

Crown Pastoral Land Tenure Review

Lease name: GLYNN WYE STATION

Lease number: PC 024

Fish & Game Report

As part of the process of Tenure Review Fish & Game councils may provide advice on significant inherent values within the pastoral lease, and the information may be incorporated in the Conservation Resources Report. The advice is part of the information gathered and assessed for the development of a preliminary consultation document.

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

December

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FISH & GAME RESOURCES OF GLYNN WYE PASTORAL LEASE, NORTH CANTERBURY

Prepared by the North Canterbury Fish & Game Council, Pastoral lease tenure review report to Knight Frank Limited.

November 1997.

Part 1 - Introduction

1.1 Glynn Wye.

Glynn Wye is situated adjacent to the Lewis Pass Road (SH.7) about 160 kms from Christchurch and 38km from Hanmer. It lies along the south bank of the Hope River below its confluence with the Boyle River, downward to where it joins the Waiau River, and then some distance downstream from this point

The lease contains two runs. They are the Glynn Wye (Run 255) and Somerdale (Run 236).

1.2 Physical Description.

1.2.1 Topography.

The Glynn Wye lease includes the entire north facing portion of the Glynn Wye Range. The Somerdale portion of the lease includes parts of the Little and Big Island Hill ranges (to the south), and a portion of the Organ Range to the north, while the Tekoa Range runs along the eastern boundary of the Somerdale run.

The major water systems within the lease are the Kakapo Brook, a small river which runs through the Kakapo Valley. It is bounded on one side by the Glynn Wye Range, on the other by an unnamed range which drops down to the Hope river.

Within the Somerdale portion of the lease are the headwaters of the Mandamus and Glencoe Rivers, both of which are Hurunui River tributaries.

To the west of the Dismal Valley, on a terrace of the Kakapo Brook, lies a large pond (approx. 6ha). It is bordered to the north by a large wetland area (approx 10ha). A number of smaller wetlands exist beneath the terraces bordering the Kakapo Brook. This includes a 4ha harakeke wetland about 3km above the Dismal Valley on the northern side of the Brook.

Horseshoe Lake, essentially a large pond area, lies adjacent to SH.7 on a freehold portion of the property.

1.2.2 Climate.

Rainfall at the Glynn Wye settlement averages 1041.4mm, but higher up the Hope Valley this increases to about 1270mm. Estimates on rainfall in the upper Kakapo catchment have been given as around 1524mm per annum¹

¹NCCB (1973) Soil & Water Conservation Plan, No. 923316.

Strong nor-west winds blow down the Hope and Boyle Valleys and sweep through 'the gap' in the hills on the property adjacent to the Boyle confluence. In winter snow lies over the whole property for short periods after storms.

1.2.3 Vegetation.

Glynn Wye includes a number of well developed paddock areas on its terrace lands adjacent to the Hope River and in proximity to the homestead. The Dismal Valley has also been developed into paddock areas, with fences and shelter belts providing opportunities for semi-intensive stocking, with a movement into deer farming now apparent.

Over the rest of the lease fescue tussock, with introduction grasses (including sweet vernal, brown top and yorkshire fog) cover the terraces, fans and hills; with snow grass at higher altitudes. Hieracium is also present in varying concentrations.

Matagouri is present along the extensively grazed terrace areas and on the various outwash fans that occur along the river valleys. Large patches of manuka exist on and north of the Somerdale block. This block is also characterised by dense broom and gorse, and the progressive invasion of wilding conifers.

In 1973 (ibid) it was reported that extensive areas of beech forest existed near the head of the Kakapo and Mandamus Rivers and along Gorge stream, as well as some patches in the tributaries of the Kakapo Brook (ibid).

1.2.4 Soils.

Craigieburn soils occur on the terraces, with small areas of Tasman soil along the Hope River bank. The northern part of the Somerdale run is characterised by Hurunui Steepland soils, with Tekoa Hill soils on the lower hills of the Kakapo Valley.

On the higher ranges Tekoa Steepland soils progressively give way, with increased altitude, to Kaikoura soils. Alpine soils persist on the tops. Towards the wetter western end, Tekoas and Kaikoura soils do, however, give way to Bealey and Spenser soils.

1.2.5 Erosion.

In the Kakapo catchment there are some areas of severe erosion at high altitudes, but in general the catchment has been reported to be in fair condition (ibid). The Somerdale run, however, is subject to 'severe and extreme erosion' over almost all of its higher country.

As a result of the increasing deterioration of this area by erosion a 1973 Land Improvement Agreement resulted in the destocking of sheep from the run, east of the Gorge Stream, with cattle only being retained to control rank growth on the lower country. This does not appear to have been very successful with broom and gorse now predominating as the dominant vegetation over large parts of the run.

The Council believes that at present a portion of the lower Somerdale block is grazed on a sub-leased basis by the runholder of Island Hills. However this is only a small portion of the total run block.

Part 2 - Fish and Game Values on Glynn Wye Pastoral Lease.

2.1 Context.

No recent surveys of sports fish values of the rivers and streams on the Glynn Wye pastoral lease have been undertaken. The Council is therefore obliged to draw on observations made from its own field survey and comments made by others who have visited and have a knowledge of the area.

Of the range of sports fish which exist in the region brown trout (*salmo trutta*) are likely to be the most abundant and the only present. Chinook salmon may enter into the headwaters of the Mandamus and Glencoe rivers, but this has not been substantiated.

More is known about game bird values on the lease, with Glynn Wye being included in Council aerial surveys of Canada geese and paradise shelducks. The numbers listed in table one have been observed over the last four years. It should be noted that these figures represent trend counts flown over specific flight paths only. Bird numbers are therefore likely to be higher on the lease than those indicated in the table.

	1997	1996	1995	1994
Canada Geese	0	55	116	0
Paradise Ducks	184	220	20	200

Table One: Trend count figures for Canada geese (June-July) and paradise shelduck (January - February) on the Glynn Wye lease 1994-1997.

The north facing slopes of the Glynn Wye Range, the Hope Valley, Organ Range, the Little and Big Island Hills and Tekoa Range all offer what should be good upland game habitat and recreational opportunities, with California quail and chukor likely to be present.

2.2 Sports Fish Habitat Values of Glynn Wye Pastoral Lease.

The Glynn Wye lease contains three main waterbodies which have potential sports fish habitat values. These are:

- a. the Kakapo Brook;
- b. the Mandamus River;
- c. the Glencoe River.

a. The Kakapo Brook.

The Kakapo Brook has a wide river bed relative to its average stream flow. It is also reported to change its channel characteristics regularly, namely as a result of flood events.

The observations made on the field inspection, the observations of the Council's staff, as well as of anglers who have visited the area, suggest that the Kakapo is subject to regular change in its channel configuration and is unlikely to contain sufficient stable flows to ensure optimal conditions for sports fish.

At the time of the Council's field inspection the brook was characterised by a predominantly riffle system, with a low amount of (slower) holding water being visible. This appears to be caused by the level of fall over the length of the brook, which appears to be quite sharp.

Realistically therefore there is unlikely to be a significant brown trout population in the brook. Thus one would expect numbers of these fish to be low, although those present could be large (up to 4 kg).

b. Mandamus River.

The Mandamus River is reported to contain both brown trout and chinook salmon, the latter being an anadromous species and subject to variability in its presence.

Based on the Council's field survey, however, the portion of the Mandamus within the Glynn Wye lease is unlikely to contain many, if any, brown trout. Nevertheless it is important to recognise, from a down stream effects perspective, that tenure negotiations should make allowances for provisions which avoid, remedy or mitigate for potential land use affects on the river. The development of forestry in the upper Mandamus catchment, for example, could significantly reduce both the quantity and quality of water in the lower Mandamus where sports fish are present and actively fished for by licenced anglers.

c. Glencoe River.

The Glencoe is a relatively unknown sports fishery. Observations of Council staff revealed both healthy invertebrate and bully populations (*gobiomorphus spp.*) as well as suitable holding water for sports fish; although none were observed in the short stretch that was surveyed.

It is likely that some sports fish, namely brown trout, will be present in the section of the Glencoe River on the Glynn Wye lease, although the numbers are unlikely to be large. However the population could make a valuable contribution to the lower Mandamus brown trout population, with the upper Glencoe being a potential spawning area for such fish.

2.3 Sportsfish Recreational Values.

The upper Waiau and Hurunui catchments are valued as wilderness fishery areas, characterised by outstanding scenery and a sense of solitude. Such fisheries typically hold a small number of very large fish (almost always brown trout). These fish are actively sought by a portion of our licence base, including those who come from overseas, where such large fish are rarely obtained.

Data bases of angling use of the area are limited. National angler survey data, compiled through telephone surveys undertaken during the 1994-1995 fishing

season is prejudicial against picking up the usage of such areas by anglers. This survey therefore does not provide a suitable indicator of angler usage of such waters.

In actuality it is likely that fishing of the Kakapo Brook is low, with some anglers potentially targeting the gorge section of the brook between SH.7 and Dismal Valley. It seems unlikely that the Mandamus river is fished within its Glynn Wye section as its water appears unsuitable to sports fish (inadequate depth and a general lack of holding water).

In contrast the Glencoe probably has some potential recreational value, although these are likely to be restricted to keen enthusiasts.

2.4 Game Bird Habitat Values.

a. Ducks & Geese.

Paradise shelduck, Canada geese, and in lesser numbers grey and mallard ducks, have been observed on the Glynn Wye lease. The developed pastoral areas in the Dismal Valley and along the Hope River are particularly attractive to paradise shelduck and Canada geese, the former of whose numbers have proliferated with the development of pastoralism in New Zealand.

Both shelduck and Canada geese reportedly favour the area because of its browsing food opportunities. It is likely that Canada geese nest in the dry segments of the large braided river and stream beds of the Kakapo Valley. Paradise ducks, meanwhile, would nest adjacent to and within the wetland areas which punctuate the Kakapo Valley (see photos). Because of this these wetlands are very important to game bird populations in the area, particularly as juvenile rearing areas.

The pond and wetlands 0.5km west of the Dismal Valley are also important habitat areas, particularly to grey and mallard ducks, the former declining in numbers throughout the region.

The developed river valley portions of the Glencoe and Mandamus River are also likely to contain Canada geese and paradise ducks, where it is grassed, although numbers did not appear to be high during our field visit.

b. Upland Game.

Upland game birds such as California quail and chukor (both of which are likely to be present in moderate numbers on the lease) favour different environments from those of ducks and geese. California quail favour the sunny northward facing lower and middle slopes, with matagouri, broom and gorse offering favourable habitat, while chukor should be found along the ridges and higher slope areas.

Quail were not observed during our field survey of the Kakapo Valley, although we did not survey the prime habitat areas. However they have been reported to exist by the leasee (Cox pers.comm.). Quail were heard in proximity to the Glencoe Hut and it is likely that this area will contain moderate numbers of these birds.

Chukor are difficult to observe, although the leasee of Island Hills (an adjacent lease to Glynn Wye) has reported the birds on his property along the ridges of both the Little and Big Island Hills. It is therefore likely that the birds will exist on Glynn Wye.

2.5 Game Bird Recreational Opportunities.

Canada goose shooting occurs on the Glynn Wye lease, with the permission of the leasee. Glynn Wye offers good access opportunities for those seeking a high country Canada goose hunting experience. The Dismal Valley, for example, offers the opportunity to 'dig in' and decoy Canada geese into the range of hunters.

Paradise duck hunting opportunities are also good along the Kakapo Valley and in proximity to wetland areas, and the large pond near the Dismal Valley (see map 2).

It should also be recognised that it is important that the Council be provided with access to undertake management control operations (eg. nesting and helicopter culls) of both Canada geese and paradise ducks. Both of these birds can create problems for runholders in the area (eg. through predation on crops).

Canada geese and chukor hunting statistics do not exist for the area. However if access was available and publicized it is likely that a section of our licence base would use the opportunity to hunt for these species on Glynn Wye.

For game bird recreational use it is important, especially when hunting over water (eg. over ponds or lakes) and for upland game, that access for dogs is provided. All hunting, of course, requires access with fire arms.

Part 3 Recommendations.

3.1 Sports Fish.

The report has summarised the known and perceived sports fish values on the Glynn Wye lease. The protection and promotion of these values would be achieved by the recommendations detailed on map one. These are:

1. ~~Access up to the top end of the Kakapo Brook Gorge.~~ There is the likelihood, given its morphological character, that the pools in this area will sustain brown trout.
2. Access for anglers up the ~~Glencoe River~~. Riparian strips of at least 20m ~~should also be established to give protection between any subsequent land uses activities (eg. forestry development) and the Glencoe River.~~
3. The establishment of at least a 20m riparian strip between the ~~Mandamus~~ River and any subsequent land use activities in the catchment. Although the Mandamus does not offer any sports fishing opportunities within the Glynn Wye lease, land use impacts which detrimentally impact on the river will have downstream impacts where such values undoubtedly exist.

4. Provision for use of the two huts in the Kakapo Valley, and the Glencoe River hut by anglers and game shooters.

3.2 Game Birds.

This report has summarised the known and perceived game bird values of the Glynn Wye lease. The protection and promotion of these values would be achieved by the recommendations made on map 2. In summary (with reasons provided) these are:

1. The protection of the recognised wetland margins from development and stocking. These areas are important for juvenile rearing and in supplying habitat opportunities, as well as providing hunting areas. See map 2.
2. Access to the Dismal Valley for Council game bird control purposes and for recreational hunters. See map 2.
3. Access to the upper Dismal Valley pond and associated wetlands for game bird hunting and Council management purposes. The protection of the wetland from stock is also recommended. For example, by fencing. See map 2.
4. Access to the northward facing slopes and ridges of the Hope Valley, Glynn Wye and Organ ranges (via either the Kakapo Brook or existing farm tracks) for upland game hunters. Such access would need to include the right to carry hunting firearms and to bring dogs onto the property. See map 2.
5. Public access to the upper Glencoe and Mandamitis catchments for upland game hunters, with the right to carry firearms and bring dogs onto the property. This area appears to offer good upland game hunting opportunities. This recommendation is summarised on map 2.
6. Access from the upper gorge on the Kakapo Brook for Canada goose and paradise shelduck hunters and to the Council for management purposes. This should include access to major outwash fans and streams that form part of the catchment. This recommendation is summarized on map 2.

Concluding Statement.

This report summarizes the sports fish and game habitat and recreational values, and the recommendations for the protection of these values by the North Canterbury Fish & Game Council.

WAYNE McCALLUM.
RESOURCE OFFICER.

Photographs from Glynn Wye Field Survey

13th & 15th October 1997

See Map **3** for Photo Locations



Photo One: Terrace wetland on the Kakapo Brook, south bank, between Dismal Valley and the Kakapo Brook Gorge. These wetlands are important as game bird habitat and recreational areas. (See map five for photo locations).



Photo Two: Pond and wetland. Significant game bird habitat and recreational area approximately 0.5 km west of the Dismal Valley. (See map five for photo locations).

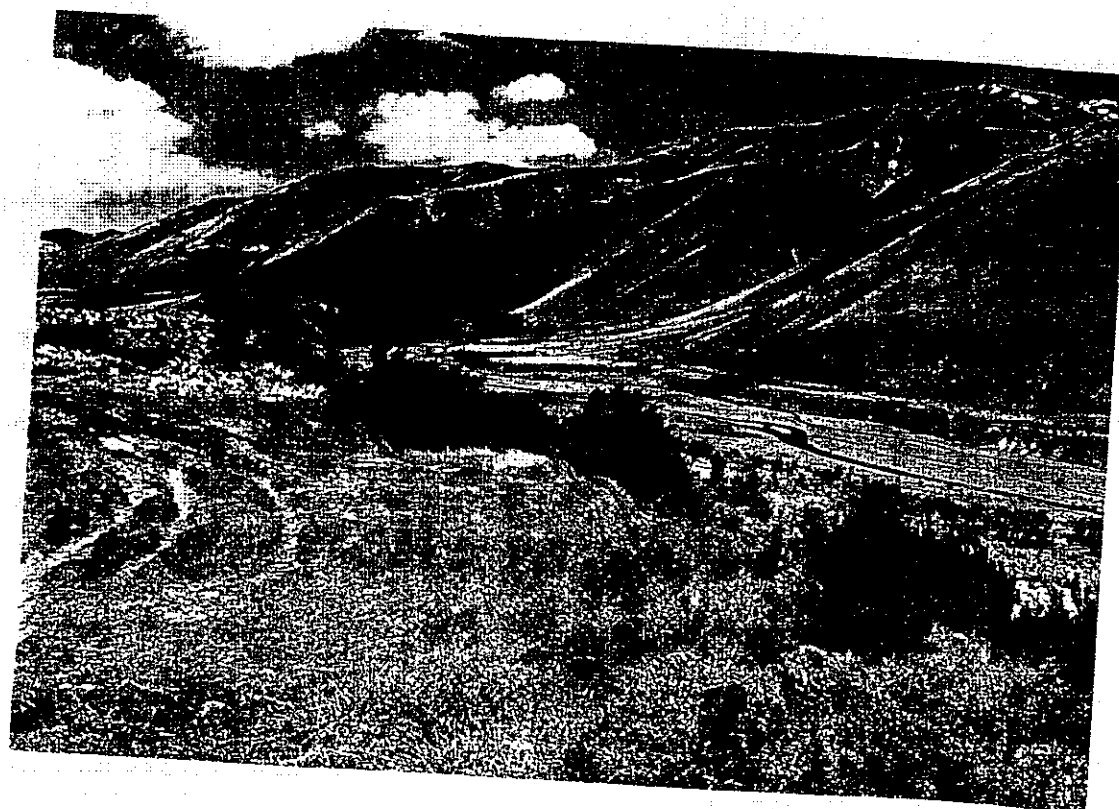


Photo Three & Four: The Kakapo Brook. Marginal sports fish value. Significant Canada goose and paradise duck habitat and recreational hunting area.



Photo Five: Lower terrace wetland. Important habitat area for game birds and also plays role in the maintenance of water quality and quantity in the Kakapo Brook.

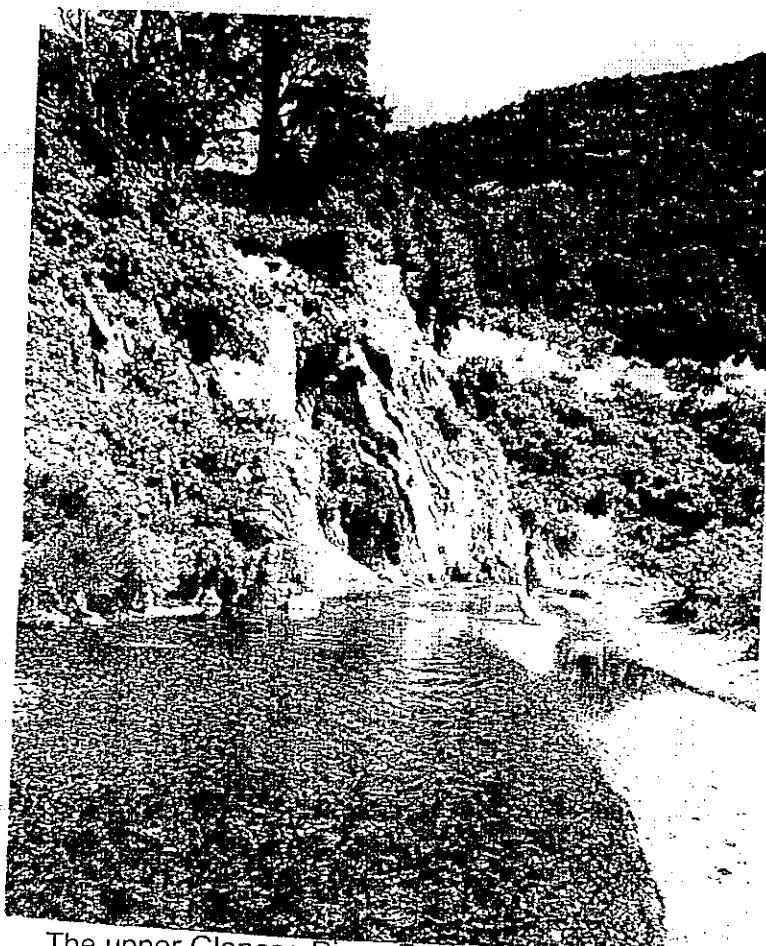


Photo Six: The upper Glencoe River. Pools such as those adjacent to Field Officer Ross would be expected to provide good habitat for brown trout.



Photo Seven: Invertebrate check of the upper Glencoe River. Survey by Council staff showed high levels of invertebrates (esp. stone fly and caddis). A high number of bullies were also observed in the river. Such populations would sustain health brown trout numbers.



Photo Eight: The Glencoe River from a terrace, just before the ford leading to the hut.

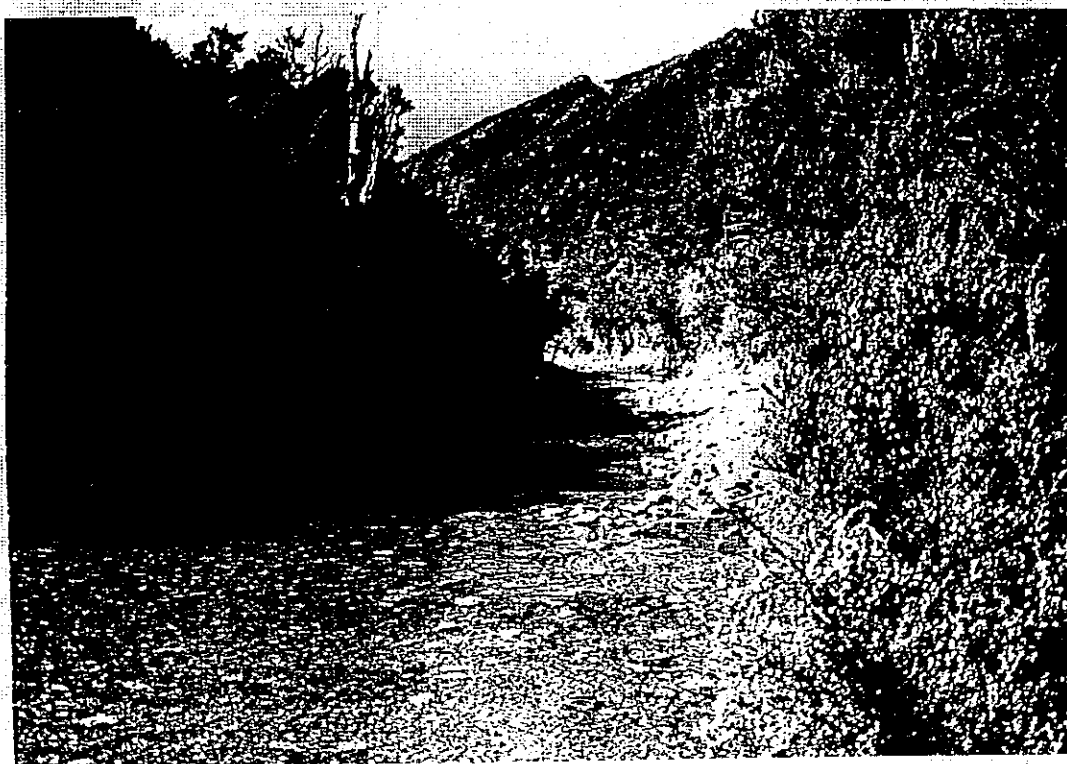


Photo Nine: The upper Mandamus River. Lack of invertebrates and habitat variety necessary for brown trout survival suggest that this water would not sustain brown trout.