zones shown A-F on the attached map 2.

Zone A: Upper Catchment of Shag River below Kakanui Peak: This closely corresponds to the part of Dansey RAP 6 on the property. Although containing significant areas of erosion (improving) and some scree, this zone has overall a good vegetative cover dominated by *Chionochloa macra* at higher altitude and *Chionochloa rigida* lower down. There is a good intertussock cover including *Dracophyllum muscoides*, *D. uniflorum*, *Aciphylla aurea*, *Gaultheria depressa*, *Celmisia brevifolia* and occasional flax bushes *Phormium cookianum*. Lower down in the gullies flax and *A. aurea* were more common amongst some very large *C. rigida*. At around 1100 m there is a small tussock/shrubland dominated by *Hebe hectorii*, *Hebe odora* and *Cassinia leptophylla*.

Zone B: An upper catchment of Deep Creek, this basin faces north and is more heavily modified. The *Chionochloa macra* and *C. rigida* are reduced in both stature and density with areas of short tussock (*Poa cita*) and scattered *Aciphylla aurea*. *Dracophyllum uniflorum* and *Olearia bullata* are also dotted through the zone. Other intertussock species include *Aciphylla gracilis*, *Celmisia lyallii*, *Acaena caestiglauea*, *Astelia nervosa* and *Ranunculus* species. Despite the modification the area still has the original cover well represented and few exotics.

Zone C: A very heavily modified north-west facing basin running up to 1200 m. The majority of the *Chionochloa* is severely reduced in stature or has disappeared and there is a high proportion of bare ground and a high population of *Acyphilla aurea*. Lower altitude gully refuges have matagouri, flax and some large tussocks. On the lower altitude open ground are areas of *Hieracium pilosella*. Wilding pines which occur throughout the property are common in this basin.

Zone D: This area has been topdressed and oversown. The clovers and introduced grasses increase with decreasing altitude and dominate lower down. There are extensive areas of *Hieracium pilosella*. Gully refuges still hold healthy communities of matagouri, flax, *Chionochloa rigida*, *Olearia bullata*, *Carmichaelia petrii* and *Acyphilla aurea*.

Zone E: Upper catchment of Pigroot Creek: Although modified, particularly on the north facing true left slopes, there is still a good cover of tall tussock with a gradation to more short tussock at lower altitude. The gullies and fire refuges still have remnant shrublands with *Dracophyllum uniflorum*, matagouri, *Coprosma ciliata*, *Melicactus alpinus*, *Acyphilla aurea*, *Polysticum vestitum*, *Celmisia densiflora* and flax.

Zone F: This area has been topdressed and oversown and regularly burnt. It has a green appearance from the exotic understorey but still has good populations of tall tussock and remnant shrublands, particularly matagouri and *Olearia bullata*.

In addition to the above main areas, adjacent to the road north of Red Cutting summit is a strip of copper tussock (*Chionochloa rubra*) sub. sp. *cuprea*) and associated matagouri (*Discarta tomatou*) and *Olearia bullata*. In addition a rare Spaniard, *Aciphylla subflabellata* has a localised population between the road and the fence. This is the largest known Otago colony of this plant.

SIGNIFICANCE

Zones A, B and E are of high significance on an ecological district scale. Zone A is an integral part of the Dansey RAP 6 area recommended for protection under the Protected Natural Areas programme. Zone B, although modified, is still dominated by indigenous species with the original cover still well represented and healthy enough to regenerate. It is also a north facing catchment of which no examples are protected in the locality. Zone E is a healthy tussock shrubland association. Shrublands in particular have largely been removed within the ecological district. This zone also has high landscape significance dependent on the vegetation cover. This landscape

aspect also applied to Zone F where the cover is not particularly significant from a vegetation aspect but has landscape implications.

Similarly the narrow strip of copper tussock and shrubland at Red Cutting Summit has more landscape significance than vegetative, however it does represent a potential habitat for the rare *Acyphilla subflabellata* present on the roadside strip.

The healthy indigenous vegetation communities on the property cover an altitude range from 600-1500 m.

PROBLEM PLANTS

Wilding pines which occur throughout the locality are widespread on this property and represent a heavy infestation in parts. Broom is also present and while not a major problem at present, has the potential to become one. Hieracium is a significant problem from a farming aspect

2.5 FAUNA

INVERTEBRATES

In association with the healthier areas of native vegetation is a rich and varied insect population at higher altitude. These include the moths *Orophora unicolor* and *Orocrambus tritonellus*, weevil *Anagostis latirosus*, caddis *Tiphobiosis cataractae* and carabid beetle *Megadromus bullatus*. Lower down species noted were grasshopper *Sigaus australis*, carabid *Mecodema sculpturatum*, bug *Rhyphodes chinai*, darkling beetles of *Mimopeus* sp., burrowing carabid *Metaglyma tibiale*, cicada *Kikibia angusta*, caddis *Hydrobiosis kiddi* and stonec *Zealandobius takabe*, these last two at their most easterly location at Pigroot Creek.

The aquatic invertebrate community in particular is very species rich here and also has species of local occurrence, the caddis *Synchorema tillyadi*, *Neurochorema pilosum* and *Baeroptera roria* being examples, as is *Pseudoeconesus stramineus* which is local and associated with seepages.

AQUATIC VERTEBRATES

The Shag River within this property contains populations of both brown trout (*Salmo trutta*) and flat head galaxid (*Galaxius depressiceps*). Co-occurrence of non-migratory galaxid fish and trout is rare in Otago (Townsend and Crowl 1991). The site is of special research and conservation interest with many new research findings already having been published (Flecker and Townsend

1994, Crowl and Townsend 1992, McIntosh Townsend and Crowl 1994) and further monitoring being undertaken.

In the Pigroot Creek upstream of SH 85 the NIWA freshwater fish database records three species; *Galaxias* sp., brown trout and brook char.

OTHER FAUNA

A wide range of bird species both indigenous and introduced, have been recorded throughout the ecological district. On the day of inspection a NZ falcon (*Falco novaeseelandiae*) a category B threatened species (Molloy and Davis 1994) was sighted on the property near the highway.

SIGNIFICANCE

The invertebrate communities in the higher part of the properties represent a good cross-section of the species found throughout the Danseys Ecological District. The lower valley species and the aquatic invertebrates in particular are of ecological region significance and the fish community in the Shag River is of national significance.

PROBLEM ANIMALS

Rabbits are present on the property and goats appear periodically, but neither represent a problem unless ignored for a length of time.

2.6 HISTORIC

The remains of a stone hut and holding yard are located in the mouth of a side gully off the Shag River approximately 1.2 km up from the highway (GR 142 069 562). Two previous lessees (Preston then MacDonald) have advised they understood the site to be an early boundary rider's hut that may have dated as early as Johnny Jones proprietorship (mid 1800s) but this has never been verified.

The headwaters of the Hyde race also start on this property approximately 25 km up the Shag River from SH 85

The Pigroot was an important early gold mining route and one of the first formed roads into inland Otago. The new road in places follows a different line and just east of the Red Cutting Summit the old road formation is still clearly visible.

SIGNIFICANCE

All the above features are of at least district significance and if the Johnny Jones connection is correct those remains would be of regional significance.

No pre-European features are known to DOC, however Trevor Howse has visited the property and will report direct to CCL on any Ngai Tahu interests.

2.7 PUBLIC RECREATION

2.7.1 Physical Characteristics

Over half the property represents a largely natural environment but, except for the Deep Creek catchment, in most of the remainder traffic is noticeable on SH 85.

The main ridge through the property is a good foot access route to the Kakanui Crest and a side ridge gives good foot access to Obi Peak and on down a continuous spur to Shingly Creek.

There are good picnic sites adjacent to the Shag River.

Although a private skifield was established here some years ago snow is not reliable enough for skiing to be a significant feature.

2.7.2 Public Access

The property bounds SH 85 and there is a marginal strip up the Shag River for approximately 3.5 km. The old road formation is also still a legal road but only a very small part lies within the lease. Other than the above features there is no formal access on the property.

2.7.3 Activities

The private skifield established included a good hut and circulating rope tow but stopped operating some years ago mainly because of lack of reliable snow. The hut (overnight accommodation standard) is still sound but the tow is non-repairable and the mechanicals have been removed from the motor shed.

The main public use is tramping - either short walks up the Shag River or utilisation of the ridge routes up to the Kakamti crest or the round trip to Shingly Creek. Present use is modest only.

SIGNIFICANCE

Even at present use levels the access routes here are significant and there is a realistic likelihood of increased use in the future.

PART III

CONSULTATION AND DISTRICT PLANS

3.1 CONSULTATION

On 12 December 1996 a meeting was held with NGOs in the DOC office in Dunedin.

Maps were provided to the NGO representatives. The issues discussed included:

- Landscape issues were raised by Forest and Bird as an overall principle using the Rock and Pillar as an example. It was suggested that the whole range be looked at as a unit.
- With reference to properties located in the Pig Root such as Islay Downs, Clover Flat and Kinross, PANZ and F&B stressed the need to protect the tussock vista from the Pig Route road.
- On Islay Downs, FMC suggested that public access be sought up the main farm track from the Pig Root road to the Kakanui Ridge to enable a round trip to be completed.

On 6 March 1997 a further meeting was held in the DOC office, Dunedin for various representatives from NGOs.

Property maps had already been circulated to the NGOs and a report of the individual discussions for each property is as follows:

Values identified on P361, Islay Downs, were:

- significant view from higher areas of the property
- significant in terms of access from Pig Root road to the top of the Kakanuis
- long-term aim would be to secure a round trip walking up the Islay Downs track along the tops and down through PO 34 Shingly Creek
- F&B in particular considers that landscape potential of land around the Red Cutting area was important and should not be allowed to have pine trees planted. They considered a covenant could be in order. Some historic importance to retain the old road formation some of which is on the pastoral lease near the top of the pass. (PANZ)

- PANZ suggested a fence from adjacent to the Longlands/DOC fence heading up a ridge to connect with the new fence on the Pig Root Creek side.
- Mike Floate (FMC) provided notes on this property which are attached unabridged.

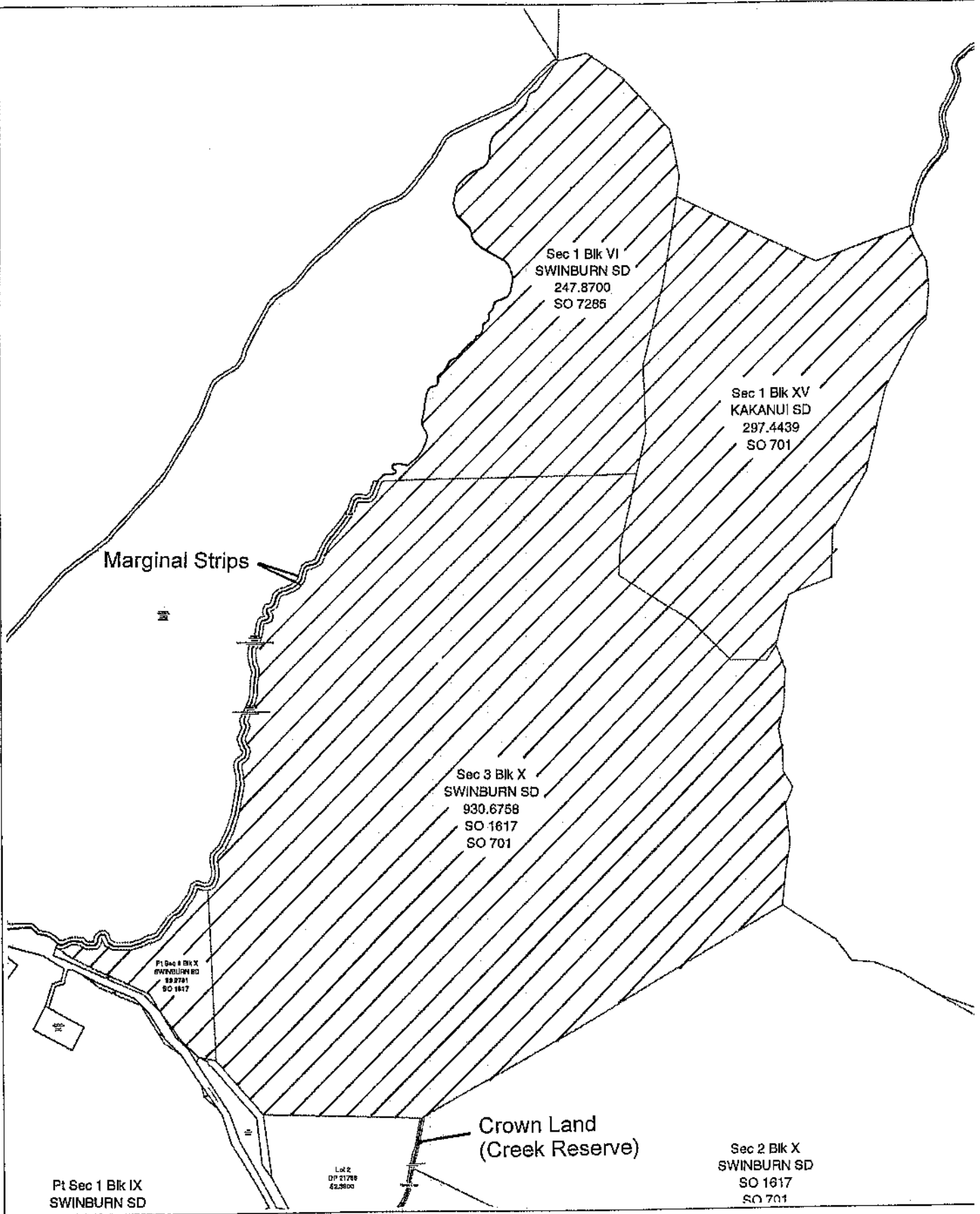
3.2 DISTRICT PLAN

The property is in the Waitaki district and is zoned Rural Scenic in the proposed district plan.

Permitted activities in that zoning are forestry, farming, one residential unit/20 ha, visitor and home occupation, mineral prospecting, small scale factory farming and recreational activities.

No areas are protected under the proposed plan and the RAP is not noted.

See also the attached extract from the draft Conservation Management Strategy report (Special Place 14).

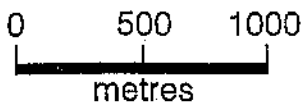


ISLAY DOWNS

File Ref: P363 Map Ref: Sheets I41/42



Department of Conservation
Te Papa Atawhai

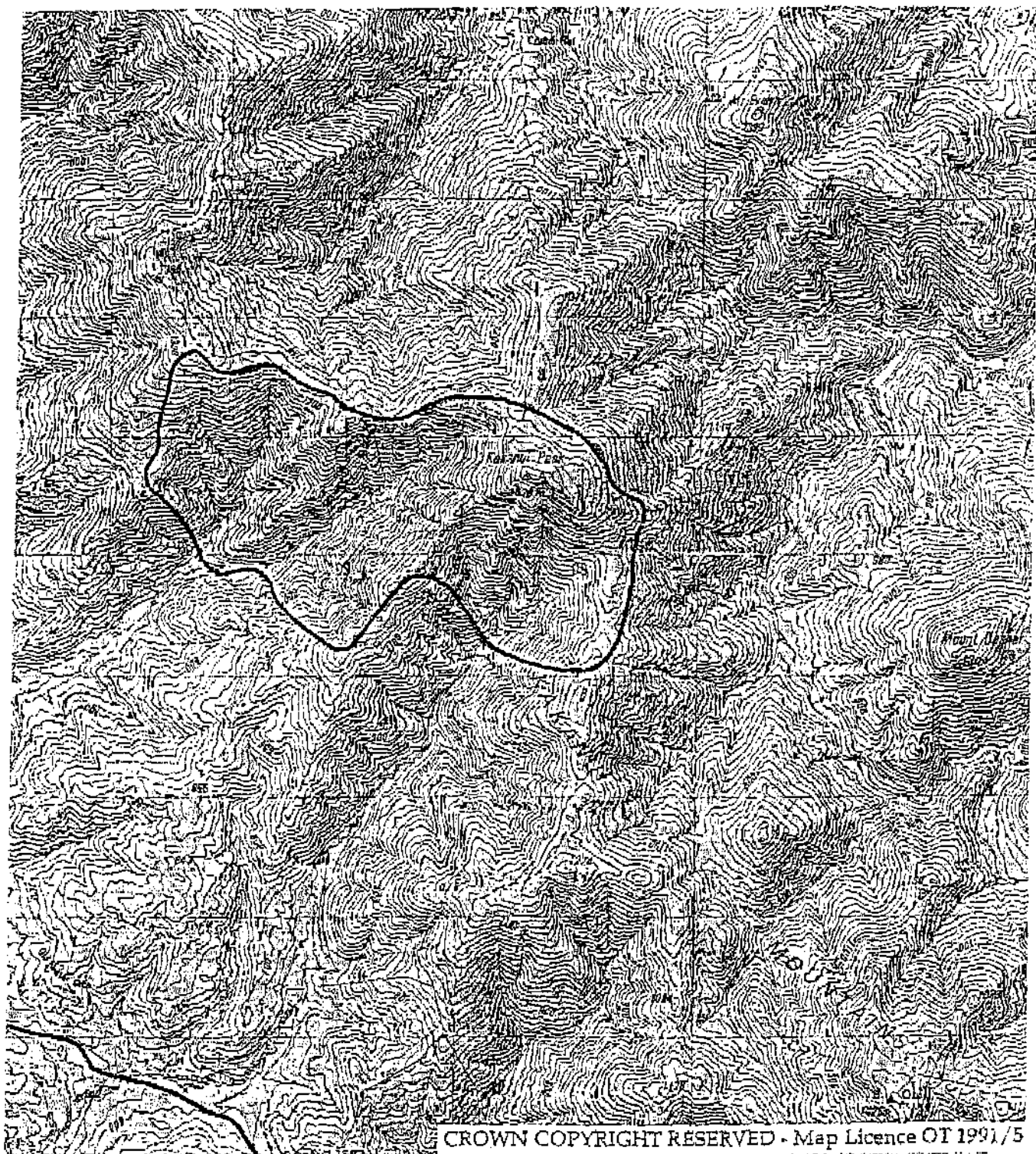


Map 1 : Cadastral



Islay Downs
Pastoral Lease

Dansey RAP 6 - Kakanui Peak



GR Centre: : NZMS 260 I41 070605
Area : 700 ha
Altitude Range : 700 - 1520m
Tenure : Pastoral Lease (Longlands, Islay Downs), POL
(Expired)
Sample Sites : FIG 02 - 07, 12 - 24, & KAK 01 - 02

Dansey RAP 6 : KAKANUI PEAK

Ecological units

TWINSPAN vegetation group (no.) name and landform	Plots
(01) High-altitude cushionfield on debris mantled top	KAK02
(02) Shrubland on debris mantled slopes	PIG17, 20
(03) Slim snow tussockland on debris mantled slopes	KAK01, PIG 02, 03, 04, 05, 06, 15, 19, 22, 23
(04) Narrow-leaved snow tussockland on debris mantled slopes	PIG07, 12, 13, 14, 16, 18, 24
(07) Sedgeland on debris mantled slopes	PIG21

Landform and soils

Kakanui Peak RAP encompasses the upper slopes of Kakanui Peak and the headwaters of two streams, the Swinburn and Shag Rivers, along the steep, dissected, western face of the Kakanui Mountains. This western face represents the dissected scarp of the Waihemo fault system, along which the Kakanui Mountain block has been uplifted.

Bedrock is semi-schist. The soils are all mapped in the Kajokoura set (Marshall 1977).

Vegetation and flora

Valley sides and ridges are covered predominantly in narrow-leaved snow tussock (*Chionochloa rigida*) (TWINSPAN group 04). The diversity of inter-tussock species is generally low. Bare gravelly ground and sheet erosion surfaces are common, particularly on sunny aspects. Hawkweeds (*Hieracium pilosella* and *H. praealtum*) are abundant in some areas, particularly below 1000 m. Other species found in variable amounts associated with narrow-leaved snow tussock are *Gaultheria depressa* var. *novae-zelandiae*, *Pentachondra pumila* and *Celmisia densiflora*.

Slim snow tussockland (*Chionochloa macra*) (TWINSPAN group 03) is confined mainly to slopes above 1300 m, particularly on south and east aspects where, in many places, it achieves a cover greater than 80%. Areas of slim snow tussock generally have a higher proportion of native inter-tussock species, with *Gaultheria depressa* var. *novae-zelandiae*, *Celmisia brevifolia* and *C. angustifolia* as the dominant species.

Shrubs occur throughout the tussockland (TWINSPAN group 02). Matagouri (*Discaria toumatou*) is extensive on mid to lower slopes, especially in the Swinburn catchment. Cover varies from scattered shrubs to dense scrub. Amongst the matagouri, primarily at lower altitudes, are *Hebe rakaiensis*, *Coprosma propinqua*, needle-leaved *Coprosma* (*C. rugosa*), mountain flax (*Phormium cookianum*) and occasional plants of *C. intertexta*, *Olearia cymbifolia* and coral broom (*Corallospartium crassicaule*). *Coprosma intertexta* is now generally restricted to remnant shrublands from Marlborough to Central Otago, but was once widespread throughout the eastern South Island. This was the only record of the shrub in the District during the PNA survey, but it may well occur in some of the other catchments which were not visited along these steep western faces of the Kakanui Mountains.

On shady slopes, mainly above 1000m, turpentine scrub (*Dracophyllum uniflorum*) is abundant, and areas of mountain flax are common in hollows and streamsides. Inaka (*Dracophyllum longifolium*) is also scattered throughout the shady slopes. On the southern face of Kakanui Peak, at around 1100 m, there is a small area of tussock-shrubland dominated by *Hebe hectorii*, mountain tauhinu (*Cassinia leptophylla*) and *Hebe odora*.

Some flushes of bog rush (*Schoenus pauciflorus*) occur on the higher altitude slopes (above 1100 m), in both catchments (TWINSPAN group 07).

The summit of Kakanui Peak consists of gravelfield and rockland with cushions of *Dracophyllum muscoides*, *Leucopogon fraseri*, *Celmisia ramulosa*, *Luzula pumila* and lichens (TWINSPAN group 01). Below the summit, a patch of scree extends down into the Swinburn catchment to about 1250 m on the south-west face of Kakanui Peak.

Fauna

Falcon and pipit were recorded in this RAP during the field survey. Patrick (1991) noted that grassland moths are well represented in this RAP with the diurnal species *Scoparia autochroa* and *Eudonia organaea* typical of this fauna. Wetter sites amongst the tussock, often consisting of mosses or cushions, support mainly diurnal moth fauna including *Glaucoccharis helioctypa*, *Orocrambus scoparioides* and *Scoparia ergatis*. Fewer moth species are present on the scree but of these the dark-coloured *Orocrambus melampetrus* is worthy of note.

Discussion

Steep slopes, extensive bare gravelly ground and abundant rock outcrops of low relief are typical of the western side of the Kakanui Mountains. The indigenous content of the vegetation also tends to be lower than the more gentle eastern faces of the range. Kakanui Peak is the only area recommended for protection in the steeply sloping western faces of the Kakanui Mountains.

This RAP contains the greatest diversity of plant communities, with the highest level of naturalness, of the catchments seen on the western side of the main range. It includes vegetation types and species poorly represented or uncommon in other RAPs such as extensive matagouri shrublands, and the shrub species *Olearia cymbifolia*, *Coprosma intertexta* and coral broom.

In addition, the slim snow tussocklands on the upper slopes of Kakanui Peak have one of the highest covers (> 80%) in the District. Patrick (1991) has also identified the tussocklands and wetlands on Kakanui Peak as a key site for the conservation of insects.

Criteria summary

Representativeness	H	representative of steep western faces of the Kakanui Mountains.
Diversity	H	high species richness and number of vegetation groups over a range of aspects and altitude.

Special features	M	contains a number of plants and insects uncommon in the District.
Viability	H	large area, retired from grazing.
Buffering	MH	includes both natural and unnatural boundaries; similar to surrounding landscape.
Threat	L	wilding pines, fire.

10.14 KAKANUI MOUNTAINS

CONS. UNIT NO.	NAME	STATUS	AREA
141 089	Kakanui Peak	Conservation Area	690 00 ha

10.14.1 *Ecological District*

Dansey

10.14.2 *Local Authority*

Waitaki District Council, Central Otago District Council.

10.14.3 *DOC Land*

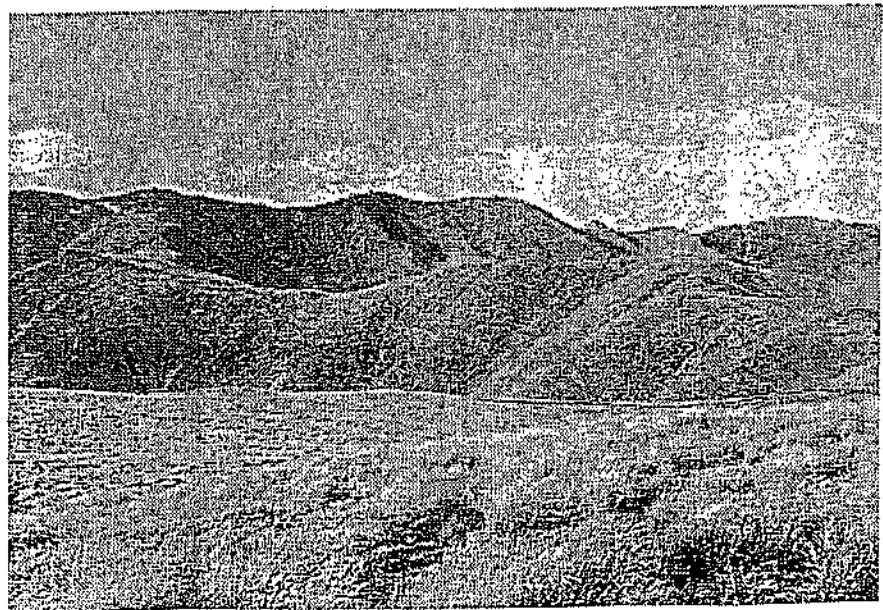
The Kakanui Peak Conservation Area protects part of an unstable catchment of typical alpine species dominated by *Chionochloa rigida*.

10.14.4 *Other Land*

The remainder of the Kakanuis is held predominantly under pastoral leasehold tenure. Two covenants protect areas of *Chionochloa rubra* var. *cuprea* grassland.

10.14.5 *Description*

The Kakanui Mountains are the north-eastern most of the Otago schist mountain ranges, effectively forming a transitional barrier between Central-eastern Otago and North Otago. Danseys Pass is a saddle between the Kakanui Mountains and the St Marys Range and carries a metalled road connecting the Maniototo to the Waitaki Valley. The Kakanui Mountains consist of a series of steep peaks including Mt Nobbier, Kakanui Peak and the highest, Mt Pisgah (1643 metres), with several gently sloping substantial spurs running at right angles into North Otago.



Summit ridge, Kakanuis

A variety of typical schist landforms and periglacial features are found on the crest including tors and patterned ground.

The entire range is clothed in indigenous vegetation.

Fellfield with low herbs, cushion plants and lichens dominate the crest of the range while large areas of snowgrass with some shrubland remnants covers the flanks. Snowbanks are rare but many wetlands are present in the alpine zone. Areas of copper tussock grassland occur on the plateaux.

A significant and visually striking area of extinct volcanic cones and basaltic boulder fields are found near the south-eastern end of the mountains with several significant basalt peaks such as Kattothyrist, Mt Dasher and Siberia Hill. Snowgrass, wetlands and bluff systems are the dominant ecosystems of the basalt area.

Most of the Kakanui Mountains is Crown land in pastoral lease tenure, with only a modest area of snowgrass below Kakanui Peak managed for conservation. Importantly, the mountains are essentially natural, especially with increasing altitude, and form a cohesive unit of natural ecosystems dominated by native vegetation.

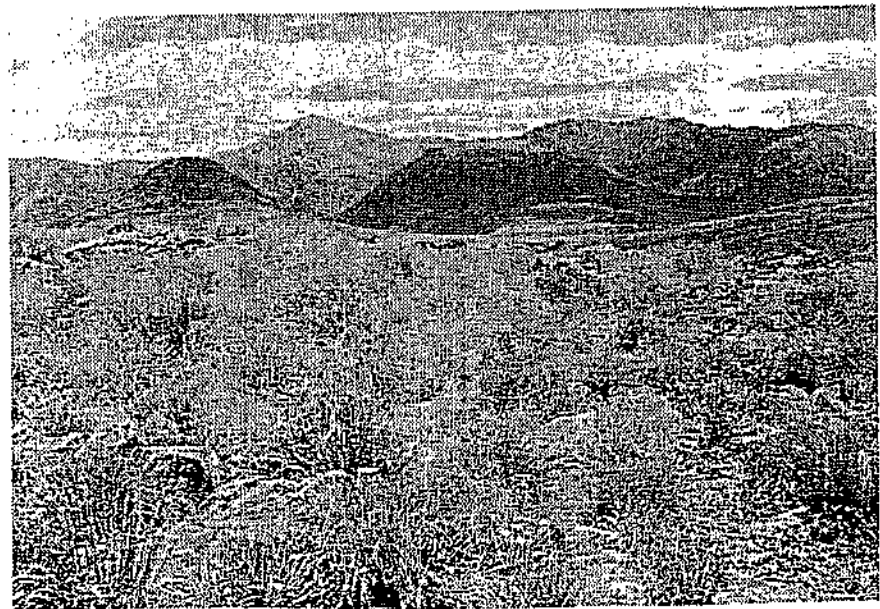
Transmitters exist on a peak near Mt Alexander and on the basaltic Obi, with 4WD access both to these and beyond to the highest crests linking up with several tracks up the spurs.

To the northeast the range is drained by the Maerewhenua and Kakanui Rivers, while the Shag River and Kye Burn drain the south-western slopes.

10.14.6 Values

The Kakanui Mountains form an impressive natural backdrop to both North Otago and Maniototo communities with more intimate views from the Danseys Pass and Pigroot Roads.

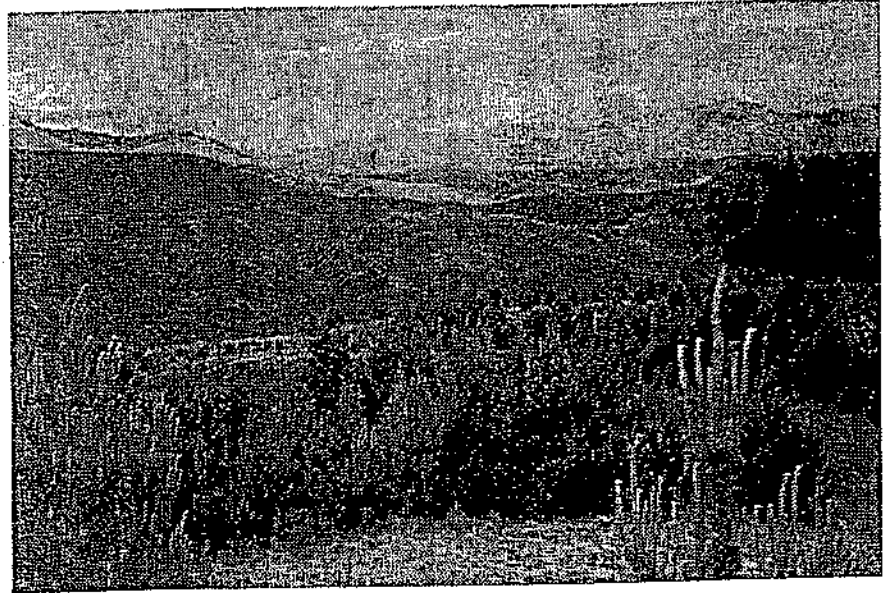
Geologically the volcanic area centred on Mt Dasher-Siberia Hill is significant, together with its cover of *Chionochloa macra* and *C. rubra*, extensive wetlands and bluff/scree systems. Shrubland containing snow totara and mountain totara are also a feature.



Mt Dasher-Siberia Hill area, with its distinctive volcanic landforms, especially the truncated pyramidal shapes of Kattothyrist and Mt Dasher. A natural landscape with outstanding intrinsic values.

The intact high-alpine vegetation of the rest of the range is also of considerable conservation value with large areas of fellfield and scree with smaller areas of snowbanks containing cushion species such as *Kelleria obliq.* Large areas of *Chionochloa macra* and diverse wetlands are a feature of the alpine zone with shrublands of *Dracophyllum* and *Hebe* species surrounded by *Chionochloa rigida* on lower slopes.

The area was surveyed under the PNAP in 1989/90 and 10 representative areas ranging in size from 2,000 hectares to 125 hectares were recommended for protection.



Wilding conifers spread out from Naseby Forest, Kakanui Mountains behind

Seedlings from Naseby Forest have resulted in a widespread wilding pine (mainly *P. contorta*) problem on the southwest slopes of the Kakanui.

As with the flora, the fauna is typical of other Central Otago mountains but with a distinct North Otago element including two unnamed giant weevil species (*Lyperobius* n. spp.), giant weta *Deinacrida connectens* and a diurnal moth *Notoreas ischnocyma*. The variety of ecosystems present is reflected in the invertebrate fauna with various assemblages of species, each dependent on wetland, shrublands, rock bluffs/tors, grasslands or fellfield vegetation. The lower Kakanui catchment is the only known Otago location of the long-jawed galaxias (*Galaxias prognathus*).

Back country drive-in and walk-in settings for recreation are available along the range provided access permission is obtained, with the highest peaks forming a core of remote country.

Recreation values centre on summer time 4WD activities, with tramping less important because of the area's remoteness, private occupation and lack of huts. A traverse along the range taking in the volcanic area and the higher peaks would make a satisfying tramp of 3-4 days. Many of the higher altitude vehicle tracks would provide challenging mountain bike touring. Skiing has occurred occasionally on the Kakanui but the unreliability of snow has curtailed activities in more recent times.

Historic values are found on the periphery of the Kakanui. A short but significant burst of activity looking for gold has left a legacy of diggings and water races, while a slate quarry near "The Dasher" has local historical significance.

10.14.7 *Management Issues*

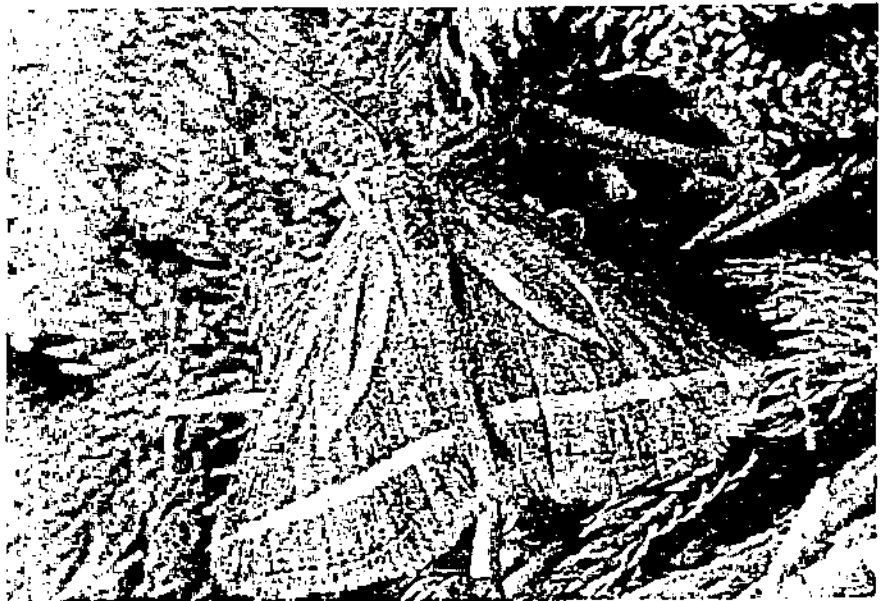
- At present the only areas under protection are the Kakanui Conservation Area and the two covenants for red tussock grassland at Mt Staiker, while the balance of the area is utilised for pastoral farming, including burning and ploughing for exotic pasture development. Most of the PNA survey recommendations have yet to be implemented.
- Public access to the range is very limited.
- Protection from fire.
- Fencing to exclude stock from fragile areas.
- Weeding pine control in the southwest.
- Landscape protection on the balance of Kakanui Mountains, ie, advocacy on burning, tracking issues and plantation forestry.
- Further siting of installations in visually sensitive locations especially on skylines.

Objectives for Kakanui Mountains

To maintain the natural resources contained within the existing protected areas on the Kakanui Mountains while taking opportunities that may arise through pastoral lease tenure review to negotiate protection of and access to areas of high natural and recreational value.

Implementation

- (a) Control weeding trees that threaten natural resources on the Kakanui Mountains, including liaison and cooperation with neighbours.
- (b) Foot access negotiated at key points for the public to areas managed by the department, with public vehicular access having a lower priority.



Aponotoreas insignis, a diurnal geometrid moth found in the Kakanui Mountains.

- (c) Co-siting of future telecommunications buildings and towers will be advocated on the Kakanui Mountains.
- (d) Resource information that assists management of existing areas administered by the department or assists pastoral lease tenure review discussions will be gathered.
- (e) Protection of key areas for natural and historic resources will be sought through pastoral lease tenure review negotiation opportunities.
- (f) Advocate against burning of native grasslands or shrublands where its effect is to degrade significant natural and historic resources, especially landscape and soil and water, in the context of Resource Management Act and other statutory processes.

Priorities for Kakanui Mountains

In this Special Place, tenure review negotiations and wilding tree control will be the priority method for implementing the objective during the course of this CMS.