

## WAIORAU PASTORAL LEASE

### 1 OVERVIEW OF ECOLOGICAL FEATURES

Waiorau Pastoral Lease lies in the Pisa Ecological District, in the Cardrona Valley. Some 8560 ha of the Pisa tops were recommended for protection (RAP) by a PNAP survey in 1985. This Pisa tops contains broad ridges, spectacular tors, steep cliffs, cirques and a variety of valley systems. The vegetation is wide ranging in diversity and representativeness and, as this block mountain is the highest in Otago, the ecological significance is reflected here. The RAP identified as A3 Pisa tops, has an altitudinal range from 670-1960 m with the majority above 1500 m.

This RAP has been affected by grazing and fires in the past which has resulted in a modified natural vegetation. Despite this modification, the diversity of richness of the vegetation is still of significance. Today the grazing pressure on the whole area is low, with no fires occurring in recent times.

### 2 a RAP FROM DRAFT PISA SURVEY REPORT

The RAP boundary on Waiorau encompasses nearly 50% of the Pisa tops, approximately 3974 ha. The values within Waiorau can be summarised as follows:

- i Prince Burn: The core to the RAP is the most diverse of the eastern tributaries and has branches of different characters with a wide range of slope angles and aspects and an almost full altitudinal range of vegetation types.
- ii Leopold Burn: Mirrors the Prince Burn, except that *Chionochoa macra* growing on colluvial slopes is absent.
- iii Pisa Tops: Highly sensitive cushionfields with periglacial features and nivation hollows. A distinctive landform of summit plateau and undulating ridges, a stark contrast to the glacial cirques in the east. A wide range of species occur in the cushionfields and lag gravels.
- iv North-west corner on boundary Robrosa/Waiorau. Bog flush vegetation growing on peaty soils. These only occur west of the Roaring Meg and those identified are the largest and most sensitive to any disturbance.
- v Area of *C. macra* at lower altitudes of good quality growing above Roaring Meg near northern boundary. Compares with *C. macra* in Prince Burn as it is of better composition and density.
- vi Alluvial surfaces in Roaring Meg contain *C. macra* with bog flushes adjacent.
- vii Winter Creek, Colour Burn: Steeper incised valley in south, diverse shrubland and mixed tussocklands.
- viii *Dracophyllum pronum* on western boundary found on shady face between 1300-1600 m above Roaring Meg.

In 1991 following a field inspection and discussions, DOC altered the RAP boundary to exclude the main ski field and trail areas, with the true right bank becoming the revised boundary line for much of its length, with the exception of the bog flush vegetation (iv) and the *Dracophyllum pronum* (viii) remaining as areas of significance on the western boundary.

## **b FARMLAND**

The remaining land outside of the RAP encompasses approximately 1530 ha being the front faces above the homestead and 1250 ha from the snowline fence to the Meg River. The majority of this land has been significantly modified for pastoral farming. The lower country has, to a significant extent, been OSTD while higher up the mix is a variety of introduced grasses and/or fescue tussocklands. The ridge top between the snowline fence and the Meg is the least modified habitat, but this vegetation is well represented within the RAP, apart from two significant areas identified in 2a(iv) and (viii).

Matagouri and briar are also a component of the lower slopes, up to about 650 m. The latter has been the subject of a successful weed control programme.

This area contains minimal ecological values on the whole but the area does have landscape sensitivity and historical considerations that need some degree of protection.

The main access track to the nordic ski field traverses this land and the major base facilities are also located within the upper area near the Roaring Meg.

It is this land which is available for possible freeholding.

## **3 FAUNA**

- 1 Black-backed gull, oystercatchers, banded dotterels, black-fronted tern, paradise duck and grey duck all breed within the area.
- 2 Slopes also include pipits, skylarks and other passerines. The New Zealand falcon has also been recorded.
- 3 The range of the habitat will contain many invertebrate species, many of which are rare or endangered.

## **4 LANDSCAPE ASSESSMENT**

Waiorau can be divided into three landscape zones with boundaries similar to those already described. Each zone has a degree of landscape sensitivity that requires careful handling.

### **a Front Faces**

These are very visual from the Cardrona Road which has become a major tourist route. The major impacts are from tracking or mining. Currently the Cardrona River flats are being mined and the impacts are considerable but, in theory, these flats will be returned to farmland at the end of the operation.

A major road traversing the front faces is another major impact, but this has been handled sensitively and on-going maintenance will be the only future requirement. Existing farm tracks are probably sufficient to service the property. Any new tracks or fencelines need to be sited sensitively to reduce these impacts. While a tenure change will no longer involve Landcorp and DOC, they should be noted.

Improvement to the front country by OSTD and vegetation control will, depending on ones viewpoint, improve the landscape.

## Lower Ridge Top from the Snowline Fence to Roaring Meg

These rolling ridges and gullies leading to the Roaring Meg are an analogue to the higher Pisa tops. Rocky tors are a feature of the area. From a distance the area does look similar to the tussocky higher tops. However, on closer inspection it lacks the ecological characteristics of the higher slopes. Being at a lower altitude the modification reflects this, except for two areas in the Meg. The upper Meg near Tranquillity contains the bog flush vegetation growing on peaty soils, which are highly sensitive to any disturbance. In the lower Meg, *Dracophyllum pronum* growing on a shady face is the largest area identified within the Pisa Range.

This middle country provides a foreground to the greater Pisa RAP and any development could tend to lessen the impact of the values if insensitively done. The main threat to this area is further development of the skifield and its associated trails. However working on similar guidelines to those that have already been established, further impacts can be minimised by the right management prescriptions.

It is seen as desirable for some constraints to be placed over the area and it is recommended that a covenant would protect the landscape of this area and the two ecologically sensitive areas.

### Management Prescription

- i Strict control on siting of buildings and earthworks associated with new facilities. A good revegetation programme and maintenance is essential.
  - ii Pastoral farming which retains or improves the condition of the vegetation. Status quo management acceptable - no burning or oversowing allowed.
  - iii Peat bogs and *Dracophyllum pronum* scrub are highlighted as areas of special significance requiring extra sensitivity.
- c RAP

This area, because of its ecological status, is also the most dramatic landscape on the Pisa tops. The whole area has an indigenous character that is impressive when combined with the rocky outcrops, cirques and high tops.

This area is one of the few block mountain tops where good public access is available via the skifield road, and this access will, in time, allow for greater public appreciation of the area, in all seasons. Practical access is also available via a legal road up Tuohys Gully.

The long term protection of this area as conservation estate is desirable. However, in reaching agreement for this change some management considerations will have to be taken into account. Future development will need to be clearly defined and a similar management prescription to (b) above will have to apply.

## 5 CULTURAL VALUES

### a Historic

Gold mining has played an important part in shaping the Cardrona Valley and associated areas. Prospecting first started in 1863 and continued over the next four decades. The history and physical evidence has been documented by Dr Jill Hamel as part of the PNA programme, in two documents covering the history of Waiorau Run and the Criffel, Roaring Meg in the Pisa Range.

The main workings are:

- i River flats and sluiced cliffs, Cardrona Flats
- ii Criffel face sluicings, dams, reservoirs in Tuohys Gully
- iii Meg Hut workings
- iv Water races
- v Cardrona Roaring Meg pack track.

Site (i) has been the subject of recent mining activity and the evidence of earlier mining has largely been destroyed or is in the process of being destroyed or is hidden under the alluvial flats. It is seen as desirable for the other sites to be protected in their settings to retain their historic integrity.

Conservation covenants over the Criffel face in Tuohys Gully, part of the Meg Hut site and water races leading from the Roaring Meg is desirable. The latter site is near the *Dracophyllum prunum* and is within the landscape ecological covenant proposed under 4(b). The Tuohys Gully portion of the Cardrona-Roaring Meg pack track is probably on legal road and has been offered as walking access through into the RAP by Waiorau lessee.

The Roaring Meg sites on the true left bank largely fall within the proposed conservation land, along with the water races found on the top of the Pisa Range.

#### Management Prescription

- i No tracking or earth disturbance within the proposed covenant areas.
- ii Status quo pastoral management acceptable, however, increasing stock pressure from cattle near the dams and reservoirs in the Tuohys Gully area may necessitate fencing to exclude cattle.
- iii Management of briar and woody vegetation in the long term is desirable to prevent the sites from disappearing under thick vegetation cover. Briar sites should not be root raked.

## 6 ANIMAL PESTS

### a Rabbits

This animal pest is confined to the lower altitude farmland and is the subject of ongoing control operations. Rabbits do not affect the higher altitude lands, although extreme populations could affect the historic sites at the lower altitude, by burrowing, etc.

### b Hares

They are present throughout the higher altitude - no control is seen as necessary.

### c Others

Opossums are present throughout the property. At the lower altitude rabbit control possibly has some effect on the populations. Their effects at higher altitudes are probably minimal.

Goats, deer and pigs do not present any threats.

## PLANT PESTS

Briar is the most obvious problem plant below 650 metres, however, high control inputs have seen some major control gains in recent times. Some input from DOC may be required on the proposed covenant area and Stewardship land in the longer term.

Hawkweed is present in a few isolated patches on the property, but at this point in time does not appear to be a major problem. The ground cover throughout the whole pastoral lease is relatively good. However, land on an adjoining property does have high infestation in places, and some monitoring of vegetation is desirable.

As part of a proposed QEII Trust initiative, Peter Johnson, DSIR, has done some initial work around the Roaring Meg, which will be useful for base data in the future.

## 8 FARMING

The lower altitude land as mentioned in 2b is clearly farmland available for possible tenure change. Intensification of farming will occur in time and is probably desirable from a landscape perspective to prevent the further spread of briar.

The upper area above the snowline fence is a block of 1012 hectares and incorporates part of the proposed covenant areas. Precise stocking numbers are not available, but aerial counts reveal numbers between 100-400. Providing the overall landscape appearance is not altered or two key ecological areas affected, continued farming and change of tenure can be accommodated.

This country, because of skifield activity, has been largely ungrazed in recent times, but normally carries part of the weaned ewes until mid May.

The area east of the Roaring Meg follows largely the RAP boundary and the Back Block (4139 ha) of Waiorau Station. This block normally runs 2500-2700 wethers from November/December through to early May. However, for various reasons this number has been lower in recent years (1500-2200 wethers with 1700 in 1991). This represents approximately 1500 SU on an annual basis. The area is also extremely valuable to the lower country to provide autumn spelling of the lower country in normal seasons.

It is considered that the current stocking rate is probably sustainable, but needs careful monitoring. With a possible tenure change to conservation estate the question of long term grazing needs careful consideration. Freeholding of the lower country may provide off-site benefits that no longer make the "Back Block" a requirement as a critical part of the farming operation.

Given that some research is indicating that grazing of high mountain tops is not sustainable, there may be some requirement that allows for short term grazing with its eventual phase out. This point needs further discussion.

If grazing is phased out, no practical stock boundary is available and fencing along the proposed line would not be practical or desirable. However, because of the current low grazing pressure in the proposed landscape covenant, some consideration could be given to destocking this area also. Practical lines probably exist which would effectively control stock movement.

The Waiorau/Robrosa boundary fence requires ongoing maintenance and is slowly being renewed. The grazing pressure on Robrosa is such that in the longer term most of its length may need replacing, some 8 km. Negotiations with Robrosa may reduce the stocking pressure on part of the boundary fence.

## NORDIC DEVELOPMENT

Future development of this facility depends on skier days, snow seasons and finance. To crystal ball gaze is extremely difficult, but it is apparent that development requires a relatively free hand, within constraints of the Resource Management Act and district planning. A change in tenure over the lower country and base area should allow this development to occur. If a general covenant is accepted over this area it should encompass guidelines for facility development/enhancement and trail revegetation. It is foreseen that further trail construction, huts and improved base facilities will be part of the future. It is recognised that nordic skiers visit the area for different reasons than their downhill counterparts and appreciation of the natural environment is of prime importance. Any development should be towards that ultimate end. Also, the RAP is part of a greater backdrop and protection of the landscape as a whole is important.

In the RAP proposed development consists of:

- a relocation the Bob Lee Hut
- b overnight lodges in the lower Leopold and Prince Burn and perhaps in the Colour Burn
- c formation of trails to the huts and a new loop from the Bob Lee Hut
- d snow groomed trails, only in good snow years up the valleys to the tops.

Overall, the impacts of this development is minimal when the total overall area is being considered for protection. A concession would be required for the current operation to occur along with any proposed developments. The latter should be able to be accommodated within existing known guidelines. The huts can be sensitively sited and will be not far up each valley. The Colour Burn Hut does raise some concerns in terms of accessibility and development. It is possible to locate this hut, with no hut or trail earthworks. This hut may be developed with perhaps a sharing concept with DOC for those using the proposed "free" public access route.

The loop from the Bob Lee Hut traverses a steep face through a good stand of *Chionochloa macra*. The integrity of this area and the landscape will be affected by this track, however, the compromise of acquiring the greater area makes this acceptable. With the trail techniques and revegetation work currently being developed, the impact can be reduced, especially if a minimum width is pursued with less emphasis on grades, the topography should dictate the line of the trail.

A concession package will have to be developed as the change of tenure option is explored. While DOC cannot promise Waiorau exclusive rights to the area for a concession, the access through his front country will control any future concessions.

## 10 ACCESS

The main ongoing controversy on Waiorau over the years has been access to the tops. Waiorau have developed a first class road to the ski area for use of its patrons. Wide ranging discussions have looked at the options for the public using this road for access to the tops. Waiorau have allowed various road tolls to be charged for use of this road outside of their normal fees in the past. To date, use and honesty have not been respected, therefore management is reluctant to look at a tiered charging system and the policing associated with it. Access is available via this road during all seasons, but there will be a fee charged, that for the foreseeable future will be a the road/field fee. A "true" backcountry recreationalist will still need to use the ski trails before breaking out into true virgin country.

This access road and the skifield trails themselves will make a large natural area available for public enjoyment, something that is often not available to the public even at a price.

ie access track to the skifield does make it possible for all road vehicles to gain access to the proposed DOC estate. It is highly desirable that no vehicles have access to the conservation area and Waiorau should be able to exercise control over vehicle access. Other access points along the Pisa will make vehicle control difficult, but some degree of control is desirable.

Free public walking access is available on the southern boundary up Tuohys Gully up the old Cardrona-Roaring Meg Pack Track. This line is legal road and Waiorau accept the use of this road for walking access into the greater RAP. The start of any proposed track theoretically crosses land belonging to the adjoining Pine Hill property and negotiations will have to occur to formalise this entry point. If this access point fails Waiorau have offered alternative practical foot access from near their house. This will involve some walking track formation, signs and styles. Nearer the ridge crest the track drops down to the Meg Hut, the proposed access point to the RAP. If public use increases with time, some joint arrangement is desirable for maintenance sharing of the Meg Hut providing it is freely available for trampers.

In the longer term, access along the Cardrona-Cromwell and Cardrona-Roaring Meg Pack Track may be possible, opening up other longer term options.

## RECOMMENDATIONS

That tenure change of Waiorau pastoral lease be conditional on the following points being negotiated with DOC:

- 1 The land east of the Roaring Meg, including a 20 metre strip up the Roaring Meg on the true right bank from the southern boundary to the Robrosa boundary in the north near the area known as Tranquillity, becomes DOC estate.
- 2 A covenant over the land immediately west of the Roaring Meg to the first tributary be entered into. this land will be available for a tenure change, and a covenant is primarily for landscape purposes, but will specifically define two ecological areas of importance that need protection. The covenant will accept planned development of facilities and trails along guidelines already established and will require consultation with DOC.
- 3 Historic covenants over Criffel face/Tuohys Gully workings, pack track and part of the Roaring Meg site be entered into. These sites may be linked under one covenant running along Waiorau southern boundary. The water races and remaining Roaring Meg sites will be protected under 1 and 2 above. The main physical constraint will be no earthworks and a desire to maintain vegetation cover that protects the sites. Some stock control may be desirable.
- 4 DOC has no further interest in the balance of the property outside of the above.
- 5 That pastoral farming can continue over the proposed covenant of area 2, providing the overall character of the landscape and specific areas are not compromised. Some monitoring may be required. Some consideration should be given to fencing and destocking this area to provide adequate stock control to 1 above.
- 6 That a grazing licence from November/December to May for 1700 wethers be issued to Waiorau. This licence be subject to the normal provisions under the Conservation Act and be for a period of five years. This will enable off-site benefits to be developed to cater for loss of grazing in this area. That the question of grazing be under a strict monitoring regime for the period and that grazing may be discontinued at any time if research shows degradation of conservation values.

That DOC issues a concession to Waiorau that allows the nordic ski operation to operate on the conservation area, and that DOC accepts as part of the negotiation process the fact that some future development will be required in the area. This specifically allows development of huts in the Leopold and Prince Burn with associated trail development. Location of a hut in the Colour Burn by aerial means only and part be available for public use. Relocation of the Bob Lee Hut further down the ridge if required. Development of a loop track to the Bob Lee Hut.

The specific details of such a concession need to be worked through. However it is probably appropriate that this license be along the lines of other skifield licences.

- 8 That the public can use the main access road to the conservation area for a fee, but that free as of right access will be available up the legal road line in Tuohys Gully to the Meg Hut and the conservation estate. That costs will be borne by DOC for this access and that some future cost sharing arrangement of the Meg Hut may be desirable, and that DOC can use the existing skifield road as required, after consultation with Waiorau Station.

M Clare  
for Regional Conservator

12 March 1992



Waiorau  
 Proposals  
 Freeholding  
 Conservation Estate **E**  
 Covenants 1 Landscape **i**  
 2 Historic **!**  
 Public Access **- - -**

