

## Crown Pastoral Land Tenure Review

Lease name: Ramshead Run

Lease number: PM 024

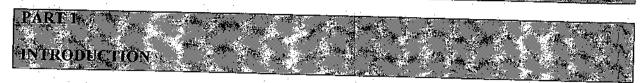
### Conservation resources report

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

# DOC CONSERVATION RESOURCES REPORTE ON DENIRE REVIEWSOF RAMSHEAD PASTORATE EASE.



The Ramshead Pastoral Lease is located about 35km from the township of Blenheim. Access is from the Waihopai Valley via Tyntesfield Road and the Omaka Valley. The lease is 2346 hectares and is roughly triangular. The eastern side of the lease is the Omaka River. The western boundary is the ridge on the true left of Dillon Creek, a tributary of Omaka River. The third and southern side of the lease runs from the Omaka River across the headwaters of the Dillon Creek to the western ridge above Dillon Creek.

To the south of the lease is a Conservation Area formed when lands were removed from the lease in the 1980s. The area removed from the lease was added to a larger Conservation Area based on Altimarlock, Mt Horrible and Ferny Gair. Blairich Pastoral Lease has a common boundary with Ramshead along part of the Omaka River. The rest of the lease is bounded by freehold land

The lessees of Ramshead own an area of freehold to the west of the lease in the headwaters of Mistake Creek, a tributary of Dillon Creek. An area of 77ha within the northern part of the lease has a Forestry Right granted to PGG Trust Limited over it.

The lessees have a license to undertake commercial walking activities on the lease and on adjoining Conservation Areas. The walking operation is also carried out on the lessee's freehold and other adjoining freehold.

Ramshead is in the Waihopai Ecological District. The District is characterised by steep greywacke mountains rising to 2000m asl, with a range of altitude and climate and relatively dry, shallow, stony steepland soils. As a result of survey of the property in the 1980s two Protected Private Land (PPL) agreements were negotiated on the lease. One of the PPLs covers 512ha on the true left of Dillon Creek while the other includes 139 ha and crosses the slopes above Ramshead Saddle between the Omaka River and Dillon Creek



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# IMIERENT VÄBUES DESCRIPTION OF CONSERVATION RESOURCES AND ASSESSMENT OF SIGNIFICANCE.

#### 2.1 Landscape

General Landscape Character

The run itself and the surrounding lands are all moderately steep. At the base of the slopes there are small areas of rolling land and flats. The lowest point on the property is at its northern corner, where the bed of the Omaka River is about 225m asl. The central ridge rises to 911m asl and the eastern boundary reaches 1092m asl towards the south.

There is a marked difference in the vegetation cover and hence the landscape character of sunny and shady faces. In general the ridges and the north and west facing slopes are dominated by exotic pasture grasses, while stands of kanuka and broadleaf forest are found mainly on the shadier south faces.

Evidence of human land use includes the pasture and the grazing stock. There is also a comprehensive pattern of fences, and a network of farm tracks runs through the valleys and to the saddles, giving vehicle access to the bases of all of the slopes. Buildings comprise the homestead and associated sheds overlooking the confluence of the two creeks, and Dillon Hut, an ex-Forest Service hut nestled in the southern valley. There is no visible sign of significant slope erosion, and almost all slopes are well vegetated.

#### Landscape Units

For the purposes of this report the landscape of the run has been subdivided into 9 units. 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.

#### 1. Homestead Flats

This narrow area of flats wraps around the hill from the northern entrance to the property and is overlooked by the homestead. The contour is generally flat, and exotic pasture predominates. There are stands and scattered specimens of exotic willows and poplars, as well as scattered kanuka, and the recently planted pines reach down into this unit from Plantation Hill.

#### 2. Plantation Hill

This unit is the sunny and shady faces of the round hill that dominates the initial views of the property. Much of the hill has recently been planted with pine trees, which are in the process of changing its landscape character from pastoral to commercial plantation.

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When the trees mature, extraction will no doubt be preceded by the establishment of a network of logging tracks to and over the summit of the hill. The unplanted parts of the hill are predominantly in pasture, with some kanuka regeneration, especially on shadier faces.

On the south facing slopes there is an attractive stand of low native broadleaved trees including golden akeake, lancewood, putaputaweta and kohuhu.

#### 3. Lower Fantail Block

The side slopes at the ends of two spurs at the foot of a catchment known as the Fantail Block. The southern part of this unit is more rugged than the northern, with significant areas of rock outcrops. Both parts are vegetated predominantly with exotic pasture and bracken, with scattered kanuka regeneration.

#### 4. Translator Hill

This unit is the rounded east and west facing slopes of the northern part of the central triangular hill, running south from the confluence of Dillon Creek and the Omaka River. It includes the Ramshead homestead and associated outbuildings and vegetation at their northern tip. It is very similar in character to Unit 2 except it has no pine plantation. The slopes are predominantly in pasture and bracken, with some kanuka regeneration, especially on shadier faces.

#### 5. Back Hill Block

The unit lies to the south of Unit 4 on the same rounded hill. It differs from that unit in that the ridgeline is higher, up to 910m asl, and there are larger areas of kanuka regeneration, and some patches of low broadleaf forest, on the shadier faces.

#### 6. Ramshead Saddle PPL

This unit is steep and south facing, with some rock outcrops, and is densely covered with kanuka and low native broadleaved trees. The vegetation is protected as Protected Private Land and is fenced to prevent stock grazing.

#### 7. Dillon Hut Block

This unit comprises lower slopes around the creeks and several distinctive knolls at the back of the property and the slopes which rise from the creeks up to the southern ridgeline of the property, reaching 822m asl. It is distinguished by scattered kanuka trees throughout and the large areas of kanuka regeneration especially at its eastern and western ends, all of which contribute to its backblocks character.



#### 8. Pig Whare Saddle

This unit occupies the floor and sides of a surprisingly gentle valley running up to Pig Whare Saddle, plus the upper slopes around the saddle. The floor of the valley and most of the south-facing slopes are almost completely covered with kanuka regeneration, while the saddle area itself has a mix of exotic pasture and native shrublands (such as coprosmas and matagouri), with rocky spurs interspersed. There are areas with native alpine plants around the higher ridges on the north and south sides of the Saddle.

#### 9. Long Arm PPL

Unit 9 comprises steep, rugged, east-facing gullies, slopes and spurs with rock outcrops dropping down off the dominant western ridgeline known as Long Arm. The area is clad in native regeneration, mainly kanuka. It has quite a different landscape character from the rest of the property, one of rugged wilderness.

#### 2.2 Landforms & Geology

The lease is based on the main north-south ridge between the Omaka River and Dillon Creek. A transverse valley runs south-west to north-east south of the main ridge. The slopes of the transverse valley rise from the creek beds at 350 to 380m asl to two ridgelines forming the southern boundary, one up to 860m asl and the other to 1075m asl near the southern corner of the property.

The underlying rock is massive, well indurated graded greywacke. The zone around Ramshead is dotted with fault lines and the transverse valley could be a result of this. Soils are upland Haldon yellow-grey earths around the homestead and Hurunui yellow-brown earths above the homestead.

#### 2.3 Climate

Climatic conditions on the lease have a strong altitudinal gradient from the lower, relatively dry front country to the high, wet, back country. Rainfall varies from 800mm on 80 rain days in the front country to 1400mm on 156 rain days along the tops. Mean annual temperature ranges from 6°C to 13°C while sunshine hours can range from 2100 to 2500 annually. Strong gale-force winds can blow through the valleys and across the high ridges.

#### 2.4 Vegetation

There is a moderately diverse mix of vegetation communities on the property which reflect the range of altitude, aspect, topography, landform and disturbance history. Mountain beech (Nothofagus solandri var. cliffortioides) forest remnants; mixed broadleaved forest and scrub; kanuka (Kunzea ericoides) forest, scrub, and shrubland; mixed shrublands (including grey scrub); wetland; bluff and rockland vegetation; riparian vegetation; streambed vegetation; bracken (Pteridium esculentum) fernland; hard

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tussock-mixed pasture grassland; and rough pasture are all present. Intergrades of these communities exist where they are in transition from one community type to another, either through succession or spatially as an ecotone. The dominant community types are pasture grassland, degraded short tussock grassland and shrub-grassland, and kanuka forest and scrub. Very little of the remaining natural vegetation cover remains unmodified.

The original vegetation on the property was likely to be dominated by forest, particularly beech (red beech, black beech and mountain beech), as it was over much of the Waihopai Ecological District (New Zealand Biological Resources Centre, 1987). However beech forest is now restricted to small isolated remnant stands of mountain beech above 600m asl.

#### 2.4.1 Forest and Scrub

#### Beech Forest

Post-fire regeneration of beech forest has been slow. Mature mountain beech (*Nothofagus solandri* var. *cliffortioides*) forest remnants persist in a few scattered, sheltered localities above 600m on south-facing slopes that have survived burning.

Red beech and black beech are largely confined to minor component species of riparian mixed broadleaved vegetation in scattered localities, particularly by Dillon Creek, south of Dillon Hut. Black beech has suffered considerably with the effects of drought over the summer of 2000/2001.

#### Broadleaved forest and scrub

Primary colluvial mixed broadleaved forest is rare in the northern part of the Waihopai Ecological District due to extensive burning in the past. A small remnant stand is present below bluffs at NZMS 260 O29 699437. The principal canopy species are mahoe (Melicytus ramiflorus) and marbleleaf (Carpodetus serratus) with minor akiraho (Olearia paniculata) and kanuka (Kunzea ericoides). The shrub tier is dominated by Coprosma rhamnoides with minor Helichrysum lanceolata. Hookgrass Uncinia spp. and common shield fern Polystichum richardii are the most common species on the forest floor. An outstanding feature of this community is the abundance of the nationally declining mistletoe Ileostyus micranthus.

Secondary mixed broadleaved forest and scrub on concave greywacke hill slopes and gullies is a community type which is relatively common between 300-800m, and characterised principally by akiraho and, to a lesser degree, marbleleaf with minor broadleaf (Griselinia littoralis), red mapou (Myrsine australis) and mahoe. Cabbage tree (Cordyline australis) and kowhai (Sophora microphylla) may be present where the forest is more open. The composition of canopy species varies according to aspect, altitude, topography and history of disturbance. Coprosma rhamnoides is the most common species in a typically sparse shrub tier. The ground tier is also commonly depauperate

with scattered wall lettuce (Mycelis muralis), Polystichum vestitum and Uncinia spp. The majority of this secondary forest lies in the upper lowland and montane bioclimatic zones. However there is a particularly good example of lowland mixed broadleaved forest towards the northern end of the property where species such as five finger (Pseadopanax arborea) and tree fuchsia (Fuchsia excorticata) assume a significance in the canopy composition not seen elsewhere.

Mixed broadleaved riparian forest occurs along Dillon Creek and Omaka River and their tributaries, although the continuity and intactness is variable. This vegetation type is the most diverse on the property. Some of the better examples are to be found along the steep-sided, gorge part of Dillon Creek, from 0.5km to 1km north of Dillon Hut, and along the tributary to Omaka River northeast of Ramshead Saddle. Canopy species are a mix of akiraho, marbleleaf, Olearia avicenniifolia, tree fuchsia, lancewood (Pseudopanax crassifolius), kohuhu (Pittosporum tenuifolium), broadleaf, Hebe traversii, mahoe (Melicytus ramiflorus), kowhai, red mapou, black beech, kanuka and manuka (Leptospermum scoparium). Understorey and shrub species include Coprosma rhamnoides, C. 'tayloriae', C. crassifolia, C. lucida, Cyathodes juniperina, H. venustula, Gaultheria antipoda, Leucopogon fasciculatus, Helichrysum lanceolatum, toetoe (Cortaderia richardii), Astelia nervosa and where communities are more open C. propinqua var. propinqua, matagouri (Discaria toumatou) and the naturally uncommon (range restricted - de Lange et al, 1999) tree broom Carmichaelia carmichaeliae. Common ferns include Polystichum richardii, hound's tongue (Microsorum pustulatum), water fern (Histiopteris incisa), Blechnum fluviatile, and B. penna-marina. The ground tier is commonly sparse with introduced wall lettuce and scattered broadleaved seedlings the most common components.

A more open mixed scrub community is evident around 800m asl on colluvial south-facing slopes near Pig Whare Saddle, largely comprising akiraho and Olearia aviceniifolia in the canopy, with kanuka and minor manuka, Coprosma linariifolia, C. propinqua and matagouri. The ground tier is dominated by Coriaria sarmentosa. This community is an unusual feature of the vegetation on the property being confined to steep, unstable colluvial slopes on shady faces. Drought has caused the death of several akiraho and O. aviceniifolia.

#### 2.4.2 Kanuka forest and scrub

Kanuka forest and scrub is common over much of the property. Stands are of varying ages depending upon the length of time elapsed since the last disturbance event. The condition of the understorey is also variable with younger stands tending to contain a higher number of exotic species. Older stands of low forest have a higher proportion of broadleaved species of which some, such as lancewood and red mapou, occupy the canopy. Typical shrub tier species include Coprosma rhamnoides, C. propinqua (margins) and Cyathodes juniperina with minor akiraho, Helichrysum lanceolatum, Coprosma crassifolia and Leucopogon fasciculatus. Clematis forsteri is the most frequent vine. The common ground tier species include wall lettuce, Microleana avenacea and hookgrass Uncinia spp. Bare ground and moss are common features of this community

Ramshead Conservation Resources Report 02/08/01 CHCCO-30572 type. Where damper conditions prevail the ferns Asplenium terrestre and Blechnum novae-zelandiae may form dense growth with species of hookgrass Uncinia and sedge Carex.

#### 2.4.3 Shrublands

Grey Scrub

Matagouri-dominated shrubland is present throughout the property although it tends to include younger shrub-grassland in most places. These communities are commonly on sunny north-facing slopes. *Coprosma propinqua*, C. 'tayloriae', and tauhinu are common associate species.

Manuka and kanuka shrublands

Young regenerating manuka and kanuka shrublands are present throughout the property, commonly on the margins of older, more established stands of kanuka. Beneath the canopy the vegetation is commonly typical of the induced grassland it is attempting to displace.

#### 2.4.4 Wetlands

A Carex secta-Juncus wetland is present on an alluvial terrace depression between the road and Dillon Creek at NZMS 260 P29 715472. Scattered emergent cabbage tree, manuka and Coprosma propinqua are present, particularly on margins. The ground tier is highly modified and dominated by introduced species such as cocksfoot (Dactylis glomerata) and browntop (Agrostis capillaris).

#### 2.4.5 Bluffs

Lowland riparian bluffs are commonly dominated by the regionally endemic Marlborough rock daisy (Pachystegia insignis s.s.), Hebe traversii, kanuka, akiraho and the naturally uncommon (range restricted – de Lange et al, 1999) tree broom Carmichaelia carmichaeliae. Other species which may be present where the vegetation is diverse (eg Dillon gorge) are Carmichaelia australis, Coprosma linariifolia, C. robusta, the regionally endemic Heliohebe hulkeana, H. traversii, Olearia arborescens, the ferns Adiantum cunninghamii and Blechnum penna-marina, Brachyscome radicata, an orchid Corybus trilobus, Epilobium minutiflorum and Anaphalioides bellidioides.

Montane bluff systems on hills slopes and ridge side slopes contain a mix of species such as Coprosma propinqua, C. 'tayloriae', akiraho, wharariki (Phormium cookianum), Gingidia montana, and Celmisia insignis.



#### 2.4.6 Streambeds

The narrow floodplains of Dillon River and the tributary to Omaka River in the Ramshead Saddle catchment provide habitat for a variety of species, both native and introduced. Cocksfoot, foxglove (Digitalis purpurea), scotch thistle (Cersium vulgare), mouse-ear chickweed (Cerastium fontanum), Prunella vulgaris, wall lettuce and catsear (Hypochaeris radicata) are common adventives. The native Raoulia tenuicaulis is a specialist of this type of habitat. Carex secta is present where it is damp. Other species include manuka and a variety of broadleaved seedlings, the bidibidi Acaena anserinifolia, stinging nettle Urtica incisa, the fern Blechnum penna-marina, Histiopteris incisa, as well as tauhinu, silver tussock (Poa cita) and hard tussock.

#### 2.4.7 Fernland

Bracken fernland is naturally regenerating in areas exposed to recent fires. It commonly forms mosaics and intergrades with pasture grassland, and shrub-grasslands dominated by hard tussock, tauhinu and matagouri.

#### 2.4.8 Grasslands

Hard tussock-mixed pasture grassland

This community type is found largely on north-facing slopes and ridges. Intertussock vegetation is dominated by introduced species – cocksfoot, browntop, mouse-ear chickweed, catsear and vipers bugloss (*Echium vulgare*).

Silver tussock is scattered over browntop pastures on lower slopes in the head of Dillon Creek. The tussock is often in association with tauhinu.

Rough pasture grassland

Commonly on fertile alluvial terraces, flats and gentle hill country. Browntop is the most common species.

#### 2.5 Fauna

#### 2.5.1 Birds

NZ falcon: Several individuals have been seen at Pig Whare Saddle and along the boundary ridge north of there. Falcon are regarded as a special feature by those visiting for trekking. It is very difficult to obtain meaningful comparisons of falcon density given the characteristic large home ranges, however, the frequency at Ramshead is greater than that observed during a recent study over 300km<sup>2</sup> immediately to the west of Ramshead.

Bellbird: Abundant in all woody vegetation.



Brown creeper: Small flocks have been frequently observed in scrub and forest.

South Island robin and yellow-breasted tit: Both species are in surprising abundance although their presence in similar seral habitats of inland Marlborough is well known. Robins and tits are often absent from much maturer habitat and seldom found in such high numbers.

Fantail, warbler and silvereye: Present throughout in good numbers and in all but completely open habitats.

Tui may be a seasonal visitor to Ramshead and are likely to become established as the forest matures.

The presence and relatively high numbers of robin and tit is the most outstanding feature of this fauna. Both species feed on the ground and nest in sites that are particularly vulnerable to predation. Predation is considered to be the most limiting factor for these species. It may be that the virtual absence of beech forest (and its periodic seed masts) and large fruiting trees such as the podocarps provides significantly less food for rodents which, in turn, limits mustelids. Alternatively (or additionally), the absence of rabbits following the arrival of rabbit calci virus will have reduced predator numbers.

#### 2.5.2 Reptiles

Several geckos have been captured on screes at Pig Whare Saddle and identified as the newly described species – *Hoplodactylus* sp 'Kaikoura'. This is not unexpected. The habitat is ideal for green geckos (Naultinus spp.) which could be either of two species.

#### 2.5.3 Invertebrates

Appendix 1 lists the invertebrate species that have been collected on the property.

One of most interesting specimens collected is a Wainiua shell found in the small forested valley south-east from Dillon Hut. Although this species is known from a number of sites from the Marlborough Sounds south to the south-eastern Richmond Range and Kekerengu, it appears to have been recorded from the country between the Awatere and Wairau only once, at Ferny Gair. The species occurs only sparsely south of the sounds and is probably in decline in much of the southern part of its range, from the combined effects of habitat loss and predation by introduce predators such as pigs and rats.

The other species of most interest found is the rare geometrid moth, Gingidiobora nebulosa, which feeds on the mountain anise Gingidium montana. This represents one of only a handful of sites, in Marlborough and Otago, from which this species is known. The type locality is Coverham in Marlborough. This is one of 114 species of Lepidopterea listed as being nationally "at risk" by Patrick and Dugdale (2000).

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#### 2.5.4 Animal Pests

Deer, pigs and goats are present. Small groups of goats have been seen at different locations and their impact is quite apparent in some areas of forest where palatable plants are severely browsed. It is likely that recreational hunters provide a reasonable level of control over deer and pigs.

There is little recent sign of possums, no doubt the result of district council operations. Continued work trapping for ferrets will be having some effect on these predators.

It is likely that animal pests are now at lower levels than at any other time during the last 100 years at Ramshead and both the vegetation and fauna are showing the benefits of this work.

#### 2.6 Historic

Ramshead Station was originally part of the Leefield Estate owned by the Dillons. In 1916 the Ramshead Run land became Crown Land and was established as Pastoral Lease Run 110. In 1963 the back portion of the run became a Pastoral Occupation Licence and in 1988 the present shape of the Run was established when a major portion of the POL was surrendered and the Protected Private Land areas were established.

The Run was managed until recently in conjunction with other land and consequently there are no historic assets on the pastoral lease. There is an historic hut on the freehold land owned by the lessees and this hut is used as a focal point of the guided walk carried out by the lessees.

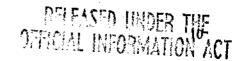
#### 2.7 Public Recreation

#### 2.7.1 Physical Characteristics

Ramshead Run is characterised by two valley systems with moderate to steep slopes. The front part of the lease would be classified as "Open Space" (FMC classification) being semi-natural grasslands with extensive grazing and low to moderate use. The back part of the lease, because of the dominant presence of native forest and grasslands, would be classified as Natural Experience. With easy access to the lease, even though it may not be legal public access, the front part of the Run would be classified as "Back-Country Drive-in". The presence of 4wd tracks on the back of the Run would see this area classified as "Back-Country 4x4 Drive-in".

#### 2.7.2 Legal Access

Tyntesfield Road from the Waihopai Valley provides access to the lease. There is a legal roadline that follows the Omaka River to the lease. The formed road however does not follow this legal roadline, diverting off it across Tyntesfield Station. The lessees of



Ramshead have a Right of Way along the formed road but it is unclear whether this ROW allows any general public use.

The legal roadline continues up the Omaka River to the southern boundary of the lease. A legal roadline also extends up the Dillon Creek for approximately 3km and a ROW has been laid off beyond this legal road to link with the Conservation Area at the head of Dillon Creek. Marginal strips have been laid off on both the Omaka River and Dillon Creek. The strips run the entire length of the waterways within the lease.

#### 2.7.3 Activities

Ramshead, in conjunction with the adjoining mountain ranges and valleys, has been used for both hunting and tramping. A large number of deer and goats have been hunted in the area but with a decrease in the number of wild animals, hunting has decreased.

The introduction of commercial walks on the lease has seen the number of guided walkers grow while the number of private trips has decreased. The routes used by the commercial walkers are very attractive as they provide round trips and links with the Conservation Area on Blairich, Mt Horrible and Ferny Gair. There are also good possibilities of links onto Blairich Pastoral Lease and onto freehold land adjacent to the lease. The commercial walk is undertaken on the lease under a recreation permit and on adjoining Conservation Areas under a concession. The permits are held by the lessees, trading as Ramshead Walking Tracks.

There has been little use of the lease by mountainbikers and 4wds because of the problem of legal access. The system of 4wd tracks on the lease and the possibility of links onto Blairich do, though, provide good avenues for these activities.



#### 3.1 Consultation

At early warning NGO meetings in Blenheim (8/3/2001) and Christchurch (12/12/2001) NGO's were asked for comment on Ramshead. Points noted included a desire to provide legal access to the Run and through the Run for tramping, mountainbiking and 4wd excursions and expressed a concern that the commercial walk excluded the general public.

#### 3.2 District Plans

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

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is permitted on land below the 1000m contour. Erection of further accommodation buildings is restricted to one dwellinghouse/title.

#### 3.3 Conservation Management Strategies & Plans

The Nelson Marlborough Conservation Management Strategy includes the Ramshead 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.



- 4.1 Illustrative Maps
- 4.1.1 Landscape Units (attached)
- 4.1.2 Topo/Cadastral (attached)
- 4.1.3 Values (attached)

#### 4.2 Acknowledgements

I would like to thank Greg and Carol Miller (lessees) for assistance with this survey. Thanks also to the members of the survey team — David Sissons (landscape), Simon Moore (botanical), Ian Miller (invertebrates), Peter Gaze (fauna) and Jan Clayton-Greene (Area Office).



#### APPENDIX 1

Invertebrate species recorded on the property.

Mollusca (snails)

A single shell of the medium-sized carnivorous snail Wainuia urnula nasuta (now considered to be a good species, separate from Wainuia urnula) has been found in the small, forested valley south-east from Dillon Hut. This appears to be only the second record for this species from the country between the Awatere and Wairau Rivers, the other being from Ferny Gair, at 1600m altitude (Efford, 1998). However, this site is within the broad distribution of the species, which includes the Richmond Range and the Kekerengu area. This species is found only sparsely along this south-western edge of its distribution, and may be in retreat.

Araneida (spiders)

The large water spider *Dolomedes aquaticus* has been seen by night on boulders in Dillon Creek. Large numbers of the introduced *Steatoda capensis* are present under rocks and remains of logs in open sites, especially noticeable at Billy Goat flat above the Omaka River east of Ramshead Saddle. The introduced Australian fleet-footed spider *Supunna picta* has been noted on open rocky ground in pasture in the Dillon Creek catchment. Other miscellaneous species have been seen in both forest and open habitats.

Odonata (dragonflies and damselflies)

A single medium-sized dragonfly has been seen at the Dillon Creek wetland.

Orthoptera (grasshoppers, crickets, etc.)

Short-horned grasshoppers have ben noted in pasture along the 'Long Arm' ridge.

Individual locusts (Locusta migratoria) have been noted at several localities in the property. This species is often seen in Marlborough over late summer/early autumn.

Hemiptera (bugs, cicadas, etc.)

Along the 'Long Arm' ridge a single black scree cicada (Maoricicada sp.) has been heard to call from a steep scree slope.

Coleoptera (beetles)

A single carabid specimen has been found. This was a species of *Megadromus*, identified by Peter Johns as probably *M. rectalis*. This is predominantly a south Marlborough/north



Canterbury species based on present distribution information, but with one reliable record from Gouland Downs in Kahurangi NP (Johns, in litt.).

Diptera (true flies or two-winged flies)

A small number of craneflies have been collected. In addition, two small flies, less than 3mm body length, have been collected. These are a dolichopodid (a widespread family of predaceous flies whose members usually exhibit a degree of shiny metallic green or blue coloration) and Lonchoptera furcata, a widespread species from the Lonchopteridae, a small family of uncertain affiliation. L. furcata is thought to have been introduced to Australia and New Zealand from Europe or North America.

Along the 'Long Arm' ridge at least two species of robberfly (Asilidae) have been seen (a small and a medium-sized species) and several hoverflies (Syrphidae) noted. A syrphid and one of the larger asilids have been collected.

**Trichoptera (caddisflies)** - identifications from John Ward, Canterbury Museum. All caddis have been taken in the bed of Dillon Creek, 420m, near Dillon Hut (grid reference P29 073 439). family Conoesucidae:

family Conoesucidae: Confluens olingoides 1f Pycnocentrodes aeris 10m 3f P. aureolus 1m 1f

family Hydrobiosidae (free-living caddises):

Costachorema psaropterum 1f

C. xanthopterum 2m

Hydrobiosis clavigera 1m 1f

H. soror 1m

H. umbripennis 1f

H. parumbripennis 1f

Psilochorema leptoharpax 1f

P. macroharpax 1m

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family Hydropsychidae (net-building caddises):

Aoteapsyche catherinae 2f

A. colonica 2m 3f

family Leptoceridae (long-horn caddises): Hudsonema amabilis 1m Triplectides dolichos 1m

family Oeconesidae: Oeconesus maori 1m

family Philorheithridae:

#### Philorheithrus lacustris 1m

family Polycentropodidae: Polyplectropus puerilis 1f

The caddis are all species with distributions which extend beyond the conservancy and none of these records are considered to be rare or unusual.

Lepidoptera (butterflies and moths) 2 identifications from John Dugdale, Nelson Almost all of the Lepidoptera have been taken in the bed of Dillon Ck near Dillon Hut.

Noctuidae:

Graphania morosa

Persectania aversa

Geometridae:

Austrocidaria similata

Dichromodes sphaeriata

Gingidiobora nebulosa

Hydriomena rixata

Ischalis fortinata

Pasiphila sp. (Hebe-feeding species, part of the dryas-rubella group)

Pasiphila lunata (another Hebe-feeding group)

Xyridacma veronicae

#### Lycaenidae:

Zizina labradus (common blue butterfly – the most numerous and ubiquitous species seen on the property. This is the Australian species which has displaced the endemic one throughout much of New Zealand.)

#### Crambidae:

Deana hybreasalis

Eudonia cataxesta

Eudonia sp. cf. philerga

Eudonia feredayi

Eudonia sp. (too worn for ID)

Gadira leucophthalma

Nymphula nitens

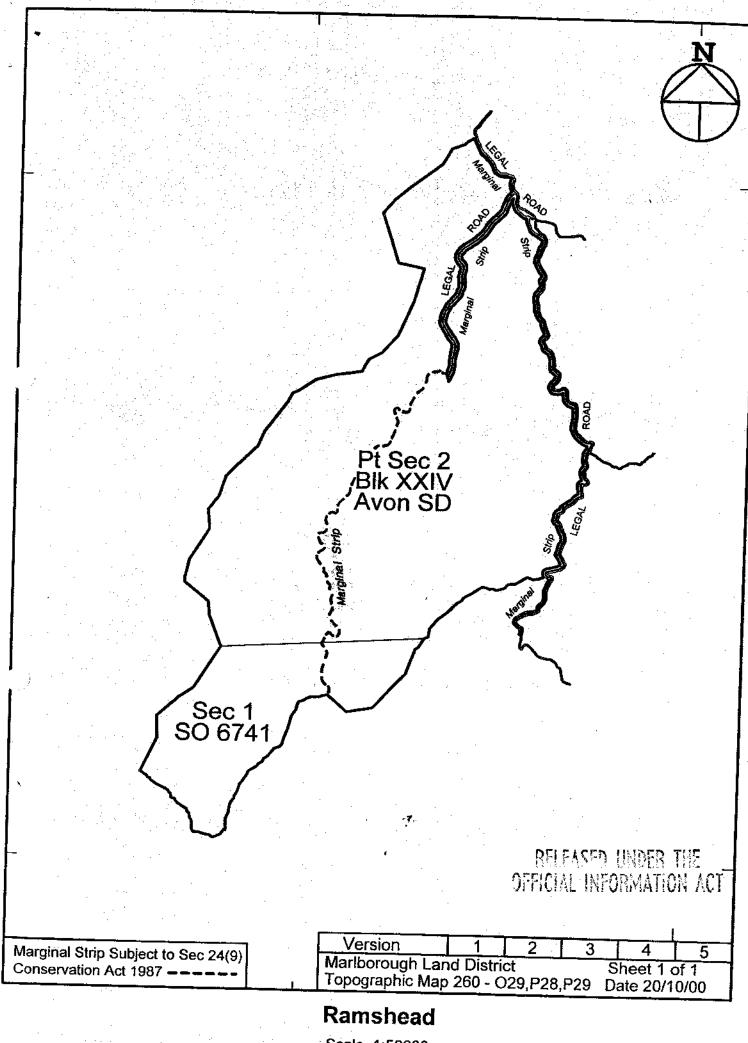
Orocrambus vitellus

Scoparia diphtheralis

Scoparia s.s. rouella

The most significant find here is the rare geometrid *Gingidiobora nebulosa*, which feeds on *Gingidium montana*, and is known from relatively few specimens in Marlborough and Otago.

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Scale 1:50000

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