

Crown Pastoral Land Tenure Review

**Lease name : Mt Peel
Lease number : PT 138**

**Lease name : Waikari Hills
Lease number : PT 137**

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 October 2002

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OFFICIAL INFORMATION ACT"

DEPARTMENT OF CONSERVATION REPORT TO KNIGHT FRANK LTD ON
TENURE REVIEW OF MT PEEL/WAIKARI HILLS PASTORAL LEASE
KNIGHT FRANK (NZ) LTD TIMARU

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Part 1: Introduction

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Mt Peel (2870 ha) and Waikari Hills (1880 ha) pastoral leases are run together by the Acland Family. The property is located west of the Rangitata Gorge road between Peel Forest and the Rangitata Gorge. It is run in conjunction with freehold land between the pastoral leases and the Rangitata River.

Further Pastoral lease land is located west of the property and to the South East lies Peel Forest Park. This conservation area is one of the most important along the Canterbury foothills and contains excellent podocarp forest and a rich bryophyte flora.

The property is in Orari Ecological District, a non-glaciated area of low mountains. The original vegetation of the District included beech forest, podocarp, podocarp-hardwood forest and alpine tussocklands. The District contains five Protected Natural Areas and these are summarised as follows:

Peel Forest Park Scenic Reserve - lowland podocarp/broadleaved forest, the best forest of its type in eastern central South Island. Raules Gully Scenic Reserve - mixed broadleaf, second growth forest and scrub. Orari Gorge Scenic Reserve - lowland second growth mixed broadleaf forest, with some kahikatea. Waihi Gorge Scenic Reserve - lowland mixed broadleaf forest. Hae Hae Te Moana Scenic Reserve - lowland mixed broadleaf forest with some lowland totara.

This tenure review survey was undertaken in late February/early March 1995 and early May 1995. Landscape, ecological, recreation/access and historic values were assessed and these are described in part II of this report.

Part II: Conservation Resource Description And Assessment of Significance

2.1 Landscape

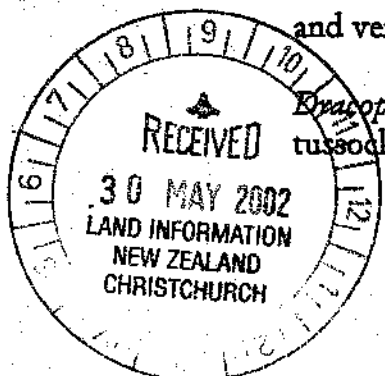
Landscape Character Types

Mt Peel and Waikari Hills comprise eight distinct landscape character types:

i) Mt Peel Range/Lynn River Catchment

Topography is rugged and dramatic, with exposed rock outcrops and bluffs, especially on Mt Peel itself. Stream valleys are deeply incised with small waterfalls, rock steps and very steep sides; lower tributaries are often gorged.

Dracophyllum shrubs and snow tussock dominate higher altitudes grading into short tussockland lower down. Regenerating broadleaf/hardwood forest is one of the most



04 November 1996

striking features of the catchment. It characterises lower slopes, gullies and associated rock outcrops.

The variety and contrast between its vegetation types and its rugged topography make this character type of significant landscape interest. The area has been little modified visually and has a high degree of apparent naturalness and intactness. The 4WD track below Long Spur is not particularly obvious, and the summit ridge track from the north is even less so.

ii) **Lower Horse and Mackenzie Spurs**

This area is less steep than other parts of the Peel Range and is characterised by "improved" short tussock grassland. Remnant forest and shrubland are present on the lower sideslopes of Lynn Stream and the front faces.

The area is of moderate naturalness with significant visual modification - semi-intensive grazing in fenced off blocks, two 4WD tracks, some gorse and broom.

iii) **Little Mt Peel Bush**

The valleys and lower slopes immediately North East of Peel Forest Park support an important area of regenerating forest which is integral to the Park. There are two 4WD tracks within or adjacent to it. There are direct views of the forest from the Rangitata Gorge Road.

iv) **Coal Hill Range**

This steep mountain range is less rugged than the Peel Range and contains the upper basin catchments of Chapmans Creek, Raules Gully and Boundary Stream. Upper slopes, spurs and summits are typically rounded and smooth, with rock outcrops and gorged streams lower down.

Snow tussock is the dominant vegetation, with *Dracophyllum* scrubs also being prominent.

With the exception of the fenced and tracked block north of Boundary Stream it is grazed as one block and has little fencing or tracking. Overall, the area has a high degree of apparent naturalness and intactness, contrasting sharply with the developed fans/slopes below.

The continuous grassland cover, extensive scale and lack of visible cultural modification creates an impressive landscape which is visually continuous with the mountains to the North West. Coal Hill itself is distinctive, with its pyramidal form and incised gully erosion.

v) **Coal Range Foothills**

These lower slopes of the Coal Range are subdivided into grazing blocks of improved short tussock grasslands, with associated matagouri. They comprise an unimpressive landscape.

vi) Stream Gullies

The lower, developed slopes of Waikari Hills are bisected by three prominent stream gullies. They typically have a rather sparse riparian community of native shrubs. Boundary Stream and Raules Gully have a moderate to high degree of apparent naturalness, especially in contrast to the adjacent developed land. Both valleys are easily visible from the Gorge Road.

Middlestream valley is more modified, having less shrubland and being subject to more intensive grazing. It is totally surrounded by "improved" or cultivated land.

The Boundary Stream Valley rock bluffs near the Rangitata Gorge Road, the Gorge section near its confluence with the Rangitata, and the riparian shrubland and bluffs of the Stream are all interesting visual features.

vii) Developed Paddocks

These are found on the fans and terraces of the lower Coal Range and on either side of the Gorge Road immediately north of Peel Forest Park. Coniferous shelter belts edge some of the "improved" or cultivated paddocks.

At the northern end of Waikari Hills, there is a small but interesting area of moraine hummocks with dense matagouri and modified short tussock. A small remnant podocarp forest is visible close to the Gorge Road a little south of Lynn Stream. More extensive regenerating forest is present to the west of Lower Valley slopes.

viii) Outwash Terraces of Rangitata River

A flight of large and impressive terraces between Boundary Stream and Raules Gully. The terraces are semi-intensively grazed and have a low cover of short tussock, grassland and some shrubs. Their low cover means that the full sweep of terrace edges and the open character of the area can be readily appreciated.

2.2 Landforms and Geology

The property is within the non-glaciated Orari Ecological District. It is dominated by low mountains of greywacke and argillite of moderate induration.

On Mt Peel Pastoral Lease, there is a small area of glacial till underlain by subdued morainic topography and outwash gravel adjacent to the Rangitata River. On Waikari Hills, there is outwash gravel and some till around the middle reaches of Raules Gully. At the far NE tip of Waikari Hills there is another area of till and associated youthful moranic topography.

A fault line trending NW/SE runs through the lower parts of Waikari Hills, through Mt Peel freehold to the Rangitata River. Associated with this are some small areas of limestone, siltstone and sandstone on Waikari Hills Pastoral Lease.

The mountains of Waikari Hills are moderately steep with some incised gullies and minor rock outcrops. The mountains of Mount Peel are generally steeper, more dissected and jagged, scree and rock outcrops are prominent, especially on Mount Peel itself.

There are no geopreservation sites on either property.

2.3 Climate

Being located on the eastern edge of the Canterbury foothills, the property is affected by weather from several directions. Strong North West winds are common, though rainfall from that quarter is infrequent. In contrast, much of the precipitation comes from the south as southerlies sweep up the eastern coast. Easterly conditions can also bring rain, and low cloud and mist are common. Rainfall in the Ecological District varies from 1000-2800mm.

These factors are significant for two reasons. The first is that the moist climate provides suitable conditions for a relatively diverse bryophyte flora. The second is the rapidity with which weather changes occur from the south. Within a matter of minutes, it is possible for the weather to change from a pleasant, sunny day to very cold and sometimes severe conditions. This poses hazards for recreational users, particularly at higher altitudes or in exposed localities.

2.4 Vegetation

The vegetation of the property is summarised below for each pastoral lease, as they are geographical entities with some distinct vegetation differences.

Geographical Summary

Mt Peel

Unnamed Stream Catchments (SE of Lynn Stream)

- Narrow-leaved snow tussocklands, generally in good condition
- Short tussock grasslands at lower altitude, typically OSTD and more intensively grazed.
- extensive *Dracophyllum* shrublands reflecting wet environment.
- regenerating mixed shrublands and associated flax and fernlands
- second growth broadleaf/hardwood forest in gullies and on lower slopes (especially south-facing)
- scattered pockets of podocarp in the east.

Waikari Hills

- Narrow band of slim-leaved tall tussock at higher altitude, in very good to exceptional condition.
- Extensive narrow-leaved snow tussock at mid altitude in very good to excellent condition.

- Fairly extensive short tussock grassland at low altitude, most OSTD and more intensively regenerating mixed shrubland, particularly in Boundary Stream; associated flax and fernlands.
- *Dracophyllum* shrubs on southerly aspects at mid altitude (less than at Mt Peel).
- Scattered mixed grey shrubs and matagouri at lower altitude, often stimulated by topdressing.
- Mountain ribbonwood in upper gullies and associated with unstable sites.

Community Descriptions

i) Slim-leaved Snow Tussock

Slim-leaved snow tussock (*Chionochloa macra*) occurs at alpine levels as a narrow band along the top of both pastoral leases. It is generally in very good to exceptional condition. Tussock density can be as high as 90% though is generally between 40 and 80%. Reflecting the density of cover, indigenous species diversity is low and exotic species are infrequent - at times no hawkweeds were recorded. Other prominent plants occurring in these communities include the daisies *Celmisia spectabilis*, and *C. lyalli*, mosses, lichens, *Anisotome aromatica*, *Uncinia* spp. (hookgrass), *Luzula* spp (woodrushes) and blue tussock (*Poa colensoi*).

Overall, naturalness is high. Grazing effects are minimal, except on summit ridges and knolls. In these areas, tussocks are more scattered and the vegetation is dominated by low-grazing plants more resistant to grazing e.g. a serpentine shrub (*Dracophyllum pronum*), a daisy (*Celmisia sessiliflora*), *Anisotome flexuosa*, *Phyllachne rubra* and *Kelleria dieffenbachii*.

ii) Narrow-leaved Snow Tussock

Narrow-leaved snow tussock (*Chionochloa rigida*) dominates much of the two pastoral leases between upper montane and alpine zones. They would have been more widespread at lower altitude in the past but only scattered tussocks now remain in short tussock grasslands. Their distribution has been extended through the removal of forest and scrub, mostly by burning.

In these communities, tussock density is generally 20-50% being least on ridges where stock grazing is greatest. At moister sites, especially on the eastern side of Mt Peel Pastoral Lease, these communities have an obvious shrub component. Here, *Dracopyllum* comprises up to 15% of ground cover and other prominent plants include snowberries, (*Gaultheria* species) *Myrsine nummularia*, Golden Spaniard (*Aciphylla aurea*), mountain flax (*Phormium cookianum*), *Celmisia spectabilis* (a daisy) and a fern

(*Blechnum* mountain³). Hawkweeds and exotic grasses are uncommon and naturalness is moderately high to high.

On sunny slopes, prominent species include *Celmisia spectabilis*, blue tussock, golden spaniard, *Festuca novae-zelandiae* (hard tussock), *Festuca mathewsii* (alpine fescue tussock), *Raoulia subsericea* (a scabweed), *Leucopogon colensoi* (a heath), sweet vernal (*Anthoxanthum odoratum*) and *Hieracium pilosella*. With the influence of grazing, exotic species are more common, though naturalness is still moderate to moderately high.

iii) Short Tussock

Where forest and regenerating shrubland is absent at lower altitudes, hillslopes are dominated by modified short tussock grasslands. Most areas have been OSTD, or contain clover as a result of stock use. Introduced grasses are common e.g. browntop, sweet vernal, cocksfoot and Yorkshire fog.

Silver (*Poa cita*) and fescue tussock occur at most sites, while matagouri (*Discaria toumatou*) and *Coprosma propinqua* are often present. *Olearia virgata* (a shrub daisy) is sometimes present on terraces.

iv) Forest

On Mt Peel Pastoral lease, mixed broadleaf/hardwood forest characterises east-facing slopes above the Rangitata Gorge Road, and most lower valley sideslopes e.g. Lynn Stream. In valleys, forest is more extensive on southern, shady slopes and rather restricted on sunny slopes except for some kowhai groves.

Dominant trees include Mahoe, wineberry, putaputaweta, pokaka, broadleaf and the occasional kahikatea. In other localities, lemonwood, kowhai and kaikomako are present. Subcanopy trees and shrubs include tree fuchsia, *Coprosma rotundifolia* and pepper tree. Scramblers include bush lawyer, *Muehlenbeckia australis* and *Parsonia capsularis*. The ground surface is dominated by ferns e.g. *Polystichum vestitum*, *Asplenium bulbiferum*, *Blechnum chambersii*, *B. fluviatile* and mosses.

On alluvial flats, a wetter community comprising emergent kahikatea and mature lancewoods can be found.

The condition of these forests is variable. Where they are adjacent to grasslands, the understorey is often open and well tracked by cattle. Elsewhere regeneration is good, despite the presence of deer.

Previous investigations of the Lynn catchment by Dr Brian Molloy have also been undertaken (Pers. comm, April 1995). He considers the Lynn a key catchment, being transitional between inland mountain beech and the lowland podocarp of the upper plains and terraces. Small pockets of mountain totara, the original forest, also occur and lowland totara is present lower down in the catchment. Being drier, the Lynn has less

diversity of mosses and ferns compared to Peel Forest, but their populations and diversity increase again in the headwaters due to rainshadow effects.

In adjacent freehold, forest remnants occur as small patches or ribbons in gullies. The main exceptions are the true left of the Lynn which is forested, the east-facing slopes immediately north of the Lynn and the gullies behind the homestead.

A little South West of the Lynn on a terrace of the Rangitata is a tiny remnant of highly modified podocarp forest. It contains matai, totara, kahikatea and the hardwoods, lemonwood, ribbonwood, broadleaf, putaputaweta, kaikomako, tree fuchsia and lancewood. The forest floor is very open and modified by stock though mahoe and kowhai regeneration is extensive.

v) **Shrublands and Scrub**

These communities which are regenerating into broadleaf/hardwood forest typify many middle and upper stream valleys and gullies. Typical species present include broadleaf, *Myrsine divaricata*, *Olearia arborescens*, *O. avicennifolia*, *O. virgata*, five and three-finger, *Hoheria lyallii*, *Hebe* spp, *Dracophyllum* spp, *Coprosma* spp, *Aciphylla* spp, mountain flax, *Gaultheria crassa* and tutu. The ferns *Polystichum vestitum*, *Blechnum capense* and *Phymatosorus diversifolius* are widespread.

Mountain totara and rata were recorded at one rock outcrop.

Mixed grey shrubland is common on lower valley slopes, river terraces, talus patches and OSTD fans.

Brian Molly considers the Lynn to contain one of the largest populations of the threatened Canterbury Pink broom, *Notospartium torulosum* (several hundred).

Dracophyllum shrubs are widespread in damper areas at subalpine levels, and are densest at the South East end of Mt Peel Pastoral Lease. Locally they can comprise up to 50-60% of ground cover.

vi) **Other Communities**

Alpine communities were not visited on Mt Peel because of poor weather but are considered important. An endemic Edelweiss occurs among rock outcrops (B. Molloy, Pers Comm) and other typical plants on bluffs include *Hebe buchananii*, *H. pinguifolia*, *Helichrysum selago* and the curious vegetable sheep, *Raoulia eximia*.

Scree plants include *Cotula atrata*, *Neopaxia australasica*, and an *Epilobium*.

Wetland seep and flushes occur in the subalpine and alpine zones below Coal Hill. Prominent plants include *Schoenus pauciflorus*, mosses, comb sedge (*Oreobolus pectinatus*), *Capha alpina*, *Gnaphalium mackayi* and *Hebe* sp.

2.4. Flora

An Edelweiss endemic to Mt Peel is present on Mt Peel Pastoral lease, though according to Brian Molly, the best populations are on the neighbouring Lochaber lease. The threatened Canterbury pink broom occurs here, the Ecological District being its southern limit. He also notes that the Lynn catchment contains *Olearia fragrantissima*, *Hebe amplexicaulis* and several unnamed taxa, and that it is "floristically very interesting". *Olearia fragrantissima* reaches its western limit in this Ecological District, while *Helichrysum plumeum* reaches its eastern limit here.

2.5 Fauna

While no systematic faunal survey was undertaken, observations were made of birds and lizards and two fish traps were set in boundary stream. Cold, wet and cloudy conditions limited faunal observations generally.

2.5.1 Birds

Eight native bird species were observed in forest and shrublands and two in tussocklands. They were:

- South Island Fantail (*Rhipidura fuliginosa*)
- Tomtit (*Petroica macrocephala macrocephala*)
- New Zealand Pigeon (*Hemphaga novaeseelandiae novaeseelandiae*)
- Silvereye (*Zosterops lateralis*)
- Rifleman (*Acanthisitta chloris chloris*)
- Bellbird (*Anthornis bicinctus bicinctus*)
- Grey Warbler (*Gerygone igata*)
- Pukeko (*Porphyrio melanotus*)
- White-faced Heron (*Ardea novaehollandiae*)
- Harrier Hawk (*Circus approximans gouldi*)

The threatened Blue duck was recorded as breeding in the Lynn by New Zealand Wildlife Service. Additional species were also reported in the Forest Park adjacent and could be expected to be present at times in the Lynn e.g. New Zealand falcon, (*Falco novaeseelandiae*) Tui, (*Prosthemadera novaeseelandiae*), Kingfisher (*Halcyon sancta*), Shining cuckoo (*Chrysococcus lucidus lucidus*), Long-tailed cuckoo (*Eudynamis taitensis*), Grey duck (*Anas gibberifrons gracilis*), Morepork (*Ninox novaeseelandiae novaseelandiae*) and Welcome swallow (*Hirundo tahitica neoxena*).

Overall there appears to be moderate to high populations of New Zealand Pigeon and Bellbird in the forest and shrublands, and there are a wide diversity of bush birds present.

Forests and shrublands in the Lynn and elsewhere on the property have a combined value as habitat for birds, particularly in relationship to Peel Forest nearby. In this regard, corridors and connections between areas are important.

The Central South Island Fish and Game Council note the presence of Californian quail and Pheasant (minimal numbers) on Mt Peel Pastoral Lease. Waterfowl noted were Mallard duck,

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Grey gecko, paradise duck, and Canada goose. The latter four were also recorded on Waikari Hill.

Reptiles

The common grey gecko (*Hoplodactylus maculatus*) was observed on rock outcrops in the upper reaches of Lynn Stream catchment. No skinks were observed, though conditions were cool.

2.5.3 Fish

Two koaro were caught in Boundary Stream (freehold) together with unidentified bullies and an eel. Of the waterways in the pastoral leases, the Lynn is likely to contain the greatest species diversity. Expected species include common river galaxias, long-finned eel, upland bully, alpine galaxias, and possibly long-jawed galaxias and torrent fish. Brown trout and salmon may be present if accessible.

The Central South Island Fish and Game Council have highlighted the importance of the Rangitata as a sports fishery, and they note that spawning takes place in Boundary Creek, Raules Gully and Lynn Stream.

2.6 Historic Values

Mt Peel Station is one of the oldest high country runs and has been owned by the Acland family from the outset. The Mt Peel homestead was built in 1865, using pit-sawn timber from Peel Forest and bricks made on the property. It has been gifted to the Historic Places Trust by the Aclands.

The Church of the Holy Innocents was also built from local materials and is located near the homestead.

No information about Maori cultural values was available at the time of writing this report.

2.7 Existing Land Status

Mt Peel/Waikari Hills is bounded by pastoral lease land to the north-west, and Peel Forest Park Scenic Reserve to the south. East of the pastoral lease is Mt Peel/Waikari freehold and further freehold NE of the property.

There are marginal strips on the true right of Boundary Stream from Waikari Hills Pastoral Lease to the Rangitata, and down the true right of the Rangitata to just past Raules Gully. Beyond here, AMF rights are presumed to exist to the centreline of the river, and also in the lower reaches of Lynn Stream.

An unformed legal road extends from the Rangitata Gorge Road up the NW side of Waikari Hills Pastoral Lease, almost to Coal Hill. Three unformed legal roads extend from the Gorge Road to the Rangitata River - two adjacent to Mt Peel Pastoral Lease and one through freehold.

2.7.1 District Plan Provisions

Waikari Hills Pastoral Lease is entirely within the Rural 3 zone of the Proposed Timaru District Plan (October 1995). This zone covers areas of high natural value where inappropriate use or development might impact on these values.

Permitted activities include public or private land used for conservation or amenity purposes, home occupation and mining up to 5000m³ in one year.

Controlled activities include accessory buildings for conservation purposes and restoration programmes. Discretionary activities include pastoral intensification, clearance of indigenous vegetation, roading, shelter belts and forestry. There are specific performance standards for all activities in this zone relating to sunlight, visual amenity and noise.

Mount Peel Pastoral Lease is covered by the Mackenzie Country District Scheme (March 1986). An apron around Mount Peel is in the Rural 2 zone, the remainder of the property being part of the rural 1 zone.

Rural 2 covers erodible high country and is designed to assist water and soil conservation. Predominant uses include protection/amenity forestry, reserves and periodic grazing, where it is in accordance with an approved management plan.

Rural 1 is a general farming zone, where predominant uses include pastoral farming and commercial forestry up to 50 hectares. Conditional uses include forestry > 50 hectares, but these will now be subject to Section 104 and Part II of the Resource Management Act.

2.8 Recreation and Access

Both pastoral leases are used for recreation. Mt Peel is visited frequently along the ridge from Little Mt Peel, and trampers also access it up Long Spur using Parson Stream Hut. Lynn Stream catchment is used by casual walkers and trampers, and in a more organised way by school groups based at the local Outdoor Pursuits Centre. There is an annual Mountathlon over Little Mount Peel and down Horse Spur.

On Waikari Hills, there is an annual Mountain bike race over Coal Hill from nearby Coal Hill Station. 4WD tracks in this vicinity are used regularly by mountain bikers.

Recreational use also occurs on freehold land below the pastoral leases. On Waikari Hills, a few anglers access the Rangitata via Boundary Stream, and access is also used on the northern side of Raules Gully to the Rangitata. Commercial rafting operations through the Rangitata Gorge use freehold land to pull out, and to put in for the Klondyke Run. On Mt Peel, the

4WD track leading to Long Spur Hut is used as is the Lower Lynn Stream to the Rangitata River.

Long Spur Hut is used recreationally. Its location is of some strategic importance in relation to any future additions to the forest park.

2.8.1 User Issues

The presumption of AMF rights along the true right of the Rangitata River effectively means there is no legal public access beyond the marginal strip referred to in 2.7. Refer also the Topographical/Cadastral Map.

2.9 Existing Management

Grazing

Above upper montane levels, sheep are generally having little impact on the tussocklands except on accessible spurs and tops. At higher altitude, it is apparently at least partly a result of stock movement from the adjoining pastoral lease.

Cattle browsing is adversely affecting forest and shrubland regeneration in some localities.

Weeds

There are few wilding conifers currently present, but those likely to cause further spread should be removed to prevent wilding spread becoming a problem, e.g. the South East corner of Mt Peel Pastoral Lease. Gorse and broom (in particular) require control above the bushline and should be undertaken from upper levels first e.g. Horse Spur. A more detailed assessment is required to determine if there are other key sites or areas requiring attention.

Sycamores were noted on the eastern periphery of Mt Peel Pastoral Lease and a more detailed assessment may be needed to determine if control measures are required. Himalayan Honeysuckle is quite widespread and requires assessment to determine if any control is required.

Wild Animals

Deer and possum control will be necessary to ensure populations are kept to minimum levels.

Part III Consultation

A meeting with NGOs was held to discuss Mt Peel/Waikari Hills and a submission was made by the Central South Island Fish and Game Council. The submission is attached in appendix 1. The main points which emerged were:

- The significance of the Rangitata as a sports fishery.
- The desirability of improving and formalising access to and along the Rangitata River via Raules Gully, Boundary Stream, Chapmans Creek and Lynn Stream.