

Crown Pastoral Land Tenure Review

Lease name : SUNNY PEAKS

Lease number : PO 259

Conservation Resources Report

As part of the process of Tenure Review, advice on significant inherent values within the pastoral lease is provided by Department of Conservation officials in the form of a Conservation Resources Report. This report is the result of outdoor survey and inspection. It is a key piece of information for the development of a preliminary consultation document.

The report attached is released under the Official Information Act 1982.

June

02

Sunny Peaks Pastoral Lease



Conservation Resources Report

PART 1 INTRODUCTION

This report describes the significant inherent values of Sunny Peaks Crown Pastoral Lease and Awakino Pastoral Occupation Licence. The lease covers 2496 hectares and the occupation license is 800 hectares

Sunny Peaks Pastoral lease is situated on the lower eastern slopes of the St Marys Range in the Waitaki Valley. The property may best be described as three separate areas:

- The front hill country bounded by the west and east branches of the Awakino River and the St Marys Range Retirement Area. It is the largest of the three blocks and covers an altitude range between 500m and 1300m. Shown as Area A Fig. 1.
- The back block bounded by Hut Creek and the Otematata River, Rugged Ridges pastoral lease to the north and separated from the front block by the St Marys Range Retirement Area. This area ranges in altitude from 600 - 1400m. Shown as Area B.
- The Awakino Pastoral Occupation Licence (POL) includes some of the headwaters of the Kurow River and the Awakino River (East Branch) and ranges in altitude from 800m to over 1400m. Shown as Area C.

To the east of the lease the land is principally freehold. Bellamore Crown Pastoral Lease is on the northern boundary of the eastern parts of the lease. Between the eastern and western parts of the lease is the St Marys Range Conservation Area. North of the western sector of the lease is Rugged Ridges Crown Pastoral Lease. West, across the Otematata River is the Mt Ida Syndicate Pastoral Occupation License and south is the Kyeburn Crown Pastoral Lease.

The lease is run in conjunction with Awakino Station (freehold) and the Awakino homestead is on Awakino Road, 5 kms from Kurow. The Awakino Road provides legal access to the lease.

Sunny Peaks lies within the St Marys Ecological District which is part of the Waitaki Ecological Region. However, there has been no Protected Natural Area survey (PNA) carried out in this district. The Otematata River forms the mutual boundary between the St Marys and Hawkdun Ecological Districts. The Hawkdun Ecological District has been surveyed (Grove, 1992).

PART 2 DESCRIPTION OF CONSERVATION RESOURCES

2.1 LANDSCAPE AND LANDFORM

For the assessment of significant inherent landscape values, Sunny Peaks Pastoral Lease has been divided into five landscape units (see map).

The Sunny Peaks pastoral lease is a relatively disjointed property both in physical and management terms. The back block (Landscape Units 1 and 2) could be described as a core area of a distinctive high country landscape that spans over several pastoral leases and POL's.

In totality this extensive area has a great variation in landscape character that includes the semi-arid qualities, uniform tussock lands, and the overall sense of semi-wilderness because of the lack of man built elements.

Additionally the composite area that forms the watershed between the East Branch Awakino River and the Kurow River (subunits 3(a) and 3(b)) is representative of the St Marys Range attributable to the assemblage of physical features, and the highly legible natural processes which include the long scree faces and patches of talus. Similar to the back block these subunits convey a strong feeling of isolation with the man made elements being very localized and traditional in the high country.

Unit 1

This unit incorporates all of the undulating slopes on the western back block of the property. These slopes form a part of a broad v-shaped valley that contains the entrenched Otematata River. The slopes are lightly indented by the superimposed drainage pattern, with several streams feeding directly into the Otematata River or into the Hut Creek by the way of a rocky gorge. Hut Creek is contained within a well defined gully that has its origins on the western flanks of the St Marys Range, this creek is used as a physical boundary to the property.

The highest point of the unit (1,473m.asl.) is located along the northern boundary where the terrain falls rapidly towards Hut Creek in the south. The unit is bounded in the west by the immediate change in slope from a plateau to over-steepened slopes that fall towards the river. The eastern boundary is more difficult to define as the boundary to the back block criss-crosses a stream and sidles around several slopes.

At about the 1,000m. a.s.l. contour level the slopes grade out into a rolling plateau that is perched above the river. Owing to the impeded drainage the surface of the plateau is relatively waterlogged with several areas of permanent water being present.

The composition of the ground cover changes, depending on both altitude and stock pressure. The upper rounded slopes are clad in good condition narrow leaved tussock with a sub dominance of short fescue tussock and the occasional blue tussock and golden spaniard. Patches of bare ground have been colonized by opportunist species such as hawkweed and sheep sorrel. Over the lower plateau the vegetative cover becomes more modified and comprises a mixture of heavily grazed snow tussock, and short tussock interspersed with pasture grasses

and hawkweed. There are several wet depressions that have been heavily modified by recent pig rooting.

Landscape Values

This unit has high landscape values, particularly the upper slopes where the tall tussocklands link up with a similar vegetation type on the adjoining Rugged Ridges pastoral lease. A large proportion of this unit helps to form the nucleus of a vast back country landscape that stretches over much of the upper catchment of the Otematata River. The traits that make this expansive area include:

- Uniformity of the topography, i.e. semi arid dissected hills.
- Homogenous ground cover, i.e. lack of trees.
- Unbounded qualities.
- Lacks of "built" elements - those elements present, e.g. musterers' huts, are a traditional element in the high country.
- Strong sense of remoteness and difficulty in orientation due to the similarities in the surrounding landform.

Visual Values

This unit is only visually accessible from a few tracks, again this lack of both visual and physical accessibility helps to generate a strong impression of isolation which is a special quality attached to the South Island high country.

Potential Vulnerability to Change

This unit has a relatively high vulnerability to change due to the homogenous characteristics of the ground cover. Activities that could have an adverse effect on the existing values include:

- Loss and further fragmentation of tall tussock communities
- Further tracking.
- Introduction of "built" elements
- Spread of wilding pines.
- Further damage to palatable native shrubs from feral pigs.

Unit 2

This unit comprises the over-steepened slopes that fall towards the upper Otematata River. The cross section of the valley is very narrow and tortuous, with the river winding around a series of craggy interlocking spurs. This entrenched valley could be described as a saw cut gorge due to the overhanging walls and so much exposed base rock. In places where the river channel is not bordered by rock, large boulders bound it.

Close to the south- west corner of the unit there is the confluence of several large creeks (Rambling Creek, Boundary Creek, Guffies Creek and Hut Creek) that collectively form the headwaters of the Otematata River.

The ground cover over the semi- arid slopes includes scree faces, stable rubble fields, slabs of surface rock and intermittent tall tussock and golden spaniard. At the confluence of the Hut Creek the lower slopes are clad in a diverse mixture of both native shrubs and sweet briar.

Landscape Values

This unit conveys high landscape values, due to the complete dominance of natural elements over cultural elements. Furthermore this unit is extremely vivid and memorable due to the wild and scenic characteristics that are associated with such an entrenched river, these traits include the deep narrow constricted gorge, the white water that passes through the jagged rocky spaces, and the strong sense of confinement. In aesthetic terms the complexity of the landscape elements contrast strikingly with the more uniform characteristics of the tussock lands that dominate this unit's broader context.

Visual Values

This unit is only visually accessible close to the lip of the river gorge, which helps to reinforce this unit's special character and strong sense of discovery. This unit would form a dramatic backdrop to water orientated activities such as kayaking.

Potential Vulnerability to Change

This unit is considered to be relatively robust with further changes being insidious, such as further establishment of woody weed species.

Subunits 3(a) and 3(b)

This area has been divided into two discreet subunits with 3(a) incorporating all the upper catchment of the East Branch Awakino River that is within the Sunny Peaks PL, while 3(b) comprises the Awakino POL that takes in the headwaters of the Kurow River.

The land form that dominates 3(a) is the convex slopes that lead off Mt Kohurau (2,015m.asl), which is the highest peak in the St Marys Range retirement area. The rounded crested slopes are separated by depressions, which frequently contain water courses that drain off the higher slopes and feed into the East Branch which is typified by its rugged channel. The access track that leads out of the property towards the west crosses over a distinctive long toe fan.

The vegetative cover is relatively uniform with good condition narrow leaved tussock being the dominant species, with a wide distribution of short fescue tussock and golden spaniard. At the lower northern end of the subunit the tussock cover becomes more fragmented and varied in stature owing to previous burn-offs.

On the complementary block of land (subunit 3(b)) the landform becomes more complex with an assortment of natural features that include the deeply etched side slopes that overlook the East Branch, the low saddle that forms the watershed between the East Branch and the Kurow River, while the balance of the subunit consists of a series of steep short valleys that penetrate into the St Marys Range and are clad in large patches of scree and stone pavements.

The vegetative cover on the Awakino block is influenced by slope stability and aspect. On the sunnier dry faces overlooking the East Branch the primary vegetative cover is spasmodic tall tussock which gradually improves both in

density and condition in change of aspect towards the darker faces. Over much of the more "tender" land the vegetative cover is a mosaic of grey lichen, Raoulia, tufts of both fescue and blue tussock and a scattering of snow tussock.

Surrounding the Tin Hut, a mixture of various conifers have been planted for utility reasons, unfortunately these pines have started to cone with wildings now being relatively well established by the prevailing wind.

Landscape Values

The juxtaposed sub units 3(a) and 3(b) create a large cohesive high country landscape. This composite area contains a diversity of natural features and processes that are associated with the St Marys Range. The dynamic processes that have helped to forge the shape of this country are highly legible with scree chutes, patches of scree and patterned ground being conspicuous. The tall tussock cover also acts as a unifier between these two subunits with the actual condition of the tussock depending greatly on land stability and aspect. On the Awakino retirement block the edges of the tussock are "ragged" owing to the extent of active erosion while on Sunny Peaks the tussock cover is homogenous. The low saddle that forms the watershed between the two local rivers is a distinctive landform and a key focal point.

Visual Values

From a visual perspective these subunits have limited value being obscured by the series of front ranges and hill country between it and the Waitaki Valley.

Potential Vulnerability to Change

This unit has a relatively high vulnerability to change due to the homogenous characteristics of the tall tussock, especially within subunit 3(a). Activities that could have an adverse effect on the existing values include:

- Decline in stature, density and vigour of the snow tussock, possibly through controlled burn-offs.
- Fragmentation of the tussock lands by further subdivision and land-use intensification.
- Introduction of woody weed species.
- Further spread of wilding pines that have their seed source from the plantings around Tin Hut.
- Further tracking over side slopes and thinner soils where rehabilitation is difficult to achieve.

Unit 4

This unit comprises the large block of dissected high hill country that overlooks the East Branch Awakino River. This unit, with the corresponding slopes on Awakino Station, forms a v-shaped valley that continually widens towards the Waitaki Valley. Branching off the main valley is a series of dissected valleys that lead into the St Marys Range retirement area.

The two lower valleys have similar traits, while the upper valley is distinctive by having a more angulated appearance with diagonal stratas of base rock projecting

out from the slopes. Furthermore the floor of this valley is distinctive with the side slopes abruptly changing to an outwashed fan.

The vegetative cover in this lower section of the river valley and secondary valleys has been converted extensively for pastoral farming with much of the land now clad in both introduced grasses and legumes. On the higher slopes (above 950m.asl.) which do not inherently respond to nitrogen fertilizer, there are still remains of tall and short tussock communities. The demarcation between tall tussock and improved farmland is immediate as both access tracks and bulldozed fire- breaks have been used to establish improved pasture.

Landscape Values

This unit has only moderate landscape values primarily owing to the fragmentation of the tussock grasslands that has resulted in a disjointed landscape attributable to the hard edged changes in vegetation. This unit forms the middle ground in the high country which acts as a transitional zone between the high altitude natural areas and the lower country which has a strong overlay of development.

Visual Values

Due to the fact that only localized views can be obtained of this unit, it has only limited importance as a visual resource.

Potential Vulnerability to Change

The primary risk to this unit would be the loss and fragmentation of the tall tussock lands and the increase in dozed firebreaks that are used as a tool to convert more land to improved pasture.

Unit 5

This unit encompasses all of the property that is contained within the West Branch Awakino River that links up with the East Branch at the north- east corner of Sunny Peaks. Similar to Landscape Unit 4, the top section of this unit is characterized by a v-shaped valley that gradually widens towards the Waitaki Valley. There are a number of subsidiary valleys, many of which have an angulated appearance and have rocky outcrops studding their crests.

The vegetative is modified with most of the country up to the 950m.asl. being converted to pasture grasses with a scattering of shrublands around the rocky outcrops. The upper catchment areas that form the West Branch are clad in good condition tall tussock. It should be noted that Fluming Gully was not inspected owing to inclement weather conditions, but it is anticipated that the upper segment of this gully is clad in tall tussock.

Due to the easy access and sunnier aspect much of this unit has been subdivided into smaller paddocks than the adjoining East Branch with much of the lower country being cultivated.

The access road to the Awakino ski field follows the West Branch before it starts zig-zagging up through Conservation land.

Landscape Values

The natural landscape values within this unit have been heavily compromised because this country has easier access and a sunnier aspect. The original character becomes more intact when ascending in altitude with good conditioned snow tussock being present where the river splits into several tributaries. Similar to Landscape Unit 4, this unit forms the transition between the high country and the more developed lowlands.

Visual Values

This unit forms the immediate backdrop for visitors travelling to the Awakino ski field, therefore the existing gradual transformation between farmland and a natural environment is a significant feature.

Potential Vulnerability to Change

This unit has already been extensively modified, with further changes likely to include:

- Further subdivision.
- Loss of residual tussock lands and shrub lands.
- Upgrading of the ski field access road.

2.2 GEOLOGY AND SOILS

Schistose rocks of low metamorphic grade compromise most of the basement in which the St Marys Range is cut. Non-foliated greywackes lie to the north-west of Mt Bitterness. In addition to ancient shearing and faulting, a well-developed block faulting episode postdates the widespread Cretaceous-Tertiary peneplanation of much of Otago, producing thick fault pugs which are liable to severe gully erosion.

Apart from the physically unstable fault pugs, the hard basement rocks are unlikely to erode at rates fast enough to cause concern. However, most of the long mountain slopes are mantled, particularly at lower levels, with thick colluvial deposits which are liable to catastrophic failure in particularly severe storm events.

Alpine soils on the steep mountain slopes and bluffs over 1650m altitude are lithosols, which in the recent past have only supported the sparsest vegetation. Mechanical breakdown of rock is often rapid, with daily freeze and thaw playing an important role.

Soils are predominantly hygrous high country yellow brown earths of low fertility. At higher altitudes there is a high susceptibility to wind and sheet erosion.

2.3 CLIMATE

Mean annual precipitation ranges from some 600 mm at lower levels to an estimated 1200 mm along the range summit. Snow lies above 1350 metres for six months of the year, with regular winter falls on lower areas. Cold temperatures occur year round, and very strong winds from the north-west and south occur frequently.

2.4 VEGETATION

2.4.1 Original vegetation

McGlone (2001) suggests that the prehuman vegetation of the intermontane basins of south Canterbury were dominated by grassland and scrub with low stature forest on the range slopes. The low altitude grasslands were dominated by *Poa*, *Festuca*, *Elymus* and *Rytidosperma* species. *Coprosma* and *Myrsine* scrub species and mountain totara (*Podocarpus hallii*) were the main forest species. It is likely that *Plagianthus regius*, *Hoheria angustifolia* and kowhai (*Sophora microphylla*) were also present especially on fertile soils and along river and stream courses. Snow tussock would generally have occupied higher altitude sites.

It is likely that the hill slopes of Sunny Peaks pastoral lease would have supported short tussock grassland (dominated by silver tussock (*Poa cita*) and fescue tussock (*Festuca novae-zelandiae*) and shrubland, with snow tussock at higher altitudes. Low stature forest including kowhai and totara is likely to have existed on stream banks and protected valleys.

2.4.2 Indigenous plant communities

Area A (see attached Values Map). The front hill country

This part of the property occupies the lower eastern slopes below Mt Bitterness (1910m) and Kahurau (at 2015m the highest peak on the St Marys Range). The land rises from 500m at the junction of the east and west branches of the Awakino River to 1300m where the pastoral lease joins an existing retirement area. The road to the Awakino Skifield follows up the west branch to the retirement area. The front block land is mainly steep spurs and slopes with some incised gullies. Most of the land below 900m has been developed for pastoral farming and now supports a modified cover of exotic grasses and clovers. Snow tussock in the east branch of the Awakino River and the north facing slopes above Fluming Gully has been burned very recently. Above 900m snow tussock covers the slopes merging into the retirement area above.

Area A1

The snow tussock above 900m is in very good condition and extends up slope to blend in with the retired area above. These steep slopes generally support a good cover of snow tussock (mainly *Chionochloa rigida* with *Chionochloa macra* on the higher and colder sites). Common intertussock species include fescue tussock, blue tussock (*Poa colensoi*), *Leucopogon fraseri*, *Raoulia subsericea*, *Lycopodium fastigiatum*, snow berry (*Gaultheria novae-zelandiae*) and tauhinu (*Ozothamnus leptophylla*). Other species are scattered in their distribution and include *Celmisia gracilentia*, *Pentachondra pumila*, *Lagenifera cuneata*, *Lobelia linneoides* and golden spaniard (*Aciphylla aurea*).

Above the Awakino River (east branch) the steep slopes are intermittently incised by short steep gullies that cut back into Eastern flank of Kohurau. The rock ribs that lead down into spectacular narrow gorges are overhung with *Dracophyllum uniflorum*, *Coriaria plumosa*, golden spaniard, mountain flax (*Phormium cookianum*) and huge snow tussocks.

The snow tussock above the burnt area around Fluming Gully is in good condition and supports a wide variety of species including blue tussock, *Leucopogon fraseri*, *Raoulia subsericea*, *Anisotome flexuosa*, *Luzula rufa*, *Wahlenbergia albomarginata*, and *Carmichaelia vexillata*. There are scattered plants of mouse-ear hawkweed and catsear (*Hypochoeris radicata*) present.

Area A2

The small valley draining the slopes of Mt Bitterness is well vegetated with *Chionochloa rigida* and golden spaniard. Intertussock species include snowberry (*Gaultheria depressa* var. *novae-zelandiae*), *Leucopogon fraseri*, *Leucopogon colensoi*, *Blechnum penna-marina*, *Celmisia gracilentia* and *Raoulia subsericea*. Where several streams meet before flowing into the Awakino River (West Branch) the riparian shrublands support populations of *Coprosma intertexta*, *Dracophyllum uniflorum*, matagouri, *Coriaria plumosa* and mountain flax. On rock outcrops *Gaultheria crassa*, *Myrsine nummularifolia* and *Brachyglottis haastii* are present.

Area A3

On the true left bank of the Awakino River (West Branch) there are more than 20 totara trees of varying sizes scattered up a steep scrub covered slope between rock outcrops. The larger totaras are about 5m high with numerous smaller trees and saplings growing amongst *Coprosma propinqua*, *C. intertexta*, *Myrsine divaricata*, *Carmichaelia petriei*, *Polystichum vestitum* and mountain flax.

Area B The back block

The back block is presently separated from the rest of the property by the St Marys Range Retirement Area. When the back block is stocked the animals need to be driven through the retirement area which means there is a risk of damage to the vegetation. The western back block has snow tussock clad steep slopes that grade out into a rolling plateau which then descends over steep slopes and bluffs into the winding gorges of Hut Creek and the Otematata River.

Area B1

The snow tussock is in good condition and supports a variety of intertussock species including blue tussock, fescue tussock, *Raoulia subsericea*, *Kelleria dieffenbachii*, *Celmisia lyallii*, *Rytidosperma pumila*, *Lycopodium fastigiatum* and *Carmichaelia vexillata*. The central valley draining this block supports a sloping wetland with extensive areas of *Nertera balfouriana*, *Gaultheria parvula*, *Oreobolus pectinatus*, *Carex gaudichaudiana* and *Gentiana amabilis*. Although there was some pig rooting in the vicinity there were no exotic plants present in the bog. The bluffs and rock outcrops overhanging the Hut Creek gorge contain *Helichrysum intermedium*.

Area B2

The plateau area around point 1018 is mainly fescue tussock with scattered snow tussocks and some adventive grasses and herbs including sweet vernal (*Anthoxanthum odoratum*), browntop (*Agrostis capillaris*), white clover (*Trifolium repens*) and mouse-ear hawkweed (*Hieracium pilosella*). Where drainage is impeded on the plateau there is an extensive area of red tussock (Fig.6) which

merges into *Chionochloa rigida* on better drained slopes. This area of red tussock is the only red tussock seen on the property and it is uncommon in the adjacent Hawkdun Ecological District (Grove, 1992).

Generally the vegetation on the plateau area is dominated by snow and fescue tussock with a variety of intertussock species including *Raoulia subsericea*, *Pimelea oreophila*, *Geum lieospermum*, *Brachyglottis bellidioides*, *Luzula rufa* and golden spaniard. Scattered shrubs grow near the streams flowing into Hut creek including *Olearia odorata*, *Coprosma propinqua*, tauhinu and golden spaniard.

The stony flats near the stone hut in Hut Creek are modified to some extent by mouse-ear hawkweed and some introduced grasses and clovers amongst sparse fescue tussock. Pig rooting is common on the plateau area.

Area C Pastoral Occupation Licence (POL)

The steep slopes of the POL have a homogeneous cover of snow tussock apart from intermittent long screes which often extend from ridge to valley floor. Common intertussock species include fescue tussock, snowberry, golden spaniard, tauhinu, *Geum lieospermum* and *Rytidosperma pumila*. On the dry exposed spurs the vegetation is more open with some cushion plants covering the rocky substrate. They include *Dracophyllum muscoides*, *Celmisia sessiliflora*, and *Kelleria dieffenbachii*. Blue tussock, *Luzula pumila*, *Leucopogon fraseri*, woolly moss (*Racomitrium lanuginosum*) and lichens are also common on exposed sites.

A solitary tree was sighted from some distance away in a steep gorge of the Kurow River. It appeared to be a totara but time did not allow verification of this. Totara is present on other parts of the property in the Awakino River (West Branch).

A grove of cone producing *Pinus contorta* surrounds the tin hut in the Awakino River (east branch) and wildling trees are establishing on nearby snow tussock slopes. Around the hut browntop, sweet vernal and lotus (*Lotus pedunculatus*) are common. There is an occasional patch of mouse-ear hawkweed on the track but apart from the hut paddock the whole of the POL is free of any major exotic weeds.

2.5 FAUNA

2.5.1 Birds

A total of thirteen bird species (listed below) were recorded on Sunny Peaks Pastoral Lease on 7 January 2002, comprising 1 endemic species, 4 native species and 8 introduced species.

Endemic species

Paradise shelduck *Tadorna variegata*

Native species:

Australasian harrier	<i>Circus approximans</i>
Black backed gull	<i>Larus dominicanus</i>
Pipit	<i>Anthus novaeseelandiae</i>
Pied oystercatcher	<i>Haematopus ostralegus finschi</i>

Introduced species

Hedge sparrow	<i>Prunella modularis</i>
Blackbird	<i>Turdus merula</i>
Starling	<i>Sturnus vulgaris</i>
Chaffinch	<i>Fringilla coelebs</i>
Redpoll	<i>Carduelis flammea</i>
Yellow hammer	<i>Emberiza citrinella</i>
Skylark	<i>Alauda arvensis</i>
Welcome swallow	<i>Hirundo tahitica neoxena</i>

Other bird species that likely utilize Sunny Peaks include: Banded dotterel, Grey warbler, NZ Falcon, Spur winged plover, Silvereye, Song thrush, Californian quail, Goldfinch and Greenfinch.

2.5.2 Invertebrates

Sunny Peaks pastoral lease has several invertebrate communities established in small streams, open tussock grasslands, shrublands and sub-alpine environments

A small alpine wetland complex is located in the top of a small catchment of Hut Creek in the northeast corner on the back block of Sunny Peaks. This wetland and its catchment provide an outstanding habitat for rare endemic invertebrate species. This area is an example of an unmodified ecosystem not likely to be found elsewhere in this ecological district.

The snow tussock grassland below this wetland (below 1200m on the back block) supports the best grassland invertebrate communities on the property. This area has a 'high' ranking as it contains indigenous species, which are declining as a result of human influence.

Remnant shrublands are scattered throughout the pastoral lease. Two species of darkling beetles are found on the property, one species under stones and the other on pine trees near the hut in the East Branch of the Awakino River (Morris, 2002). Several large mountain toatoa (*Phyllocladus* sp) are found throughout this area. Toatoa are essential for boring and ground living invertebrate communities to live in this area.

The West branch of the Awakino River provides a shrubland habitat with a good population of darkling beetles. This community has moderate to high values as it supports species which are still widely distributed but whose habitat has been and still is being significantly reduced or modified as a result of human influence.

The grasslands on the property support a diverse grasshopper/kawhitiwhiti fauna. Four species of grasshoppers are found throughout the grasslands, they are *Phaulacridium otagoense*, *Phaulacridium marginale*, *Paprides dugdali* and *Sigauss australis*. The grasshopper *Phaulacridium otagoense* is commonly found on all areas that are hot and dry and below 900 metres. This grasshopper is endemic to Central Otago and Mackenzie Country (Morris 2002 & 2002). The grasshopper *Paprides dugdali* was recorded in the southern part of the pastoral lease. This new site extends the known range of this species a further 44 kilometres north from the previous site at Round Hill, Shag River. Three species of copper butterflies (*Lycaena* spp) commonly fly over both shrubland and grassland areas. Several diurnal (day time) moths were seen flying over grassland.

Three species of caddisflies have so far been collected in the pastoral lease. Many more species will be collected with further collecting. One caddisfly was found on the pastoral lease, which is endemic to the South Island - *Hydrobiosis kiddi*.

2.5.3 Reptiles

Skinks/mokomoko and geckos were commonly seen within the pastoral lease.

2.5.4 Freshwater Fish

Canterbury galaxiid and upland bully are found in the streams. Rainbow and brown trout can also move up into the lower reaches of streams on the property.

2.5.5 Problem Animals

Introduced animals noted on the lease have included red deer, possums and pigs.

2.6. HISTORIC RESOURCES

Sunny Peaks was originally part of the large Rugged Ridges Run. The boundary of this run was the East Branch Awakino River and fencing in this area may be historic. The Munro family held the lease until 1992 when it was transferred to Awakino Station Ltd. The Conservation Area in between the two portions of the lease was surrendered from the lease in 1992 and gazetted as Conservation Area in 1999.

There are no known sites of historic interest on the western portion of the lease. Sergeant Garveys Cairn, a memorial to a policeman who died in the area in the 1800's, and "Pig Shit" Inn, a historic hut, are just outside the lease but access to both these sites is available through the lease.

There is a site of historic interest on the eastern portion of the lease near the junction of the East and West Branches of the Awakino River. It includes a dilapidated cottage and an adjacent, more stable, building thought to be a stable. This latter building is made of Oamaru limestone and greywacke schist slabs. The stable door is missing but the building is otherwise intact and associated yards are also still in good condition. The proximity of this site to Kurow, and to the road leading to the ski field, increases the attraction of this area.

2.7 PUBLIC RECREATION

2.7.1 Physical Characteristics

Sunny Peaks lies within the "Natural" and "Open Space" zonings of the Department's Recreation Opportunity Spectrum and would be covered by the 4x4 Drive In, Back Country physical setting. The environment is modified by tracking and farming development, particularly in its lower reaches. However, natural vegetation cover has been retained at higher altitudes and in more remote areas.

The eastern part of the lease has some flat land beside the West Branch Awakino River. The land rises steeply from the flats in the West Branch while in the East Branch the valley floor rises steadily at first before rising steeply again, particularly where the POL is. The western part of the lease has some flat land around Hut Creek, rises steeply from the creek before levelling out to quite an extensive plateau and then fairly steeply again to the top of the lease.

The streams and rivers on the lease are mainly well incised with some interesting gorges and waterfalls. Side streams can cause large washouts. There are some wetlands associated with the streams and with catchment areas on the plateaux and in gullies on the lease.

2.7.2 Legal Access

The Awakino Road provides legal access to the eastern edge of the lease. A legal road continues up the East Branch Awakino River providing legal access through this portion of the lease and to the Pastoral Occupation License.

The legal road continues only for about 1km up the West Branch Awakino River. The ski field road continues beyond this point through the lease to the Conservation Area but has no legal standing. There are Crown Land strips in the West Branch Awakino River and in the Otematata River on the boundaries of the lease.

The St Marys Range Conservation Area bisects the lease but there is little legal access to the Conservation Area.

2.7.3 Activities

The access road to the Awakino ski field passes through the lease. This road also provides access for tramping, climbing and mountain biking on the St Marys Range. There is also some hunting carried out in this area.

The 4WD track up the East Branch Awakino River and over to the Otematata River is popular as it can be linked with through trips onto Rugged Ridges, Kyeburn and Mt Ida. This route is also an attractive walking opportunity and can be linked through the Conservation Area to the West Branch.

PART 3 OTHER RELEVANT MATTERS AND PLANS

3.1 CONSULTATION

At a meeting held with Non-Government Organisations in Timaru on 26 September, 2001 the following comments were made:

- The historic pack track to Sergeant Garvey's Cairn has the potential for ongoing use.
- There is a need to secure the access to Awakino Ski Field.
- Public access is needed to the St Marys Range.
- 4WD access needed for hunting on St Marys Range.

3.2 DISTRICT PLANS

Sunny Peaks pastoral lease lies within the Rural S (Rural Scenic) Zone in the Waitaki District. The Rural Scenic Zone contains areas of the District which have significant scenic values – the high country, rangelands and inland basin areas. The majority of this zone lies above the 400 m contour (a.s.l.).

The proposed Waitaki District Plan was publicly notified in December 1996. Following public submissions and hearings on the proposed plan, the District Plan as amended by Council decisions was released in September 1999. The Plan establishes what sort of activities are Permitted, Controlled, Discretionary or Non-complying. The Plan also establishes Site Development Standards and Critical Zone Standards for these activities. A permitted or controlled activity that does not comply with any one or more of the Site Development Standards becomes a restricted discretionary activity. However, the Plan has undergone a number of changes in the Rural Scenic Zone following Council's decisions on submissions.

3.3 CONSERVATION MANAGEMENT STRATEGIES AND PLANS

Sunny Peaks is within the Waitaki Unit of the Canterbury Conservation Management. The key priorities for this unit are:

- To identify, maintain and seek to enhance the natural landscapes and natural landscape values of the unit – through appropriate methods such as tenure review and district plans.
- To identify the significant native vegetation and threatened species of the unit and to use a range of effect methods to protect a representative range of indigenous biodiversity of the unit as well as protecting and enhancing the viability of priority threatened species populations and their habitats in the unit.
- For recreation and access the Conservancy's objectives are to provide new recreational facilities and opportunities by the Department and other organisations and concessionaires where natural and historic resources and cultural values are not compromised, and to liaise with adjacent landholders to resolve conflicts over access for recreation to land managed by the Department.
- To reduce and maintain rabbit and thar densities to levels that ensure their adverse effects on natural values are minimised.

Other priorities identified in the CMS that are Conservancy wide and relevant to tenure review on these properties are – to undertake necessary actions to secure the conservation of Category A and B species, including predator control, fencing and habitat protection.

PART 4 MAPS AND ACKNOWLEDGEMENTS

4.1 Illustrative Maps

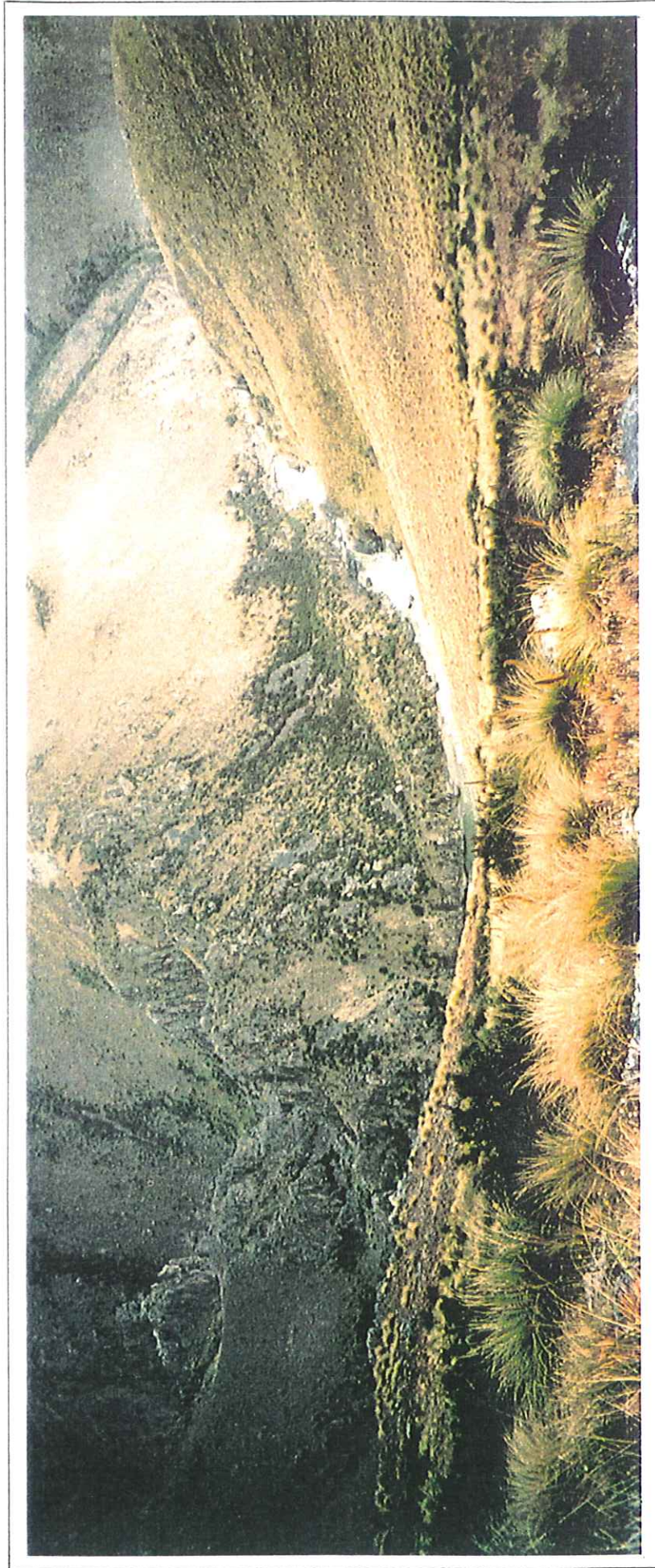
4.1.1 Landscape Units (attached)

4.1.2 Topo/Cadastral (attached)

4.1.3 Values (attached)

4.2 Acknowledgements

The Department would like to thank Tony Plunkett (Manager) for his assistance with the survey. We would also like to thank members of the survey team – Carol Jensen, Alan Petrie, Simon Morris and Kerry Brown.



LU2 A pan of the Orematata River seen winding around the jagged intersecting spurs. The river and its visual corridor convey a strong sense of natural character with the environs of the river being managed in a complementary manner. This unit has extremely high landscape values.



An aerial view looking south towards the confluence of several major tributaries that form the Otematata River. The Sunny Peaks property incorporates the dissected land that borders the entrenched river up to the point indicated by the arrow where Hut Creek meets the river. (Photograph taken by A. Petrie, 1994)



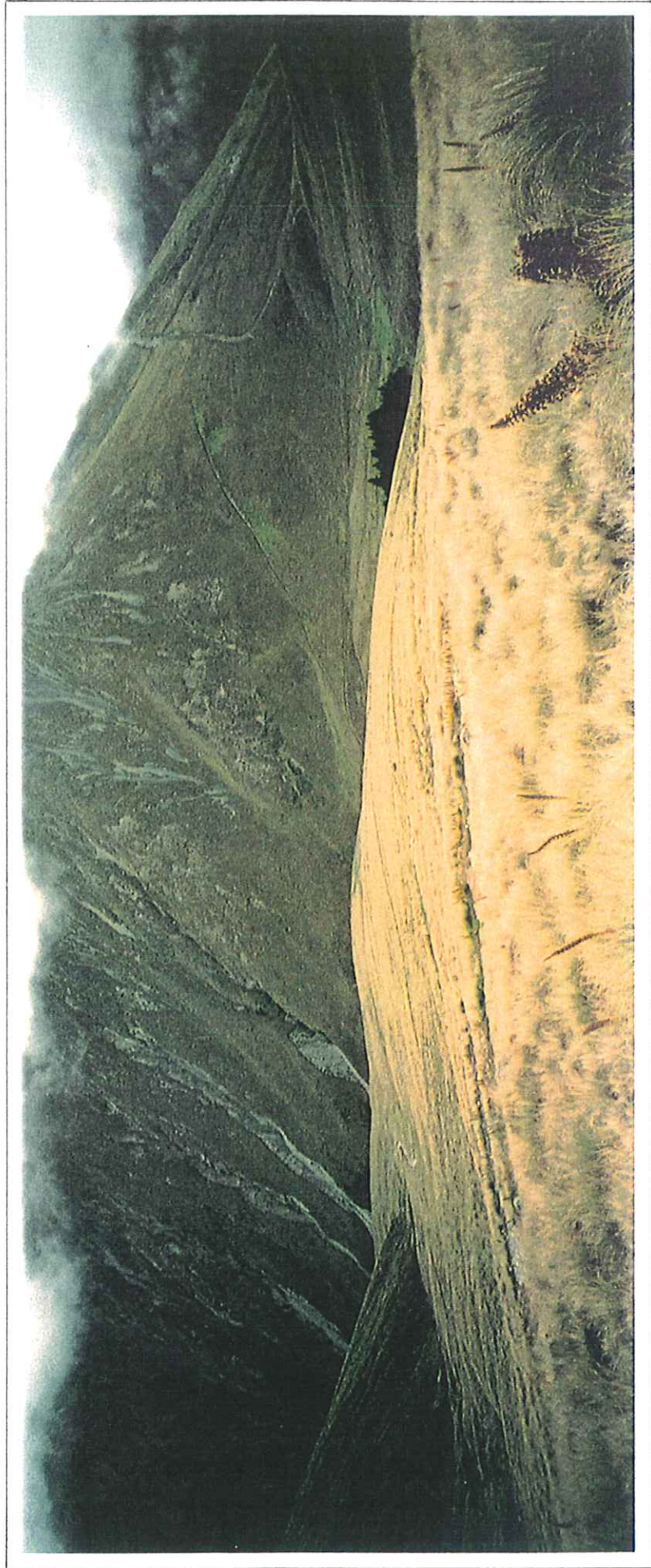
LUI Looking north towards the ridge that separates this pastoral lease from the adjoining Rugged Ridges. The vegetative cover gradually becomes more intact after leaving the rolling plateau in the foreground. This unit must be looked upon as an integral part of a cohesive and distinctive North Otago landscape.



Subunits 3(a) & 3(b) Looking towards the watershed between East Branch Awakino River and the Kurow River. In the foreground the snow tussock is recovering after a previous burn-off, the middle ground could possibly be the demarcation point between freeholding and Conservation land.



LU4 Looking down the East Branch valley where the ecological health of the snow tussock steadily declines as more progressive farming methods are used.



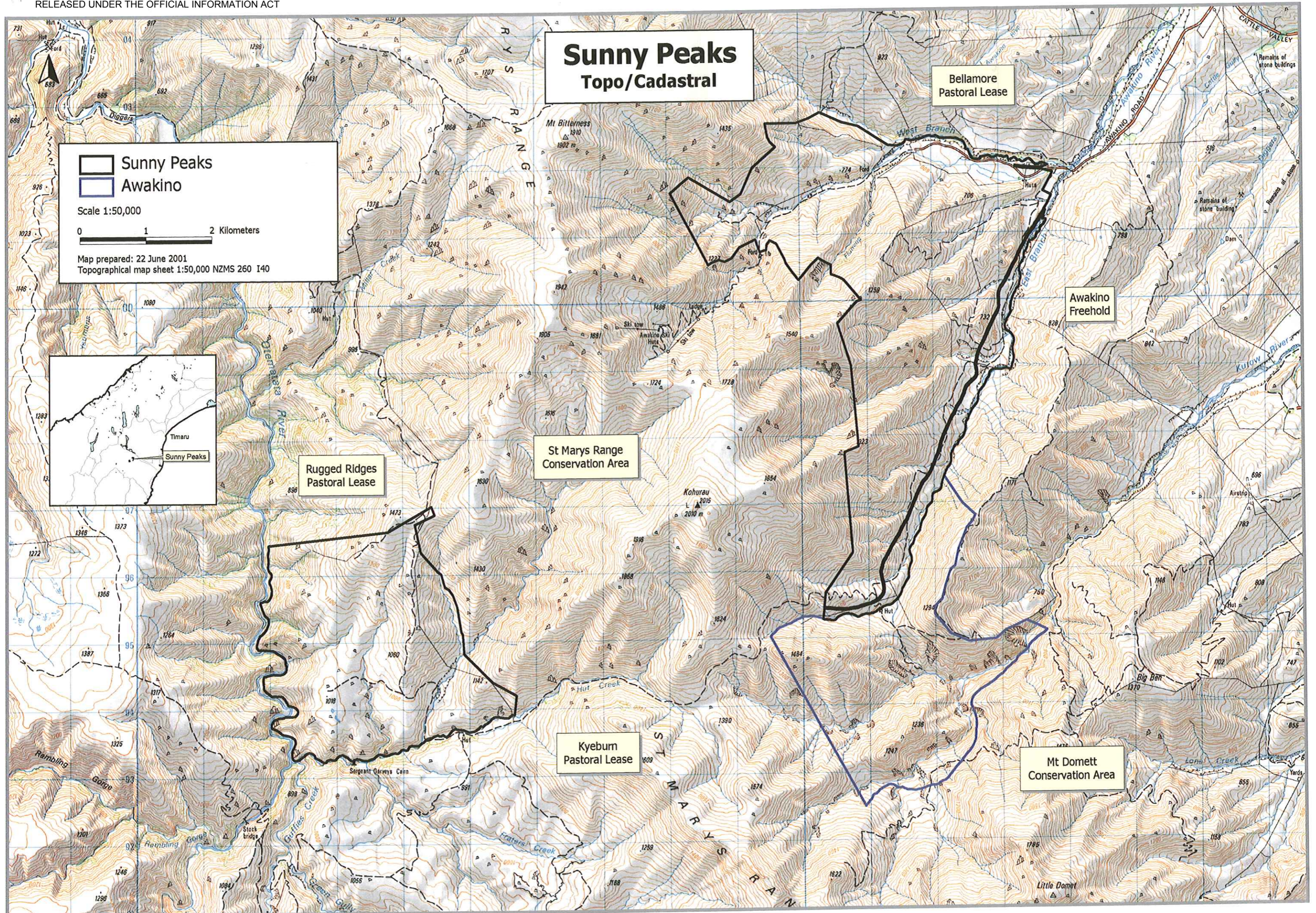
Subunits 3(a) & 3(b) A panoramic view, from the boundary of the property, looking down the toe fan towards the Awakino retirement block. Collectively these two subunits form a cohesive area that is typical of the St Marys Range lands. The Tin Hut and associated utility trees form a localized impact in the middle ground.



LU4 The upper side valley that leads off the East Branch that has a distinctive angulated character due to the quantity of base rock that is exposed.

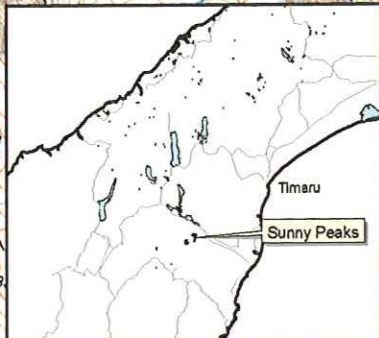


LU5 Looking downstream of the West Branch Awakino River where on the true left side tall tussock grasslands still clad the valley floor and immediate slopes. This area forms an important visual corridor to the Awakino ski field road.



Sunny Peaks Topo/Cadastral

Sunny Peaks
 Awakino
 Scale 1:50,000
 0 1 2 Kilometers
 Map prepared: 22 June 2001
 Topographical map sheet 1:50,000 NZMS 260 140



Rugged Ridges
Pastoral Lease

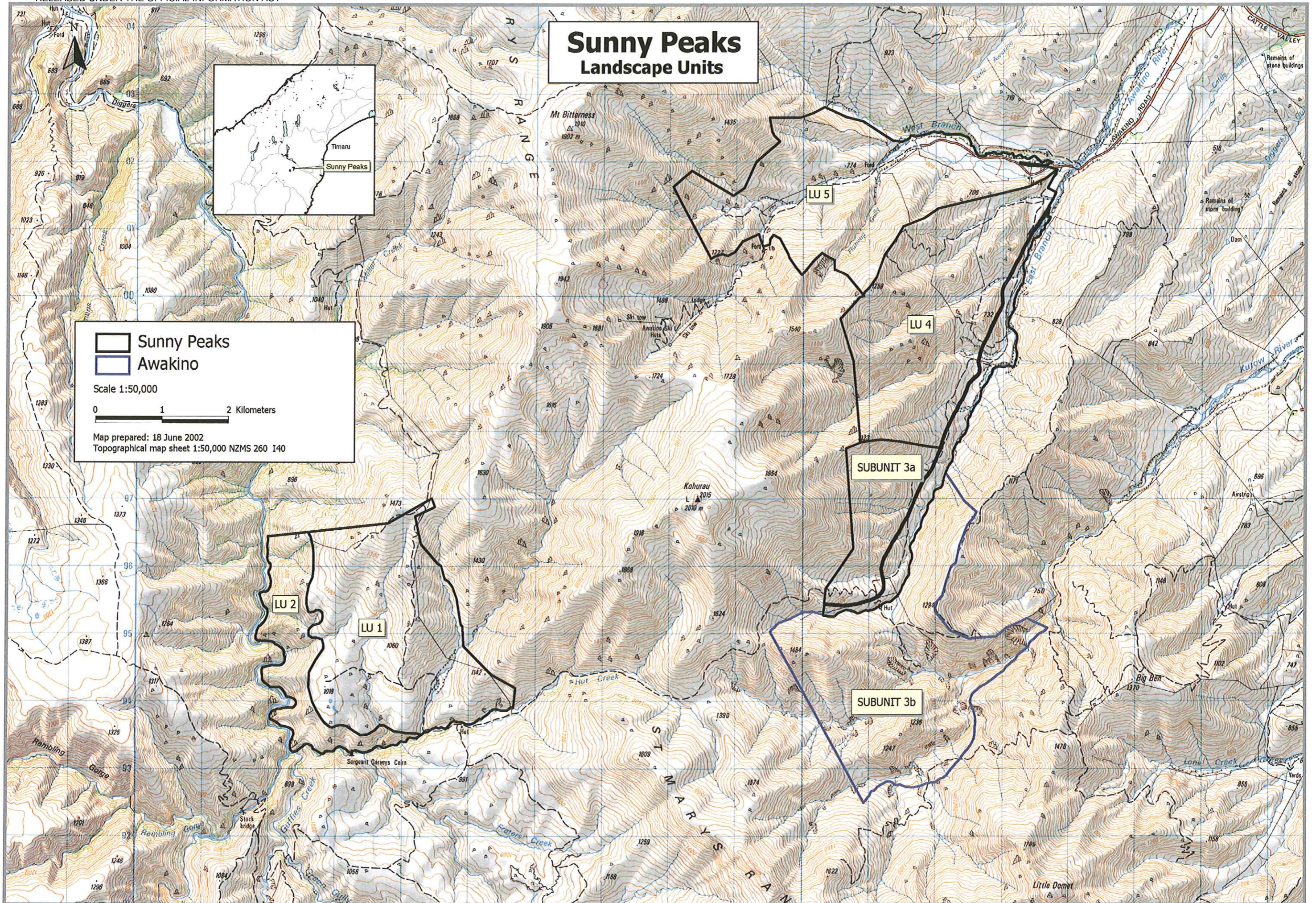
St Marys Range
Conservation Area

Mt Domett
Conservation Area



Kyeburn
Pastoral Lease

Bellamore
Pastoral Lease

Awakino
Freehold



Sunny Peaks Landscape Units

 Sunny Peaks
 Awakino

Scale 1:50,000
0 1 2 Kilometers

Map prepared: 18 June 2002
Topographical map sheet 1:50,000 NZMS 260 140

LU 2

LU 1

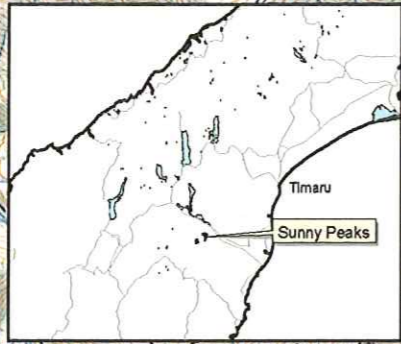
LU 5

LU 4

SUBUNIT 3a

SUBUNIT 3b

Sunny Peaks Values



Legend

- Sunny Peaks
- Awakino
- Ecological Values
- Landscape Values
- Recreation Value
- Historic Value

Scale 1:50,000

0 1 2 3 Kilometers

Map prepared: 5 June 2002
Topographical map sheet 1:50,000 NZMS 260 140

