

Crown Pastoral Land Tenure Review

Lease name : BLAIRICH

Lease number : PM 026

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.

Note: Plans which form part of the Conservation Resources Report are published separately.

These documents are all released under the Official information Act 1982.

July

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DOC CONSERVATION RESOURCES REPORT ON TENURE REVIEW OF
BLAIRICH PASTORAL LEASE

PART 1 INTRODUCTION

- 1.1 The Blairich Crown Pastoral Lease covers 3172 hectares on the northern flanks of the Blairich Range, in the Awatere Valley in Marlborough. Included in the lease is the southern side of the Blairich River catchment, part of the Omaka catchment and alluvial terraces of the Awatere River.

Land adjoining to the north and east is freehold. Easements are held across Blairich by two of the freehold properties to the north and east. To the south-west is the Black Birch Scenic Reserve. On the western boundary are Ramshead Crown Pastoral Lease and the Ferny Gair Conservation Area.

The Blairich pastoral lease straddles the boundary of two ecological districts (and two ecological regions)- the Wither Hills Ecological District (within the Wairau Ecological Region) and the Waihopai Ecological District (within the Inland Marlborough Ecological Region) (McEwan 1987). Both ecological districts encompass areas of Mesozoic greywacke mountains but the Waihopai Ecological District covers an area of high mountains with a continental-type climate, whereas the Wither Hills Ecological District covers an area of dissected hill country with low rainfall and extreme summer desiccation. Only a small part of the property (the area north of the Blairich River and Glen Craig Stream) lies within the Wither Hills District. The property is clearly a transition area between these two ecological districts (and regions) and supports plant communities and animals representative of both districts.

No reserves are listed for either of these ecological districts in the Register of Protected Natural Areas (Department of Lands and Survey 1984). The Black Birch Stream catchment (Black Birch Scenic Reserve) and the headwaters of the Omaka River (both within the Waihopai District) are now administered as public conservation land. There are no protected public lands in the low dissected hill country north of the property (in the southern part of the Wither Hills District) or in fact anywhere between the property and the Marlborough coastline to the northeast. The property lies at the edge of a large area of relatively-unmodified mountain country, but represents one of the very few areas of low-altitude country in this part of Marlborough that is not in freehold ownership.

PART 2

INHERENT VALUES: DESCRIPTION OF CONSERVATION RESOURCES AND ASSESSMENT OF SIGNIFICANCE

2.1 Landscape

Visually, the property is dominated by the Blairich Range, which divides the Blairich catchment from the Black Birch catchment to the south. Although it is offset by the foothills it is prominent range from the flat front country, and it forms the major southern backdrop when viewed from the Blairich Valley. Blairich peak is a dominant summit in this part of Marlborough, especially from the Wairau and Waihopai valleys. For travellers on the Awatere Valley road, the modified flat pastures and lower foothills are readily visible, with the steep Blairich and Black Birch Ranges behind. For visitors to the back part of the property the less-modified grasslands, shrublands, and forest remnants on the steeper slopes form the main view. Even the low country in the Blairich and Omaka catchments is broken and dissected and aesthetically interesting. The alpine ridge of the Blairich Range is particularly scenic, with prominent rock outcrops and spectacular vistas.

The prominent fault (the 'Blairich Fault') that traverses the northern slopes of Blairich Range is an interesting landscape feature. The fault forms an obvious bench, which has been utilised for both fencing and roading, and which divides the steep upper slopes of the range from the gentler slopes leading down to Blairich Stream. The bluffs and steep ridge-lines of Hooper Ridge and Newport Knob are also obvious landscape features, providing interest and complexity to the lower-altitude landforms.

Landscape units

For the purposes of this report the landscape of the run has been subdivided into 20 units. The first eight make up the "Home Paddocks" and the remaining twelve form the "Backblocks". While the boundaries between some of them are quite distinct, the boundaries of others are more appropriately considered as zones of transition.

A description of the existing character of each unit follows.

*The "Home Paddocks" (Units 1 to 8)*Units 1 to 4

These comprise flat river terraces and narrow terrace-edge scarps on the floor of the Awatere valley, around 150 to 200 metres asl.

Unit 1 lies in the bed of the Awatere river, and it is flat, with shingly soils and exotic riverbed weeds predominant. It is bounded on the east by the river channel and on the west by a terrace edge. Unit 2 comprises three narrow terraces and their scarps, overlooking the river. These are intensively grazed paddocks, with fences, power lines and a house.

Units 3 and 4 comprise a couple of higher terraces. Unit 3 is the location of the operational centre of the property, including the homestead, yards, woolshed and associated outbuildings. These sit in a setting of exotic trees, which extends back to and along the terrace edge that forms the western boundary of the unit. Unit 4 is a large area of flat terraces, well fenced and intensively grazed, with pine shelter belts and power lines crossing it, and at least one hay barn. The unit is defined by the Awatere Valley Road to the south, the base of the hills to the north, the terrace edge down to Unit 3 in the east and the terrace edge above Black Birch Stream to the west.

Units 5 to 7

These units cover the rounded hill rising to 500 metres asl on the north side of the valley immediately to the east of Black Birch Stream. There is a topdressing airstrip on the summit and the slopes are intensively grazed. A couple of farm tracks give vehicle access over the hill. Most of the land has an easy contour, is well fenced and has the character of downlands.

Unit 5 faces south and overlooks the river flats. Unit 6 faces west, into the Black Birch Stream valley, and Unit 7 is mainly north-facing.

Unit 8

Unit 8 comprises a small area of south-facing slopes running down from the eastern tip of the Blairich ridge. Its character has more in common with the "Backblocks" units, but its location and orientation in relation to the Awatere River put it into the "Home Paddocks". It rises to 680 metres asl on the ridge at the western corner, and runs down to the Blairich River (200 m asl) at its base. A farm track runs across its slopes to the ridgeline.

The Backblocks (Units 9 to 20)

Unit 9

This unit is an area of river flats and gentle toeslopes formed upstream of a "notch" where the Blairich River turns south-east towards the Awatere Valley. It comprises flat land and bounding gentle outwash slopes. Seepages from the adjacent slopes form small wetland areas, modified by grazing and pugging, and a few scattered willows mark the course of the river. A farm track runs through it, and passes a corrugated iron shed next to a set of yards.

Units 10 to 15

These are the north facing slopes of the Blairich Range. Most of the ridge itself is gentle and rounded, but the mid-slopes are steep and rugged, with rocky bluffs and creeks cut down in gorges, especially in Units 13 and 15 at the western end of the property. In contrast, the bases of the slopes run out into the undulating land shown as Unit 11.

Two farm tracks cross these slopes, one traversing the upper slopes while the other follows through a series of saddles just below the boundary between the steeplands of Units 12 and 13 and the gentler country in Unit 11.

Unit 10 is at the eastern end of the range, and rises from 300 metres asl to 800 metres asl. The contour is steep but regular, with few bluffs. Unit 11 runs along the foot of the range. It is a rolling landscape of low hills bounded to the north by the Blairich River and to the south running up to the steeper mid-slopes of the Blairich Range. Most of the contour is gentle, and it includes a line of gentle saddles near the southern boundary, through which runs the lower farm track. Almost all of this unit is between 300 and 800 metres asl.

A cob-walled musterers' hut is set amongst mature exotic trees in the northern corner of Unit 11. Units 12 and 13 cover the most rugged part of the farm, being a series of rocky gullies and spurs running down the midslopes of the range. The upper boundary of these units generally follows the top of a line of bluffs, which mark the change from the gentler tops of the range and the rougher, steeper midslopes.

These midslopes have been split into two units. The western part, in Unit 13, is steeper and more rugged. It has an upper boundary rising from around 1,000 metres asl in the east to around 1,300 metres asl in the west, and its lower boundary is around 750 metres asl in the east, rising to around 1,000 metres asl in the west. Much of Unit 13 has a mountainous character, with bluffs and rock outcrops. While steep, Unit 12 is not as wild and rugged as Unit 13, and it includes more rounded slopes running between the tops and the valley.

Unit 14 is the most alpine area, with an elevation between 800 and 1,300 metres along its lower boundary, rising to 1,500 metres at the summit of Blairich. It is regularly swathed in cloud, and a significant proportion of the vegetation is native tussock and alpine plants. It would appear from similar slopes in the locality that 1,100 metres asl is approximately the upper limit for kanuka to regenerate into a dense cover. The bottom of this unit is thus likely to be close to the bushline that might evolve if the land were left to regenerate into kanuka.

Unit 15 is a mid-slope valley system at the western end of the farm, beyond Newport Knob, and is the wildest part of the property. It has a steep contour with rock outcrops. The south-facing slopes are clothed in dense kanuka regeneration, forming the only large area of dense native woody vegetation on the property.

The vegetation of Unit 14 is dominated by silver tussock (*Poa cita*), and this native grass is also widespread in the other units, although it is increasingly being replaced by exotic grasses at lower altitudes. The native component throughout the "Backblocks" is predominantly tussock rather than kanuka regeneration, which gives the land a distinctly pastoral character, especially since most of the tussock is well below the natural upper limit of beech forest or of kanuka regeneration.

Units 16 to 20

These units are the slopes of the Hooper Ridge and Newport Knob. Their slopes range between steep and rolling country and are predominantly in extensive grazing, with widespread silver tussock and scattered regenerating native trees, especially on shadier slopes.

Unit 16 comprises mainly north-facing pastoral slopes rising as high as 976 metres asl on Newport Knob, and Units 17 and 19, rising to the Hooper Ridge at around 750 metres asl, have a similar pastoral character. Unit 18 has a more rugged landform, with several towering knolls. Unit 20 is generally steeper, with bands of rocky bluffs, but it too is predominantly pastoral, with only scattered regeneration of native trees and shrubs.

There is a musterers' hut in the northern corner of Unit 17.

2.2 Landforms and geology

Basement rocks of the Blairich Range are comprised of highly folded and contorted greywackes and argillites formed from sediments deposited in the New Zealand Geosyncline during the Jurassic Period. Collectively known as the Torlesse Group, this series includes concretions, rare conglomerates, limestone bands, igneous dykes, and extrusives (DSIR 1963). Igneous rocks outcrop on the steeper slopes below the summit of Blairich, otherwise the rocks are predominantly weathered greywacke and argillite. On the exposed summits of the Blairich Range there are areas of open rock pavement with solifluction stripes, and a remnant cirque, listed as an important geological site in the New Zealand Geopreservation Inventory (Kenny and Hayward 1993). The alluvial flats of the Awatere Valley are comprised of glacial outwash gravels from the Otira Glaciation, and more recent local fan gravel and silt.

The Blairich Range borders one of the most tectonically active areas in New Zealand (the main Kaikoura Ranges), with high rates of uplift and active fault movement. The property rises from 200 metres in the Awatere Valley to 1500 metres at the Blairich summit, over a distance of less than 10 kilometres. The major Awatere Fault follows the northwestern edge of the Awatere Valley flats, at the base of the eastern slopes of the Blairich Range, dividing the flat alluvial part of the property from the steeper Blairich Range and catchment. A smaller side fault (the 'Blairich Fault') tracks up the Blairich River valley across the base of the steep slopes of the Blairich Range, approximately along the line of the existing road and fenceline, sidling the range and forming the small saddle south of Newport Knob (DSIR 1963).

A significant area of flat land (c.450 ha.) is present on the alluvial flats in the Awatere Valley, and gently-contoured land is present on the lower slopes alongside the Blairich and Omaka Rivers. Otherwise the land on the property rises steeply to the Blairich Range and the smaller Hooper Ridge.

Soils

Steeper parts of the property, particularly below Blairich summit, are dominated by weathered rock ridges and bluffs with shattered-rock pavements on gentler upper ridges. Screes are confined to very localised areas on the steep upper slopes. The steeper mid-altitude country (above the 'Blairich Fault') supports weakly developed steep-land yellow-brown earths (Gibbs 1980) or bare ground. These Class VIIe soils are prone to moderate to severe sheet and gully erosion and generally support short

tussock grassland associations. Below about 800 metres are Class VIe Kaikoura yellow-brown earths which are prone to moderate sheet and soil slip erosion. These soils generally have a better vegetative cover of short tussock, scattered shrubland, or modified pasture. The alluvial 'front' country supports soils with only negligible to slight potential for erosion and a cover of high-producing pasture.

2.3 Climate

Blairich experiences a typical Marlborough mountain climate with relatively low overall rainfall figures but a large variation in temperature, rainfall and sunshine hours with altitude. Long-term climate records have been taken from the top of Black Birch (at 1400m asl), the range immediately south of the Blairich Range. Average rainfall at Black Birch is 1400mm, with most rain coming from the north-west, although south-easterly winds with rain do get as far inland as Blairich. Rainfall at the homestead is approximately 900mm (an estimate taken by comparing climate records from the Jordon station further up the Awatere Valley). Mean annual and daily temperature range at Black Birch is much less compared to lowland sites such as at the homestead. Generally lower temperatures are recorded, with lower maximum and minimum values. There is a high incidence of frost – average of 77 days per year, with no month being completely frost free. High number of days of fog (av. 178 per year) mean consequently lower sunshine hours than Blenheim – 2141 hours at Black Birch compared with Blenheim at 2470 hours. Black Birch is also an extremely windy site with high average wind speeds, plus a high incidence of gales, generally from the north and north-west, but occasionally from the south.

2.4 Vegetation

Vegetation History:

Early European accounts of the vegetation of the Awatere Valley (Kennington 1978) suggest that pre-European fires had removed most forest cover from the valley. Molloy (1977) concluded from a study of charcoal deposits that fire was an occasional natural phenomenon throughout the eastern South Island, with two periods of widespread burning about 6000 and 2500 years ago. More frequent burning during the last 1000 years is recorded from the Seaward Kaikoura Range (Wardle 1971) and probably also occurred in the Awatere Valley. Most forest at lower altitudes was probably removed during Maori times and it is likely that a mix of grassland, shrubland, and regenerating forest dominated the Blairich catchment when the first European pastoralists ventured up the Awatere Valley in the 1860s. At this time the Awatere Valley flats probably supported a mosaic of short tussock grassland and shrubland. Repeated burning in the early years of pastoralism would have further reduced forest and shrubland cover, and eventually eliminated most snow tussock grasslands.

Forest cover on Blairich is now confined to small, but strongly regenerating mixed hardwood forest remnants alongside the Omaka River and Glen Craig Stream, and a larger remnant west of Newport Knob. Strongly regenerating kanuka (*Kunzea ericoides*) forests with some red beech (*Nothofagus fusca*) cover most of the upper

Omaka catchment adjoining the property and smaller areas on the western part of the property. Scattered sparse shrublands are present at low - mid altitudes. Short tussock grassland dominated by pasture grasses and with scattered shrubs is present on most of the lower altitude parts of the property, except for the pasture on the alluvial front country.

Sub-alpine vegetation:

Sub-alpine vegetation is confined to the exposed summit ridge of the Blairich Range. Rock pavement areas near the summit are bare, but merge with areas of short stunted grassland comprising blue tussock (*Poa colensoi*), fescue tussock (*Festuca novae-zealandiae*), *Racomitrium* moss, and mouse-ear hawkweed (*Hieracium pilosella*). More intact grasslands are comprised of bristle tussock (*Rytidosperma setifolium*), fescue tussock and blue tussock, with a diverse range of herbs, including: *Leucopogon fraseri*, snowberry (*Gaultheria* "nz" and *G.depressa*), *Raoulia hookeri*, *R.subsericea*, *Anisotome aromatica*, *Racomitrium*, *Luzula rufa*, *Helichrysum bellidioides*, *Kelleria dieffenbachii*, *Geranium sessiliflorum*, *Pimelea oreophila*, harebell (*Wahlenbergia albomarginata*), and the introduced sheep's sorrel (*Rumex acetosella*), mouse-ear hawkweed, and tussock hawkweed (*Hieracium lepidulum*).

Grassland and herbfield communities at more sheltered sites, especially around the ridge-top rock outcrops, include the following species: *Aciphylla aurea*, *A.monroi*, *Gingidia montana*, *Celmisia insignis*, cotton daisy (*C.spectabilis*), *Viola cunninghamii*, *Gentiana corymbifera*, *Raoulia bryoides*, *Hebe tumida*, *H.pimeleoides*, *H.traversii*, *Ranunculus insignis*, *Geum parviflorum*, *Epilobium tasmanicum*, *Lycopodium fastigiatum*, and mountain wineberry (*Aristotelia fruticosa*). *Celmisia monroi*, *Gingidia montana*, *Geum parviflorum*, and *Helichrysum parvifolium* are more common on the rock outcrops. Occasional mid-ribbed snow tussock plants (*Chionochoa pallens*) are present, mostly on the Black Birch (ungrazed) side of the ridgeline fence.

Sub-alpine - Montane Rock Bluffs and Screes:

High altitude rock bluffs and screes are limited to the steeper slopes below Blairich summit and support the following species: Marlborough rock daisy (*Pachystegia insignis*), *Helichrysum intermedium*, *H.parvifolium*, *H.bellidioides*, *Scleranthus uniflorus*, *Ranunculus insignis*, *Gingidia montana*, , *Viola cunninghamii*, *Celmisia monroi*, sunhebe (*Heliohebe pentasepala*), *Hebe tumida*, *Aciphylla monroi*, *Luzula rufa*, *Acaena caesiiglauca*, *Melicytus alpinus*, *Blechnum penna-marina*, and occasional *Cheesemania fastigiata*. Plants observed on the very limited area of scree are: *Epilobium pycnostachyum*, *Myosotis traversii*, and sheep's sorrel. On more stable screes or scree edges creeping pohuehue (*Muehlenbeckia axillaris*), *Blechnum penna-marina*, and *Acaena caesiiglauca* are present.

Mid-altitude grasslands:

Floristically-diverse grasslands dominate the mid altitude country between about 800 and 1100 metres, on the moderate to steep slopes of the Blairich Range. Common

grasses present include: silver tussock (*Poa cita*), bristle tussock, fescue tussock, sweet vernal (*Anthoxanthum odoratum*), browntop (*Agrostis capillaris*), and blue tussock. Other major components of these grasslands are: *Pimelea oreophila*, *Acaena caesiiglauca*, *Geranium sessiliflorum*, *Aciphylla aurea*, *Raoulia subsericea*, *R. glabra*, *Leucopogon suaveolens*, *L. fraseri*, *Luzula rufa*, *Coprosma acerosa*, *Helichrysum bellidioides*, *Brachyglottis lagopus*, *B. bellidioides*, *Blechnum penna-marina*, mouse-ear hawkweed, tussock hawkweed, harebell, *Ranunculus insignis*, *Gnaphalium audax*, cotton daisy, *Scleranthus uniflorus*, clover (*Trifolium repens*), and sheep's sorrel.

Scattered shrubs present at this altitude include: tauhinu (*Cassinia vauvilliersii*), *Coprosma propinqua*, *Melicytus alpinus*, and kanuka, with broadleaf (*Griselinia littoralis*), prostrate kowhai (*Sophora prostrata*), and weeping matipo (*Myrsine divaricata*) at sheltered sites around rock bluffs.

Montane grasslands:

Below 800 metres the grasslands are less diverse, and dominated by silver tussock, sweet vernal, browntop, and clover, with lesser amounts of fescue tussock and bristle tussock. On lower slopes pasture grasses dominate and silver tussock is more scattered. Common herbs in these grasslands are: *Leucopogon fraseri*, *Geranium sessiliflorum*, and sheep's sorrel. On dry sites there are minor areas of bare ground and patches of mouse-ear hawkweed, *Vittadinia australis*, viper's bugloss (*Echium vulgare*), and *Raoulia australis*. Bracken (*Pteridium esculentum*) is common on some slopes, particularly rubbly slopes or south-facing sites. Scattered shrubs, and occasional denser patches of shrubland, are also common at this altitude. Nassella tussock (*Nassella trichotoma*) is also present on the property.

Shrublands:

Montane shrublands are dominated by regenerating kanuka (with some manuka) on dry sites and mixed hardwood shrublands on damper sites, dominated by kohuhu (*Pittosporum tenuifolium*), broadleaf, *Carmichaelia australis*, mountain flax (*Phormium cookianum*), tauhinu, matagouri (*Discaria toumatou*), *Coprosma propinqua*, *C. rhamnoides* and *C. crassifolia*, with bush lawyer (*Rubus schmidelioides*), *Parsonsia capsularis*, and *Clematis afoliata*. These shrublands generally grade into the main areas of regenerating forest described below

Low forests:

1. Newport Knob: This is the most significant area of forest cover on the property. It includes several large red beech trees, but is dominated by kanuka on the ridges and mixed hardwood forest in the gullies. It is a diverse forest community containing the following species: broadleaf, kohuhu, lemonwood (*Pittosporum eugenioides*), akiraho (*Olearia paniculata*), *Coprosma robusta*, *C. linariifolia*, *C. rotundifolia*, lancewood (*Pseudopanax crassifolius*), mountain flax, ti tree (*Cordyline australis*), bush lawyer (*Rubus cissoides*), fuchsia (*Fuchsia excorticata*), wineberry (*Aristotelia serrata*), mahoe (*Melicytus ramiflorus*), putaputaweta (*Carpodetus serratus*), mapou (*Myrsine australis*), *Olearia arborescens*, *Helichrysum aggregatum*, prickly mingimingi

(*Cyathodes juniperina*), *Hebe traversii*, toe toe (*Cortaderia richardii*), tutu (*Coriaria arborea*), *Blechnum fluviatile*, onga onga (*Urtica ferox*), prickly shield fern (*Polystichum vestitum*), and mistletoe (*Ileostylis micranthus*) on *Coprosma linariifolia*.

2. Omaka River: Large areas of kanuka and regenerating beech forest cover the upper Omaka catchment and small areas of this forest lie within the Blairich property, especially along the Omaka River. These forests are dominated by kanuka on the drier spurs, but are more diverse along the streamsides. Species present include: red beech, mountain beech (*Nothofagus solandri* var. *cliffortioides*), kanuka, manuka, ti tree, lancewood, akiraho, kohuhu, marbleleaf, *Coprosma linariifolia*, *C. robusta*, kowhai (*Sophora microphylla*), *Hebe traversii*, *H. parviflora*, fuchsia, broadleaf, bush lawyer (*Rubus cissoides* and *R. schmidelioides*), prickly shield fern, *Helichrysum aggregatum*, *Astelia* sp., and *Libertia grandiflora*; with plants of streamside bluffs including: Marlborough rock daisy and the naturally uncommon (range restricted, de Lange et al 1999) pink broom (*Carmichaelia carmichaelia*), and sun hebes.

3. Hooper Ridge: Scattered shrublands and strongly regenerating forest remnants are present on the south-facing slopes of Hooper Ridge, especially above the lower reaches of Glen Craig Stream. Streamside remnants are dominated by lancewood, kowhai, ti tree, akiraho, mahoe, kohuhu, fuchsia, and isolated red beech. Other species, in or adjoining the forest, are *Coprosma propinqua*, *Coprosma crassifolia*, kanuka, tauhinu, prickly mingimingi, bush lawyer (*Rubus schmidelioides*), *Melicytus alpinus*, mountain flax, and the introduced old man's beard (*Clematis vitalba*).

On the upper (southern) slopes of Hooper Ridge, forest remnants persist in the damper gullies, or beneath small bluffs. These diverse remnants are dominated by: broadleaf, putaputaweta, mapou, lancewood, mahoe, wineberry, fuchsia, prickly shield fern, and *Coprosma linariifolia*, with occasional kaikomako (*Pennantia corymbosa*) and narrow-leaved lacebark (*Hoheria angustifolia*). Other species present include: *Coprosma propinqua*, *C. rotundifolia*, *C. robusta* x *propinqua*, *C. crassifolia*, *Parsonsia capsularis*, and bush lawyer (*Rubus cissoides*).

This community grades into a diverse rock-plant community on the bluffs nearer the ridge with the following prominent species: Marlborough rock daisy, *Heliohebe pentasepala*, *Melicytus alpinus*, *Pimelea oreophila*, prickly mingimingi, *Celmisia monroi*, mountain flax, *Leucopogon fraseri*, *Gingidia montana*, *Scleranthus uniflorus*, harebell, *Geranium sessiliflorum*, *Helichrysum bellidioides*, *Gaultheria crassa*, *Blechnum penna-marina*, and *Rubus cissoides*.

Wetlands

On a terrace of the Blairich River upstream of Troloves Stream is a small *Carex-Juncus* wetland. This wetland is a mix of *Carex virgata* and *Juncus* species mainly *J. squarrosus* and *J. sarophorous*. The occasional raupo, flax, manuka and *Coprosma propinqua* are also present. The wetland has a number of herbs including *Ranunculus glabriflorus* and *Epilobium* sp. In the wetter areas duckweed (*Lemna minor*) also occurs.

Flora:

The property contains an interesting mix of species endemic to Marlborough, regenerating kanuka/beechn forests, and mixed lowland hardwood forest communities. The range of habitats (alpine, bluff, grassland, shrubland, forest, riverbank) and the range of altitudes (200 metres to 1500 metres) contributes to this diversity.

Several of the species present on the property are endemic to the south Marlborough area, notably: the Marlborough rock daisy (*Pachystegia insignis* agg.), the sun hebe (*Heliohebe pentasepala*) and *Celmisia monroi* 'narrow-leaf'. Rare species, or species with limited or local distribution, on the property include: *Cheesemanina fastigiata*, *Ileostylis micranthus*, onga onga, kaikomako, and narrow-leaved lacebark. Pink broom (*Carmichaelia carmichaelia*) is listed as naturally uncommon (range restricted – de Lange et al, 1999)

2.4 Fauna

Common bird species observed in forest or shrubland communities are rifleman, brown creeper, bellbird, fantail, hedgesparrow, blackbird, chaffinch, and grey warbler. On open grasslands species there are skylark, harrier, falcon, welcome swallow, yellowhammer, redpoll, goldfinch, NZ pipit, magpie, and California quail. Robin and kereru are also present in the Omaka River area (Hugh and Denise Cooper, pers.comm.). Other species recorded from the area during the Ornithological Society survey between 1969 and 1979, were song thrush, sparrow, silvereeye, and tui (Bull et al, 1985).

The common skink (*Leiopisma nigriplantare polychroma*) has been observed and the common gecko (*Hoplodactylus maculatus*) is recorded by Pickard and Towns (1988).

Feral goats, deer and chamois have been seen below Blairich summit in the Omaka catchment adjoining the property, and pig sign has been encountered west of Newport Knob. Possum sign has been seen throughout, and cat sign observed on the main ridge of the Blairich Range. Hares, ferrets, hedgehogs, rats, and mice are also likely to be present.

2.5 Historic

Little is documented of the pre-European association with the Awatere Valley. In early times pounamu was carried to the settlement at the Wairau River lagoon (Te Waikawa o Omaka) from the south via trails in the Waihopai or Awatere Valleys (Ngatapuwa Trust 1994). Both the Awatere and the Clarence (Waiiau-toa) Rivers are described as subsidiary pounamu trails by Brailsford (1984).

The first occupier of Blairich was George McRae who named the property after the Duke of Sutherland's Blairich estate in Scotland (Kennington 1978). It originally covered about 8900 hectares between the Blairich River and White Bluff Creek on the

Black Birch Range. A cob cottage was constructed on the property in 1848 and a two-storey, ten-room house constructed in 1850. The property was taken over by George's sons, Philip and Nehemiah, in 1860 and by 1870 the brothers owned or leased over 32,000 hectares (running 80,000 sheep) in the Awatere Valley, including Awapiri, Camden, Welds Hill, Mt Gladstone, and Middlehurst (ibid). A boiling-down plant for producing tallow from sheep was built in 1870 but only operated for three years.

Nehemiah McRae was drowned in the Awatere River in 1872 and, as the farming recession worsened, Philip McRae gradually sold his properties until, in 1887, Blairich was the last of his properties surrendered to the Loan Company. Blairich was transferred to the Bank of New Zealand in 1890 and then to the Assets Realisation Board in 1896. In 1899 the considerably run-down Blairich property, which included about 3200 hectares of freehold land, was sold to Charles Goulter for £8000. Charles sold the property to his sons, Harold and John, in 1910 and they sold it to the Government in 1947, for the settlement of returned servicemen. Subdivision of the property could not be agreed upon, so it was allotted, in one leasehold unit, to John Cooper in 1954, and later transferred to his son, Hugh.

About 1200 hectares of the original Blairich property were transferred to Altamarlock in 1850 and in 1912, and almost 3000 hectares in the Black Birch catchment was transferred to the Awatere County Council in 1956 as a water reserve (ibid), and later to DoC as scenic reserve. Several hundred hectares in the south-western corner of the property, in the head of the Omaka River catchment, were surrendered from the lease and transferred to DoC in 1988.

The existing homestead was constructed in 1948, and has since been modified. None of the earlier homestead buildings remain, except for part of the red-brick chimney of the early tallow plant, and vague remnants of the early homestead gardens (Denise Cooper, pers.comm.). All the other farm buildings are located on the flat 'front' country beside the Awatere Valley road, except for the old cob hut at 'The Willows' (Willow Flat) at the junction of the Blairich River and Glen Craig Stream. There is no known information on the origin of this cob cottage.

2.6 Public Recreation

2.6.1 Physical Characteristics

Blairich is dominated by the low mountain range which is easily accessible from the Awatere Valley. Under the Federated Mountain Clubs guidelines Blairich would be mainly in an "open space" recreational experience zoning. For open space the descriptors are semi-natural grasslands under extensive grazing, accessible by roads, off-road vehicles and foot tracks.

Based on the Department of Conservation's recreation opportunity descriptors Blairich has the primary characteristics of a back-country environment – primarily "4 x 4 drive in". This means that the property is a modified environment but one that is generally dominated by natural vegetation or landscapes and is natural looking. It is accessible to all terrain vehicles and is traversed mainly by ungravelled

roads, or 4 x 4 access. Obvious elements of modification include roads and areas of farming or forestry.

2.6.2 Legal Access

There is legal formed access along the south-eastern boundary of the lease – the Awatere Molesworth Road. A legal unformed roadline follows the Blairich River and the northern boundary of the lease from the main road. This roadline up the Blairich River does not provide practical foot or vehicle access.

2.6.3 Activities

The most significant public use of Blairich is by trampers ascending the Blairich Range and trampers crossing Blairich Pass between the Blairich River and Omaka River (Marlborough Tramping Club, pers.comm.). The route up the Blairich Range to Blairich summit is an easy and interesting walk with spectacular views of Marlborough and the Inland Kaikoura Range. Old tramping tracks up Black Birch Stream provide an interesting alternative approach to the range. There is some use of the Blairich and Omaka Rivers by hunters, with the farm road up the Blairich River providing one of the access routes. The property has provided good Californian quail hunting in the past.

It is likely that the demand for access to or through the property for recreation will increase as recreationists seek new areas to visit. The property, and the adjoining properties to the north and west, provide good potential mountain biking or horse riding routes, along the many formed farm roads. The property adjoins interesting tramping and hunting country to the southwest and could provide good alternative access routes to these areas.

PART 3

CONSULTATION AND OTHER PLANS

3.1 Consultation

A meeting was held with NGOs on 15 September 1995 to discuss Blairich. Comments included:

- A belief that all the land above 1000m a.s.l. should be excluded from grazing.
- That north-facing tussocklands on gentler slopes are not well represented on conservation lands.
- That there should be either protection of the whole of the catchment to the west of Newport Knob or, at least, the bush and a corridor to the Conservation Area be protected.
- That habitat on Hooper Ridge should be protected.
- That the matagouri shrubland remnant should be protected.

3.2 District Plans (Matters of National Importance)

Under the proposed Wairau/Awatere Resource Management Plan, publicly notified in November 1997, the station falls within the Rural 4 Zone. Under this zoning farming, keeping domestic livestock and homestays are permitted activities. Commercial forestry is permitted on land below the 1000m contour. Erection of further accommodation buildings is restricted to one dwellinghouse/title.

3.3 Conservation Management Strategies

The Nelson Marlborough Conservation Management Strategy includes Blairich in the South Marlborough management unit. Relevant objectives in this unit include:

- Obtain legal protection for threatened species habitat and important plant communities.
- Land status review of Inland Marlborough conservation areas and reserves.
- Maintain access and facilities for recreational hunting.

PART 4

4.1 Maps

- Landscape Units (Attached)
- Topo/Cadastral (Attached)
- Values (Attached)

4.2 Acknowledgements

I would like to thank Ron and Sue Small (lessees) for their assistance. Thanks also to Mike Harding for his initial report, Joy Comrie for her production of most of this report, David Sissons for his landscape report and Jan Clayton-Greene for her assistance.