



Crown Pastoral Land Tenure Review

Lease name : Peak Hill

Lease number : Pc 058

Conservation resources report

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

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

Copied March 2003

DEPARTMENT OF CONSERVATION REPORT TO KNIGHT FRANK LIMITED ON TENURE REVIEW OF PEAK HILL PASTORAL LEASE

PART 1 INTRODUCTION

Peak Hill is a relatively small (1,747 ha) pastoral lease located between the southern shores of Lake Coleridge and the Rakaia River.

The homestead is located on the Algidus Road some 9 km west of the Lake Coleridge Intake Road.

Peak Hill Pastoral Lease is located in the Coleridge Ecological District which was surveyed in 1990 as part of the Protected Natural Areas Programme (PNAP). The PNAP survey did not make any recommendations for protection on Peak Hill. A subsequent botanical report on the "Vegetation of the Shores of Lake Coleridge" did recommend that an area of forest and scrub at the eastern end of the lease be protected.

Peak Hill itself is a prominent landscape feature of the Upper Rakaia/Coleridge area. The lower slopes are intensively developed while the upper slopes are undeveloped but modified.

PART 2 CONSERVATION RESOURCE DESCRIPTION

2.1 Landscape Context

The bulk of the lease comprises the south-eastern-most 7km of the 17km long Mt Oakden/Peak Hill Range, from summit to base, the Lake Coleridge lake shore forming the north-east boundary of the lease. This is a very steep, glacially scoured, isolated mountain range located between Lake Coleridge and the Rakaia riverbed, and is a very prominent, dramatic and dominating feature of the upper Rakaia/Coleridge landscape. Peak Hill itself (1,240 masl) is entirely within the lease.

Part of the glacially smoothed downlands and a portion of riverflat between the range and the Rakaia riverbed, and between the range and Mt Algidus Road further east makes up the remainder of the lease. A large part of this lower altitude, easier relief area has been developed for intensive grazing, fodder crops etc. and contains the homestead area.

2.2 Landscape Character

Peak Hill pastoral lease can be grouped into 2 broad categories.

- i) **The Range** [Peak Hill Range (south and north aspects), Coleridge Face, and Lower South facing slopes]

The Mt Oakden/Peak Hill Range is very distinctive, isolated, hardrock greywacke "sugarloaf" mountain range trending NW-SE. It is dominant and very impressive landform significantly contributing to the special dramatic, glaciated character of the Rakaia/Coleridge landscape. The lease takes in the

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easternmost 7km of the range and includes Peak Hill in its entirety, being the highest point on the property at 1240 masl.

Within the lease area, the range landscape has a high degree of naturalness and intactness over its whole length. It is a distinctive and impressive landform, with its sheer steep slopes and glaciated surface, enhanced by the predominant tussock grassland cover virtually unbroken by visible human modifications. The aspect and altitudinal variation in the vegetation of the range is also of landscape interest.

ii) Downlands

This landscape category is predominantly all the land below 700m at the southern side of the property. This area includes river flats of the Rakaia, highly developed undulating slopes above the Rakaia River and dissected, hummocky landforms of glacial outwash which have been developed as farm land.

2.3 Geology and Landform

Peak Hill is a distinctive "sugarloaf" hill of hardrock greywacke. The lower slopes are covered with glacial outwash or till. The landform is distinctive and Peak Hill forms part of the Mt Oakden/Peak Hill Range. The NE slopes of Peak Hill rise steeply out of Lake Coleridge, while the SW slopes are gentler at the lower altitudes on the Rakaia side.

An earthquake fault line runs northwest-southeast through the property above Lake Coleridge.

2.4 Vegetation

Introduction

Nearly half of the Peak Hill consists of developed paddocks. The vegetation over the remainder of the property - on the slopes of Peak Hill and the north western extension of this hill system consists of short tussock grasslands, shrublands, tall tussockland and very small remnants of broadleaved trees.

Short Tussock Grasslands

Short tussocklands of fescue tussock, browntop, sweet vernal and hawkweeds are extensive over the Range Block. Low matagouri (< 1m) and bracken is scattered throughout as sparse individual bushes. In gullies and lower hillslopes bracken with matagouri forms thick patches making access very difficult around the lower hillslopes and to the lake - particularly in combination with the cliffed nature of the lakeshore.

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On the south facing slopes cotton daisy (*Celmisia spectabilis*) is present, in some areas reaching a cover of over 25%. The other main native species found in these short tussock grasslands are blue tussock, herbs of *Leucopogon fraseri*, *Raoulia subsericea*, occasional snowberry (*Gaultheria novae zelandiae*), harebell *Wahlenbergia albomarginata*, *Luzula rufa* and the native blue grass, *Elymus rectisetus*. Overall, however, the percentage cover is small compared with the introduced species (generally the % cover of intertussock species that are native is less than 10%)

On the shady, often damp, southfacing slopes of Peak Hill itself, matagouri is common in these tussocklands, particularly between 800-900m. At this altitude there are occasional scattered broad leaved snow tussocks (cover is less than 5%) with occasional blue tussock. Cotton daisy, bracken, and king devil hawkweed (*Hieracium lepidulum*) are the other most frequent species in these lower altitude shrub tussocklands, as well as the pink tendrils of exotic parasitic plants. Clover dodder *Cuscuta epiphyta*, is also conspicuous on these shady tussocklands and around on the eastern end of Peak Hill.

Tall Tussocklands and Shrub Tussocklands

On south facing slopes of the main Peak Hill block, above approximately 800m and on northfacing slopes above approximately 1,000m, snow tussocks begin making an appearance. The main species is broad-leaved snow tussock (*Chionochloa flavescens*) but on the very top of the hill and in upper slope hollows there are some sparsely covered areas of slim leaved snow tussock (*Chionochloa macra*). At mid-altitudes on the shady face the tussocks are mainly *Chionochloa rigida*. The Rakaia River is recognised as the possible northern boundary of *C. rigida*.

Higher upslope, on the midslopes between 900-1,000m, broadleaved snow tussock, fescue tussock and blue tussock increases in cover and matagouri becomes scattered. At altitudes above approximately 1050 to just below the summit, subalpine shrubs of turpentine scrub (*Dracophyllum uniflorum*), and mountain flax are increasingly dominant with snow tussock. The main ground cover species in these subalpine shrub tussocklands are cotton daisy, snowberry (*Gaultheria novae zelandiae*), tussock hawkweed (*Hieracium lepidulum*), *Raoulia subsericea*, fescue and blue tussock, browntop and herbs of catsear and *Leucopogon fraseri*.

On north facing mid-slopes above approximately 950m there is a reasonably extensive area of broadleaved snow tussock - covering much of the more gentle sloping hillslopes at the eastern end of Peak Hill. Here, the main inter-tussock species are cotton daisy, *Leucopogon fraseri*, *L. colensoi*, *Pentachondra pumila*, *Carmichaelia monroi*, fescue tussock, *Raoulia subsericea*, occasional golden Spaniard and exotics of catsear, king devil and tussock hawkweeds. On this north-eastern end of Peak Hill, in a depression in the undulating ice-scoured hillslopes and forming a mosaic within these broadleaved snow tussocks, is an area of slim leaved snow tussock (*Chionochloa macra*). The main intertussock species in these latter

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tussocklands are cotton daisy, blue tussock and abundant tussock hawkweed (*Hieracium lepidulum*) reaching a cover of around 30-40%.

On the broad rounded summit of Peak Hill slim leaved tussock is the main tussock species, but the tussocks themselves are very sparse - less than 5% cover although they are denser on the northern side of the fence. Rather, this area is a herbfield with scattered tussocks. The main vegetation cover is abundant cotton daisy (around 3-40% cover), *Leucopogon fraseri*, *Pentachondra pumila*, *Carmichaelia monroi* and occasional fescue tussocks.

Shrublands

Shrublands are not common on Peak Hill. They are mainly restricted to scattered shrubs amongst tussocklands, except at the eastern end of Peak Hill with matagouri. Also at this end, at approximately 950m altitude, is a small area of shrubland (<0.75 ha) on one side of a talus covered narrow gully or fault scarp (see map). The main shrub species are matagouri, *Coprosma propinqua*, *Corokia cotoneaster*, porcupine shrub, occasional manuka and yellowwood (*Coprosma linariifolia*) as well as bracken, golden Spaniard and climbers of bush lawyer (*Rubus schmidelioides*), *Clematis forsteri* and pohuehue (*Muehlenbeckia australis*).

Surrounding these are the herbfields and sparse snow tussocklands described above.

Below about 900m on these north facing slopes short tussock grasslands continue in most parts to the lake edge. Slopes are extremely steep and broken by long narrow erosion scars and bracken fernlands.

Immediately above the lake edge are small localised patches of shrublands and occasional forest trees occupying a narrow zone on very steep cliffed slopes. Matagouri and *Coprosma propinqua* are the most common shrubs, but there is also porcupine shrub, *Coprosma propinqua*, *Olearia aviceniifolia* and scattered bushes of kowhai, broadleaf, lancewood and cabbage trees. Frequent climbers on some of these trees and shrubs are hairy leaved bush lawyer *Rubus schmidelioides*, pohuepu *Muehlenbeckia complexa* and the mistletoe *Ileostylus micranthus* growing on kowhai and *Coprosma propinqua*.

The biggest remnant patch is on the south eastern extremity of the lease. It extends along the lake edge for approximately 500m. Here, along with the species already mentioned, are some marbleleaf, *Helichrysum lanceolatum*, *Coprosma linariifolia* and several rata trees hanging out over the water.

2.5 Fauna

Introduction

A thorough investigation of fauna was not undertaken as part of the field inspection. However, fauna encountered were noted. In addition, any existing

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resource information and the knowledge of local field staff and the lessee are incorporated in this report.

Bird species observed during the survey were:

- * bellbird
- * fantail
- * silvereye
- * harrier hawk
- * paradise shelduck
- * pipit

Other sources have observed bellbird, fantail and silvereye in the mixed angiosperm forest near Salmon Bay and the Coleridge PNA Survey report notes that "the scrub along the shore of Lake Coleridge (southern shore) is rich in forest and shrub dwelling birds."

Peak Hill adjoins the Rakaia Riverbed which is an important breeding habitat for several species of indigenous birds, namely wrybill, black-fronted tern, banded dotterel and black-billed gull.

Freshwater Fisheries

There are no significant watercourses within the pastoral lease. The biggest stream is Cardinal Stream which flows into the Rakaia River. There is no database information available for this stream.

Other streams in the vicinity are known to contain a range of native species, but due to its size and the modification of its surrounds it is unlikely to be an important fisheries habitat.

However, the pastoral lease bounds Lake Coleridge and the Rakaia River, both very important trout and/or salmon fisheries. These values may be affected by land use decisions made on Peak Hill, especially on the steep northern faces of the Range Block alongside Lake Coleridge.

2.6 Historic Values

No European historical sites are known to be of interest to DOC on the property. Maori history and sites have not been identified at this point and formal Ngai Tahu inspections still need to be carried out.

2.7 Existing Land Status

Peak Hill lies within the Selwyn District and is under the Selwyn Transitional Plan. Under this Plan the property is zoned Rural C and provides for extensive pastoral farming, recreation, tourism and tree planting. Appendix 2 of the Plan has

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identified 2 areas of significant natural conservation value on adjoining lands. Appendix 10 identifies the property as being in its entirety within an "Outstanding Landscape Area". The Plan identifies an earthquake fault line on the property.

2.8 Recreation/Access

Peak Hill is situated alongside popular recreation areas (Lake Coleridge, Rakaia River) but recreational use of the actual property is low. The lessees receive the occasional request for access to the Rakaia River and Lake Coleridge, largely by anglers.

Future recreational use is likely to continue to centre on the lake and the Rakaia River. Lake Coleridge is an important high country fishery, while the Rakaia's outstanding value as a salmon fishery is recognised in the granting of a NWCO for the river from source to sea. The river attracts salmon and trout anglers from throughout the country.

Access to Lake Coleridge's southern shores is limited between the intake and the head of the lake. Public access to the shingly beach with a bush backdrop (locally called Salmon Bay) on the eastern boundary of Peak Hill would enhance public use of the lake in this area.

Access along the shores of the lake within Peak Hill is very difficult, and in some places impossible, because of steep slopes and bluffs.

There are extensive views of the entire Coleridge Basin and the Upper Rakaia, Mathias and the Wilberforce Rivers from the Peak Hill Ridge. A ridgewalk across Peak Hill, and beyond it to Mt Oakden would be an attractive day trip. (See also section 2.1)

2.9 EXISTING MANAGEMENT

Weeds

Hawkweed is present over much of the property. Wilding pines are present on Peak Hill and some form of control will be required in the future.

Wild Animals

Some wild animals do occur in the area:

hare
rabbit
chamois

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PART THREE: CONSULTATION

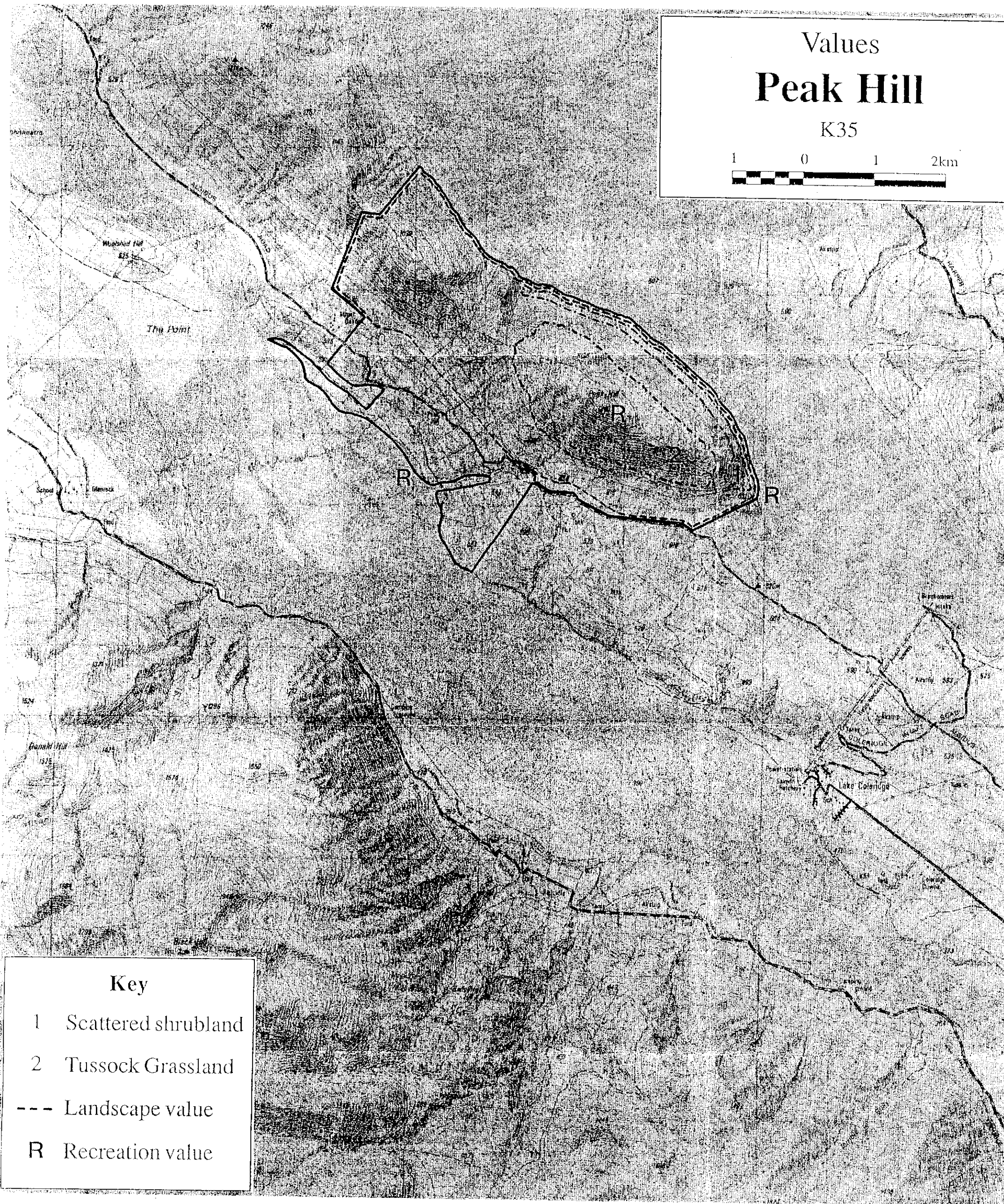
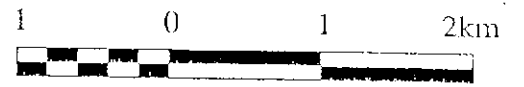
Peak Hill was discussed at a meeting with NGOs on 22 June 1995. NGO representatives had visited the property and proposed that the following values/areas be protected:

- Upper faces of Peak Hill above the 800m contour (north and south faces)
- Kowhai/broadleaf remnants along the lakeshore
- Protected strip along the lake edge - to protect existing vegetation and for possible access.
- No further burning of lakeside vegetation
- Protection of isolated shrub remnants in gullies (how to best achieve this?)
- Some restriction on grazing on southern slope of Peak Hill (seasonal grazing?)
- Legal access to and along the lakeshore (4 wheel drive club requested 4 wheel drive access to the lake and walking access along the lake. Other groups proposed walking access only).
- Legal access to Rakaia River (4 wheel drive club requested vehicle access to the river and along the river/lease boundary).

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Values Peak Hill

K35



Key

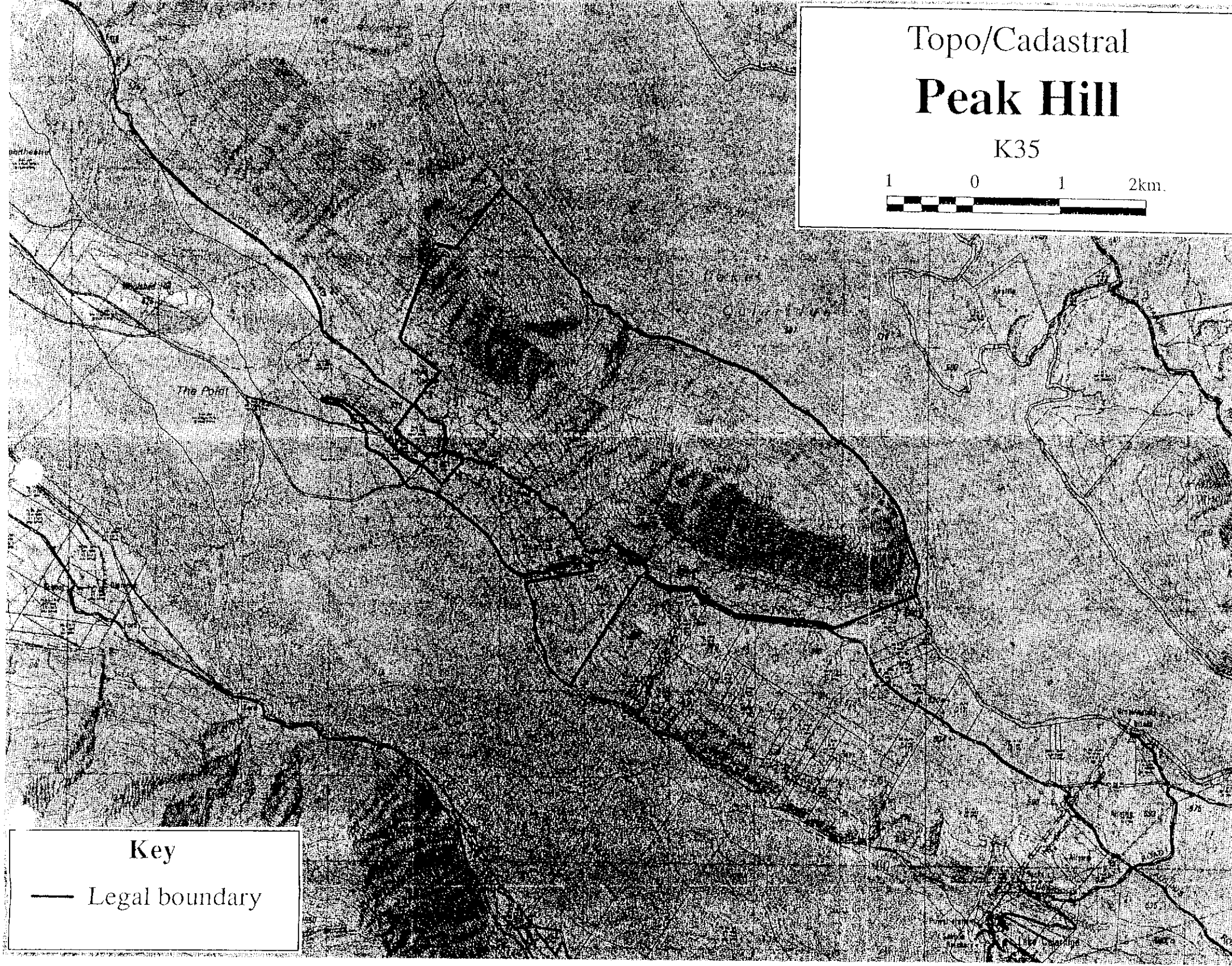
- 1 Scattered shrubland
- 2 Tussock Grassland
- Landscape value
- R Recreation value

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Topo/Cadastral

Peak Hill

K35



Key

— Legal boundary

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