

Crown Pastoral Land Tenure Review

Lease name :Hossack

Lease number :PC 062

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

Conservation resource and values of Hossack Pastoral Lease

Department of Conservation, Canterbury Conservancy, Tenure Review report to Knight Frank Ltd

February 28, 1997

PART 1 INTRODUCTION

1.1 Hossack Station

Hossack Station is a long narrow property of 9,458 ha running approximately north-east-southwest between the Clarence River in the north and the Little Lottery in the south. The western and eastern boundaries are straight line boundaries created for easy survey definition when the area was surrendered in the 1970s. Land to the north-west and north is Molesworth Station, and to the east and west is land administered by the Department of Conservation (ex. Hossack Crown Land Management Area and Tinline Downs grazing licence). To the south-west land is forest land leased to Carter Holt Harvey and to the south, freehold.

The property straddles three ecological districts - a small corner of the Dillon Ecological District in the north-west, Waiautoa (formerly part of the Dillon) in the north-east with the Hossack River forming the boundary to the two districts, and Miromiro to the south of the Hossack Saddle. Only the Dillon Ecological District has been surveyed as part of the PNA Programme. No RAPs were identified on Hossack Station in the Dillon District. Other pastoral leases in the vicinity that are involved in tenure review include Cloudy Range, Clarence Reserve, The Muzzle and St James.

PART 2 - CONSERVATION RESOURCE DESCRIPTION

2.1 Landscape

2.1.1 Context

The Hossack forms part of the south-eastern portion of a very large tract of Crown Land which extends almost continuously at 42° latitude between the Tasman Sea and the Pacific Ocean. Much of this land remains relatively unmodified, especially the forested parts west of the Waiau River and parts of the Kaikoura Range in the east. Between these moister forested mountain ranges there is a drier, predominantly tussock grassland and shrubland landscape. Much of this drier inland area is under pastoral lease tenure, with the Hossack lying roughly in the middle.

The Hossack run extends north and south of the Hossack Saddle, a low saddle (800m) between the Hamner Range to the west and Amuri Range to the east. These Ranges and the saddle effectively shelter the northern part of the property from the predominately southerly rainfall. As a result the property can be sub-divided into two distinct areas - a dry, northern, Hossack-Clarence Valley portion, and a moister, southern Hamner and Little Lottery section.

The property is not highly visible from any state highways. It does, however, provide part of a continuous semi-natural backdrop of farmland to the Hamner Basin. The visual continuity of this backdrop is important because it provides stability to the continually changing patterns of vegetation and the 'artificiality' associated with forest logging and differing management regimes in the Hamner Forest.

The part of the property south of the Hossack Saddle is included in two separate landscape studies commissioned by the Hurunui District Council and Canterbury Regional Council. In each of these studies the property is identified as part of a larger tract of mountain range lands which are considered to be "regionally significant" in the Canterbury Regional Landscape study (Boffa Miskell Limited and Lucas Associates 1993) and as a "significant landscape" in 'Landscapes of the Hurunui District (Lucas Associates, 1995). While the northern or Clarence Valley part of the property is not included in the Hurunui District Council study, the adjoining and upper reaches of the valley are, and all these parts have been identified as an "outstanding landscape". Judging by the landscape characteristics of the study area and those that are on the Hossack, it would seem logical that if the study area had been extended to include the Hossack then it would also have qualified as "outstanding" as would the reaches immediately downstream.

2.1.2 Landscape units

The Hossack Station is integral to two main landscape character types - the Clarence River valley landscape and the southern, Hamner River valley basin. These are differentiated from each other by the Hossack Saddle.

2.1.2.1 The Clarence River Valley

The Clarence River valley is a highly distinctive dry inland river valley. The stretch of river that forms the Hossack's northern boundary changes from a valley which is characterised by former outwash glacial and post-glacial alluvial terraces to a more confined valley system with steep mountain slopes and little flat land.

The Clarence Valley part of the property can be described in three sections:

(1) *Main Hossack River Valley*

This valley system is uncharacteristic of the majority of other Clarence Valley tributary river valleys which are more classically "V" shaped. Instead, this valley is composed of a wide and very broken central area with

tributary streams separated by higher dividing ridgelines. Stream cuttings and natural slope failure exposures reveal many faces of bedding sequences, dip slopes and fold complexes.

The majority of the Hossack Valley's lower country (i.e. below about 800m) is modified fescue tussock grassland with a high proportion of exotic grasses and hawkweed. Human modifications include subdivisional fencing, cattleyards, mustering huts, oversowing with grass and clover and topdressing with fertiliser and tracking. Above approximately 800m tall tussocklands and shrublands become the dominant vegetation, and, in the upper Hossack River tributary streams, patches of beech forest remain.

(2) *Mt Grant northern face*

Rising steeply from the Clarence River terraces, this face is an integral part of the Clarence Valley's sideslopes. The vegetation grades from gravelly slopes, sparsely covered in exotic herbs and grasses with some fescue tussock to flax and snow tussock with increasing elevation.

(3) *Deep Creek catchment*

Deep Creek is a locally named tributary stream of the Clarence River. It is typical of many other tributary streams in being deeply incised and dissected. It has a similar vegetation cover to the northern face of Mt Grant except for a small area of dense shrubland protected by steep rock walls in the upper catchment.

2.1.2.2 The southern side

The majority of the southern side of the property centres around the upper reaches of the Hanmer River catchment. There is also a small section of broken topography underlain by tertiary sedimentary rocks in the south-east corner of the property. This southern side can be divided into three smaller units:

(1) *The Hanmer River valley*

The Hanmer River valley is relatively narrow with steep enclosing sides and numerous side tributaries feeding directly into the main stream flow. It has an actively aggrading river bed with some of the tributary streams forming distinctive fans of fresh detritus as they enter the Hanmer River. In the lower third of the valley there are a number of discontinuous, high terraces.

The valley trends SSW-NNE. The warmer, north facing slopes have been cleared and maintained for grazing while on colder, south-facing slopes there is still a cover of beech forest and kanuka shrubland. Consequently, the valley has a markedly different appearance when looking downvalley as opposed to up-valley, toward the saddle. Human modifications include

cultivation and sowing to pasture of land which allows for some stock fattening and hay and winter feed.

(2) *Little Lottery catchments*

The slopes of similar steepness to those of the Hanmer River and similarly vegetated with the warmer sunnier slopes being cleared for grazing and large areas of beech forests retained on the colder faces. The very south-eastern portion is comprised of tertiary sedimentary rock types and has a more broken topography.

(3) *Boundary Stream - Hanmer River confluence*

In the vicinity of the homestead, the Hanmer River changes its direction to follow the alignment of the Hope Fault i.e. running north-east/south-west rather than north-north-east/south-south west. From this point downstream the river bed becomes wider and the valley begins to open out. Along this stretch of the river, pastoral lease land is only on the north or true right bank. The vegetation cover is mainly exotic grassland and kanuka shrublands with scattered wilding pines throughout.

2.3 Geology and landforms

The base geology on the Hossack is sandstones, siltstones and mudstones commonly referred to as greywackes and argillites which were deposited in the N Z Geosyncline during the Triassic to Jurassic time periods (135-200 million years BP). There is a sequence across the beds (east to west) from coarse to fine sedimentary rocks. At the base (coarse end) of the sequence are conglomerates which consist of a mixture of rounded pebble rock types.

The Hossack has not been glaciated but has been intensely eroded by frost and ice during glacial periods and remnants of glacial outwash gravels of the last glaciation remain on the "terraces" of the Hossack and Clarence Rivers.

Faulting is very pronounced in the area. The Hossack lies between two major faults, the Elliot fault to the north near the Clarence River and the Hope fault to the south near the Hossack homestead both of which trend north-east. Several relatively minor faults occur between these trending north-north-east to north-east, following approximately the line of the Hossack and Hanmer Rivers. Ridge and streams patterns have been strongly influenced by the bedding trend and these faults and have noticeable north-north-east to north-east trends such as the Hanmer and Hossack Rivers.

2.3 Climate

Average annual rainfall on the Hossack varies from 1000 to 2000mm, increasing from the Waiiau Plain north to the Hossack Saddle and then decreasing from there to

the Clarence River. Winds are predominantly from the north-west although southerly conditions influence the rainfall in the Hanmer Valley.

Temperatures range widely from -15° to 30°C, with frequent frosts in winter and very hot, dry summer conditions. Frosts and snow can occur in any month of the year at high altitude with snow covering areas above 1200m altitude almost continuously from June to September.

At Hanmer Forest meteorological station, 13 kilometres west of the property, about 1,920 sunshine hours are normal, with temperatures recorded up to 37 degrees in summer. Mean annual rainfall at Hanmer is 1163 mm.

2.4 Vegetation

The Hossack is similar to other neighbouring properties south of the Clarence River in having a mountain barrier that effectively shelters the northern part of the property from rainy southerlies and in so doing creates changes in the vegetation between the two sides of the property as a result of the decreasing rainfall.

In summary the vegetation is :

1. On the Clarence River side

- sparse short tussock grassland on riverflats and low altitude gentle rolling slopes of the Hossack River valley and Clarence River terraces.
- sparsely vegetated north facing lower-altitude slopes of Clarence River, Deep Creek and Hossack River side streams.
- flax-shrub tussocklands of *Chionochloa flavescens*, *Hebes*, *Coprosmas*, and mountain flax at altitudes 900-1100m in the Hossack River valley and on north facing Clarence River sideslopes.
- A small area of broadleaved trees and scrub in the upper catchment of Deep Creek and Malignson Creek.
- small patches of mountain beech in the upper Hossack River valley
- extensive scree above 1200m

2. On the Hanmer River side

- extensive manuka scrub throughout, particularly on shady slopes
- mountain beech remnants in the upper Hanmer River and side tributaries
- mountain beech forest with occasional red beech, podocarps and broadleaved trees in the Little Lottery
- shrubby *Chionochloa flavescens* tussocklands above 900m
- short tussock grassland with scattered kanuka
- screes above 1100m extending into stream gullies in places

In more detail these communities are made up of -

Forests

On the southern half of the property mountain beech forests remain in a large block in the headwaters of the Hamner River and as smaller patches in most side streams of the Hamner and Little Lottery Rivers. On the Clarence River side of the property beech forest only remains in the head of the Hossack River and on the lower slopes of Mt Balfour on the true left of the Hossack where rainfall is high compared to the mountain slopes closer to the Clarence River.

In the Hamner and Hossack Rivers mountain beech is dominant in the canopy with very scattered totara in the head of the Hossack River. These beech remnants are typical of much of Canterbury's beech forests with little else growing in the understorey besides beech seedlings and occasional shrubs of *Hebe*, *Corokia cotoneaster*, mingiminigi (*Cyathodes juniperina*) and *Coprosma microcarpa*. Along stream-sides there is more variety, commonly there are shrubs of matagouri, manuka and kanuka, *Hebe venustula*, *H. rupicola*, tutu, broadleaf, *Coprosma* species, and occasionally *Traversia baccharoides* and *Pittosporum anomalum*.

Along some terrace faces of the Hamner River beech is replaced by hardwood trees including kowhai, lancewood, mountain three-finger and broadleaf.

In the Little Lottery the forest is much more varied. Although dominated by mountain beech there is some red beech, occasional scattered matai on riverflats and a variety of broadleaved trees - broadleaf, mountain three-finger (*Pseudopanax 'ternatus'*), *Olearia paniculata*, lancewood, Hall's totara, marbleleaf, fuchsia, lemonwood (*Pittosporum tenuifolium*), *Coprosma linariifolia* and kowhai as well as shrubs of manuka, small leaved *Coprosmas*, *Hebe* spp. and *Olearia avicenniifolia*. Other than the small remnants of beech forests under Mt Balfour the only forest trees on the Clarence River side of the property are very small riparian shrub-treelands in Deep Creek and Malignson Creek. In Long Creek a small area of trees and shrublands have been protected from fires by steep rocky terrain. The trees are principally golden akeake (*Olearia paniculata*) and mountain ribbonwood (*Hoheria lyalli*) with very occasional Hall's totara. A diverse shrubland surrounds these trees, the most common species of which are matagouri, *Hebe glaucophylla*, *Olearia cymbifolia*, *Corokia cotoneaster*, *Olearia nummulariifolia*, *Bracyglottis monroi*, *Coprosma propinqua*, tauhinu (*Cassinia leptophylla*) with bush lawyer (*Rubus schmidelioides*) and flax. These grade into tussock shrublands of matagouri, *Bracyglottis monroi* and broadleaved snow tussock.

In Malignson Creek and possibly in the heads of some of the other side streams on the true left of the Hossack are shrublands of matagouri, *Coprosma propinqua*, *Olearia odorata*, *Hebe* spp. and brier, flax and mountain ribbonwood. Above 900m flax and broadleaved snow tussock increases.

Shrublands

The main shrublands on the Hossack are the shrub-treelands already described in Deep and Malignson Creeks, subalpine tussock shrublands at mid altitudes and

kanuka shrublands.

Kanuka shrublands are extensive throughout the Hamner and Little Lottery catchments and make up the majority of the vegetation cover on the property on the Hamner River side of the property. There is very little diversity of species with the kanuka. Frequently the ground is bare underneath or has occasional scattered grasses and herbs such as sweet vernal, browntop, catsear and hawkweeds. Other shrubs growing in association with the kanuka are matagouri and tauhinu.

At altitudes above 900-1000m on the Clarence River side subalpine tussock shrublands are widespread. Above the mountain beech remnants on the slopes of Mt Balfour on the Hossack Rivers side, beech abruptly gives way to tussock shrublands of *Chionochloa flavescens*, *Coprosma propinqua*, *Hebe* spp *Olearia cymbifolia*, mountain flax, *Olearia nummulariifolia*, *Pimelea concinna*, *Gaultheria crassa*, tauhinu, and heath (*Leucopogon colensoi*). The ground is usually covered in a range of herbs such as *Anisotome aromatica*, clubmoss (*Lycopodium australis*, *Hieracium pilosella*, and *Celmisia spectabilis* . As altitude increases the cover of shrubs lessens and tussocks and herbs increase. On the east facing slopes of Mt Grant above approximately 900m, flax and broadleaved snow tussock extend upslope with scattered shrubs of matagouri, *Olearia cymbifolia*, *Hebe venustula* and *H. traversii* .

On the Hamner River side, above beech remnants on rocky or gravelly slopes, shrublands tend to be a mix of matagouri, *Coprosma propinqua*, tauhini, *Hebe* spp. and occasional broad-leaved snow tussock. Ground cover comprises fescue tussock, bristle tussock (*Rytidosperma setifolium*), *Celmisia spectabilis*, *Leucopogon fraseri* and scattered plants of the dwarf broom *Carmichaelia monroi*.

Tussocklands

Tussocklands are not extensive on Hossack. They tend to be a mix of tussock, flax and scattered shrubs. The main tussocks are *Chionochloa flavescens* on northern gravelly slopes with limited areas of *C. pallens* on more shady less gravelly slopes. Very occasionally there are small patches of *Chionochloa macra* such as on Mt Grant - these are limited usually to hollows and sheltered areas and surrounded by the more sparse cover of *Chionochloa flavescens*.

On river flats and the low altitude gently rolling slopes of the Hossack Valley basin between Mt Malignson and Mt Grant, the main vegetation cover is sparse short tussockland of fescue tussock (<10% ground cover), with sweet vernal and mouse-eared hawkweed (cover is frequently over 20%). Around streams and hollows scattered briar is common although not thick. This vegetation type is extensive, making up approximately a third of the mapped surface area of the Clarence River side of the property. It is also highly modified, and lacking in naturalness with a large number and cover of exotic species. There are, however, occasional bushes of a threatened plant with a "local" category, *Coprosma intertexta*, alongside stream channels of the Hossack River.

On the sunny faces of Mt Grant and the lower-altitude mountain-slopes on the true right of the Hossack River, bare ground and gravel fields are extensive with only sparse scattered plants of mainly exotic grasses and herbs such as vipers bugloss, sheeps sorrel, sweet vernal, wild oat grass, haresfoot trefoil and mouse-eared hawkweed. The main indigenous plants are occasional fescue tussock, *Geranium sessiliflorum*, matagouri and sometimes areas of *Muehlenbeckia ephedroides*. Briar is common on river terraces, hollows and streamsides.

Screees are frequent on most mountain slopes. Plants recorded included scree oxalis, scree "pea" (*Swainsona novae-zelandiae*), *Hebe epacridea*, *Lobelia roughii*, *Wahlenbergia cartilegia*, *Stellaria roughii*, *Lignocarpa carnosula*, and *Leptinella dendyii*.

2.5 Fauna

No specific faunal survey was undertaken at the time of the field work, but birds recorded during the vegetation survey included pipits and falcon in the open tussockland and mountain tops, and rifleman, grey warbler and bellbird in beech forests and associated shrublands.

2.5.2 Freshwater fish

There are three main rivers within the lease - Hossack, Hammer and the Little Lottery. These rivers and their tributaries have a mixture of riparian vegetation and bed types. The highly water permeable and unstable nature of the gravels, in conjunction with their shallow bed profiles and lack of pools make these generally unsuitable either as adult trout or trout and salmon spawning habitat, although the possibility of limited opportunistic spawning when flows are adequate cannot be entirely ruled out. In the smaller tributaries where there is vegetation cover and coarser more stable substrate and suitable pools at least two species of galaxid (common river galaxias and koaro) are known to be present and observations of galaxiid fry in these and some of the main channels are also likely to be common river galaxias. It also seems likely that alpine galaxias and longjawed galaxias are present. There are also observations of bullies (probably upland bullies) in streams in the area. This interpretation is consistent with the Freshwater Fish database records which show upland bullies and common river galaxias to be present in similar streams in the general area. There are also records of long-finned eels. This is also consistent with the occurrence of koaro whose larvae, like longfinned eel can migrate long distances inland to colonise suitable habitats.

2.6 Historic values

The Hossack was originally part of the huge Lyndon run which was taken up in 1859 by John Tinline. The Hossack became a separate run of 15,182 hectares in 1897.

There are no known historic places on the property.

2.7 Existing land status

There are no marginal strips on any of the rivers on the property. A section of the Hanmer River is Crown riverbed. This extends from approximately 1.5 km south of the hut below the Hossack Saddle to a point approximately 2 km below the homestead. A legal road exists along the Clarence River crossing the river at various points.

Run plans

In the early 1970s Hossack consisted of 15,280 hectares. The property then underwent a North Canterbury Catchment Board run plan, prepared in 1975. As a result approximately 5800 hectares in two blocks was retired from grazing and a pastoral occupation licence with a 10 year term was issued over the area. Retirement of this Class VIII country was achieved by stocking with cattle only. After the POL expired in 1985 and following Crown Land allocations the land under POL was transferred to the Department of Conservation.

District Plan provisions

The Hossack falls under the jurisdiction of the Hurunui District Council, which notified a proposed District Plan in September 1995. The plan identifies all of the area of Hossack as being a "significant landscape area". It also identifies one area on the property as being a "Conservation Area" - 60 (Dog Hill Bush) which is described in the plan's schedule as "three largish patches of lowland (to montane in parts) forest on steep lower hillslopes and along streams". Only two of those patches occur on Hossack. In the Department's original schedule to the Hurunui District the beech forest around Hossack Saddle, identified as an Special Site of Wildlife Interest (SSWI), was included for recognition in the District Plan. So far, this remains outside of the plan. As submissions have only just been heard this may go back in, however.

Outside of the Land Act, the future protection of the property's natural resources and landscape will be dictated by the outcome of this tenure review and the Hurunui District Plan's policies and rules. The plan contains a number of policies covering the District's "significant natural resources" (issue 2) and "important natural features and landscapes" (issue 7). These policies include protecting resources of significant natural value from adverse effects (policy 2.2); providing for land use activities and development while sustaining and enhancing the natural values and soil, water, and ecosystem functions of the High Country (policy 2.5) and encouraging subdivision, use and development activities to be undertaken in such a way that the natural features and landscapes are protected and enhanced (policy 7.2).

These policies are to be implemented through methods such as District Plan rules to protect areas of significant value, resource consent processes, and the acquisition of significant unprotected natural resources. For natural features and landscapes the methods include the promotion of QEII covenants, financial incentives and District

plan rules including environmental standards and restrictions on the effects of activities, design standards and assessment criteria and restrictions on the siting of plantings, structures and buildings which would adversely affect important skylines.

2.7.1 Discussion

While these proposed District plan provisions provide a level of protection they are currently subject to hearings and possible appeals. The existing provisions could also be amended or deleted by subsequent plan changes or reviews. Where a rule requires a resource consent application to be made, there is no automatic assumption that an activity will be declined. In addition, even though there are certain provisions in the plan, forestry development, major earthworks or the clearance of indigenous vegetation could be permitted through a resource consent.

The rules also permit certain activities to occur as of right. These include earthworks (including tracking) up to 1,000cum, buildings which are not ancillary buildings, and shelterbelts and forestry blocks up to 1 ha in area. These activities have the potential to impact on plant communities, waterways and landscape values, particularly if they are poorly located or designed.

2.8 Recreation/Access

2.8.1 Access

Legal access on the Hossack can only be achieved via the Hanmer River bed on Crown land from below the confluence with the Little Lottery to a point approximately 1.5 km below the hut in the upper catchment. Legal access is not possible to either blocks of the Hossack Conservation Area from this Crown land through Hossack pastoral lease. Access to the eastern block of DoC land is possible via a marginal strip along the east bank of the Lottery River (on a neighbouring property). Note: one of the objectives of the Hossack Crown Land Management Area management plan was for practical legal access to be provided to both blocks of the management area (now Conservation Area). This was to be achieved through Section 58 strips being laid off all streams over 3 m wide at renewal in 1989. This does not seem to have occurred. An unformed road along the southern bank of the Clarence River gives legal, but not practical access along the Clarence.

2.8.1 Recreation use

The main recreational use on Hossack Station are centred on the Clarence River. The river is used by people kayaking and rafting, but because the Hossack is near the entry point to the river very few of these people would use the Hossack itself.

Although a range of game animals (wild pigs, deer, goats and chamois) have been reported on the Hossack and neighbouring DoC land, the very low numbers give little incentive to hunters. Hunting on the Hossack is by permission of the lessees. Access permission is also required to cross Hossack land to hunt on adjoining DoC

land. Rabbits are occasionally hunted on the Clarence River side of the property. Ducks, Canada geese and Californian quail are also hunted.

As far as is known there is no angling for sports fish undertaken in the Hossack, Hanmer and Little Lottery Rivers. In the the Clarence River, along the lease's northern boundary, brown trout and quinnat salmon are present and provide angling opportunities. While adult trout are resident in the river the salmon are in transit to spawn in the Acheron. Rainbow trout may also be present in this stretch of the Clarence but in much smaller numbers. People fishing for brown trout and quinnat salmon would cross the northern boundary of the Hossack in pursuit of their recreation.

The property is used by low numbers of mountain bikers who complete a round trip from Hanmer up the Hanmer River over Hossack Saddle, down the Hossack River via a vehicle track and follow the vehicle track up the Clarence and back to Hanmer via Jollies Pass. Low numbers of horse trekkers and very low numbers of trampers use the Hossack at present.

2.9 Existing management

As part of the 1975 Run plan agreement the majority of the Hossack is grazed by cattle only, except for a small number of wethers that may run for killers. In 1995 a new stock limitation was set allowing for 1150 cattle and 1600 sheep including 500 hoggets on the Cloudy Corner block and 1000 ewes on the Clarence terraces and Clarence block over winter. As there are no fences between pastoral lease and DoC land some of these sheep wander onto DoC land.

In the Hanmer River catchment wilding pines from the Hanmer Forest have been and will continue to be a problem. Densities are particularly thick in the lower catchment around the homestead and on the true left of the Hanmer but are scattered throughout the rest of the lease. Felling and slashing work to control the spread has been consistently carried out over the last five years by the lessees, and by DoC on adjoining land.

There are some patches of broom in the Hanmer River bed, along the track to the Hossack Saddle, in Boundary Creek and along the Clarence River sideslopes.

PART 3 NGO CONSULTATION

On 5 May 1995 a meeting was held with representatives from Forest and Bird, FMC, NZ Deerstalkers Association, Environment Centre, North Canterbury Fish and Game Council, and the Four Wheel Drive Association to discuss tenure review on Hossack Station, amongst other properties. At the meeting a number of areas were identified as important for conservation:

- Shrublands and beech remnants on true left of Hanmer River

- Hossack Saddle
- Mt Grant and true left of Hossack River
- True right of Hamner River - important shrublands and riparian vegetation
- The true right of the Hossack River was also identified as warranting consideration - from a sustainability point of view and the potential of the area for conservation.

Access issues were also discussed. Although the lower Hamner riverbed was identified as being in Crown ownership (i.e. outside the pastoral lease), there have been reports of access being denied for 4-wheel drive vehicles. Access was identified as being important from the Hamner River to the Clarence over the existing 4-wheel drive track - including consideration be given to 4-wheel drive access. The potential for horsetrekking in the area was also recognised.

At a later date Forest and Bird supplied a map which identifies the areas they recommend for retirement, for allocation to DoC, strictly controlled grazing land under a sustainable management regime (under Crown tenure), and areas suitable for freeholding.