

## **Crown Pastoral Land Tenure Review**

**Lease name: CLUDEN STATION**

**Lease number: PO 213**

### **Public Submissions - Part 1**

These submissions were received as a result of the public advertising of the Preliminary Proposal for Tenure Review.

**December 09**

DTZ ALEXANDRA

16 MAR 2009

RECEIVED

10 Smacks Close  
Papanui  
Christchurch

Re: Cluden Tenure Review

Dear Sir,

It is interesting to note your comments under the Discussion of proposed designations. I would suggest that any property is economically viable as long as the property is large enough.

A property can also be kept viable if the New Zealand dollar is constantly/or over a period, devaluing, and thus the property at least maintains an income.

It is also questionable if a property is viable if it gets ravaged by rabbits as stated in this report or suffers from weed infestations. This would indicate that not enough money is spent on maintenance and could be a result of poor profitability.

Also, although a property has been capable of economic use in the past, it doesn't hold that this will continue into the future. I admit that farming this country over 140 years is creditable but if the land is "fragile" as stated, or if the asset becomes run down, then there is nothing creditable about it.

My main concern with this review is the exclusion of CC5 from CA2.

I accept that CC5 may be more modified but by "chopping it off" from CA2 the inherent value of CA2 is markedly reduced. Viewed from the river the whole face should have the same designation. I would suggest that any adjoining land would be enhanced by CC5 being covered under a CA.

Other concerns are the scattering of the CC's. I realize that you have no control over their whereabouts but they are not tied together in any way, thus reducing their value and worthiness. E.g. why could you not extend CC2 up to meet CA2.

From anywhere inside CA1 you should be able to look to the skyline and see conservation land. This may mean a CC from CA1 to CA2. Also why is there no foot connection between the two CA's

CC6 is basically a scab on the hill, the way it is. Ideally it should cover the entire face of that hill, from hilltop to valley and down the main ridgeline to the north.

Finally I would question the height that this property is being farmed to. There are plenty of properties in the region that have a considerably lower grazing height and still suffer from erosion.

Regards  
Geoff Clark.



DTZ ALEXANDRA

19 MAR 2009

RECEIVED

## Cluden Crown Pastoral Lease Tenure Review

### Submission from Otago Fish & Game

The Otago Fish & Game Council (Fish & Game) wish to make the following submission regarding the preliminary proposal for the Cluden Propeliy.

#### Conservation Covenants

We support the conservation covenants that have been put in place as they will provide a degree of protection for upland game habitat and water quality/yield. However, the largest area of upland game bird habitat, Big Spur Creek has no protection over it. While the creek may be lacking in diversity of native species it does provide a large area of upland game bird habitat and as such is deserving of covenant protection.

*Relief sought:* A covenant placed on Big Spur Creek for habitat protection similar to provided for in the adjacent creek (noted as CC2 on the proposed designation map).

#### Public Access

Fish & Game Support the inclusion of hunting dogs and guns over the easement to the conservation land as this will facilitate a larger range of recreational opportunities.

We note that there is little recreational upland game hunting provided for in the proposal, this despite there being vast areas of suitable habitat and excellent hunting opportunities on the property.

*Relief sought:* Upland game bird hunting is provided for in the covenanted areas CC1-CC6, and in Big Spur Creek, from Queens Birthday weekend until the end of August each year.

We support public vehicle access being provided for but note that in this instance it limits recreational opportunity via a seasonal restriction. The majority of the track is not overly steep and in our experience is passable under all but the most extreme weather conditions. The upland game season runs from Queens Birthday weekend until the end of August each year. The vehicle winter restriction from "a" - "b" will restrict upland game bird hunting on the property.

*Relief sought:* No restrictions on the vehicle track marked "a" - "b" over the upland game bird hunting season (Queens Birthday weekend until the end of August each year.

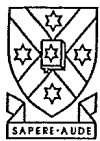
### **Fish & Game Access for Management Purposes**

Fish & Game may on occasions need to access land for the management of sports fish and game bird species. We understand that we have the same access rights for management as the Department of Conservation although this has not been formally confirmed. In the interim we request that wording be added to the proposal which confers the same access rights to Fish & Game as the Department of Conservation with regard to management access. Alternately a letter from the Department of Conservation or LINZ confirming that Fish & Game have the same management rights would meet our concerns.



John Hollows  
Environmental Officer

17 March 2009



Department of Botany

University of Otago  
Te Whare Wananga o Otago

Division of Sciences  
PO Box 56, Dunedin  
NEW ZEALAND

Tel: National 03 479 7573 International 64 3 479 7573  
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Commissioner of Crown lands,  
C/o Manager,  
DTZNZLtd.,  
PO Box 27,  
ALEXANDRA



March 23, 2009.

**SUBMISSION ON PROPOSED TENURE REVIEW: CLUDEN PASTORAL LEASE**

Dear Sir,

Thank you for sending me a copy of this document and I appreciate the opportunity to comment on it based on my knowledge of the ecology of the northern Dunstan Mountains, including the upper slopes of the area involved.

This is a very complex proposal which appears to have several shortcomings, particularly the large total extent of the six proposed conservation covenants within the relatively very large area (c. 10,000 ha or 80.7% of the total property of 12,390.6 ha) being proposed for freeholding in relation to the relatively small total area (2388 ha or 19.3% of the property), in two parcels of conservation land, proposed for reversion to full Crown ownership and management as conservation land area (labelled CA1 and CA2 on the plan), plus a proposed historic reserve of 8 ha. It is accepted that much of the lower country on the property has been degraded through a combination of severe semi-arid climatic conditions plus rabbit infestations and also aggressive farm management, particularly during the early period of pastoral farming.

Dealing first with the two proposed conservation areas, the 300 ha CA1 "Blue Slip" area is an important mixed shrubland area which contains two threatened shrub species (*Carmichaelia kirkii* and *Olearia lineata*) and some possible forest remnant species (*Myrsine divaricata* and *Hebe rakaiensis*), as well as at least two threatened moths and is a potential habitat for the threatened crucifer *Pachycladon cheesemanii*. The upper boundary of this proposed conservation area, however, are highly artificial and apparently is to be fenced (a fence of >2 km is proposed between points "Y" and "Z" indicated on plan), with the remainder of the (lower) boundaries on both sides apparently to remain unfenced. I consider this is a highly unsatisfactory situation. **I recommend** that this proposed conservation area be extended upslope along its catchment boundary (which co-incides on both sides with existing 4WD tracks), up to the lower boundary of the proposed CA2 conservation area. This would provide a valuable altitudinal sequence of plant communities, the likes of which have not been considered in this review of tenure. Adequate fencing (to exclude goats and ideally, also rabbits) should be provided around this proposed (and hopefully extended) conservation area. An easement for stock movement across this conservation area corridor would obviously be necessary and could perhaps best be provided adjacent to the fence which crosses much of this corridor midslope at about 1150 m elevation, with perhaps a second one along the existing fence at about 1250 m, which runs southwest from point "W" on the lower edge of that section of CA2 on the plan. This is the border along which the extended CA1 would join the proposed CA2 conservation area.

"

This second proposed conservation area (CA2), which runs as a corridor of varying width along the property boundary (where it adjoins existing conservation land [Northern Dunstan (Lauder Creek) Conservation Area], below the crest of the northern Dunstan Mountains, extends over the Chain Hills to the northeast on to the slopes within the Dunstan Creek catchment. This extensive area of some 2080 ha contains part of an area recommended for protection (Dunstan RAP 1: "Northern Dunstan") in the Protected Areas Survey of the [Lindis, Pisa and] Dunstan Ecological District[s] by Ward, Bruce, Rance and Roozen (1994).

The CA2 area contains a valuable mixture of narrow-leaved snow tussock, grading upslope into slim snow tussock grassland, plus mixed grey shrublands, cushionfield and boulderfield plant communities, as well as alpine wetlands. Among the many indigenous species of plant and animal here, are several that are under various levels of threat, nationally. Despite its large area, there are **some** serious deficiencies in the design of this proposed conservation area. Firstly, it should ideally link up physically with the conservation area CA1 as previously outlined. Secondly, it should be extended in its northeastern corner to take in the proposed conservation covenant CC5 through Dunstan Pass to Dunstan Creek, along the existing fence line. Although somewhat more modified with oversowing and topdressing, the tussock grassland should recover under conservation management. This would greatly improve the design of this conservation area, while remaining compatible with the existing covenant on the adjoining property on the opposite aspect slope.

In addition, the proposed covenant CC6, which is designed to protect "a rare daisy tree" would **justify** freedom from grazing by being added to the proposed conservation area CA2 by a modification to the fencing proposal. A better design of fencing layout, in terms of both its erection and maintenance, would be achieved by replacing the section shown between points "X" and "W" with a fence that runs down the ridge between points "l" and "m", then is extended to the west so as to embrace the proposed covenant CC6 and link up with the fence proposed to run east from point "W" towards point "n". This modification is strongly **recommended**.

The remaining four covenants (CC1 to CC4) are approved, noting that the proposed area of CC2 appears to coincide with the previously recognised Dunstan RAP A2: "Lower Cluden Tributary", recognised for the presence of a relatively large population of the endangered native broom *Canlichia kirkii*, appears to exclude the steep gorge faces. These should certainly be included in the covenant. The proposed CC4 covenant generally embraces the proposed Dunstan RAP B1: "Mid-Cluden Tributary" of the [Lindis, Pisa] Dunstan PNA Survey Report of Ward et al. (1994), but should be extended to embrace the shrubland occupying the true left of the tributary gully. These four covenants (CC1 - CC4) should provide important protection for the mixed shrubland communities in these gully systems, but given that there is apparently no intention of fencing any of these four covenants, their future welfare must remain in doubt. Adequate monitoring, using permanently fixed photographic points is strongly recommended, with a proviso that fencing remains an option, at the Minister of Conservation's discretion, subject to the results of the monitoring.

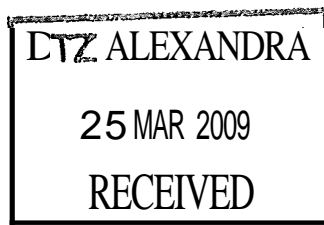
I trust that this response and recommendations will be given serious consideration and I thank you again for the opportunity to assess and comment on these proposals for tenure review.

Yours sincerely,



Alan F. Maric. FRSNZ Professor Emelitus

The Commissioner of Crown Lands  
C/o DTZ Ltd.,  
PO Box 27  
Alexandra  
Attention: Phil Murray



**FOREST  
& BIRD**  
**Dunedin Branch**

PO Box 5793  
Dunedin

24.3.09

Dear Sir,

I enclose these submissions on the preliminary proposal for Cluden Pastoral Lease on behalf of the Dunedin Branch of Forest and Bird.

Thankyou for the opportunity to make submissions on this proposal and for arranging permission fol' us to inspect the lease.

Yours sincerely

A handwritten signature in cursive script, appearing to read "Janet Ledingham".

Janet Ledingham  
For the Management Committee of the Dunedin Branch, Forest and Bird Protection Society

Email [jledingham@xtra.co.nz](mailto:jledingham@xtra.co.nz)  
622 Highgate, Maori Hill, Dunedin 9010.  
Phone 03 467 2960

## Submission on the Preliminary Proposal for Cluden Pastoral Lease

### On behalf of the Dunedin Branch Forest and Bird Management Committee.

This submission is written on behalf of the Dunedin Branch of the Forest and Bird Protection Society which has approximately 565 members, many with strong interests in the High Country values and recreational opportunities as well as in botany and natural history in general. Many of the members enjoy active recreation in the back country and are very aware of the need to ensure the protection of natural values, vegetation and landscape, historical sites and to improve public access through the tenure review process.

The submission is written with reference to the objectives of tenure review as set out in the Crown Pastoral Land (CPL) Act 1998, and the recently stated government objectives for the South Island high country, especially the following:"

- *to promote the management of the Crown's high country in a way that is ecologically sustainable.*
- *to protect significant inherent values of reviewable land by the creation of protective measures: or preferably by restoration of the land concerned to full Crown ownership and control.*
- *to secure public access to and enjoyment of high country land.*
- *to ensure that conservation outcomes for the high country are consistent with the NZ Biodiversity Strategy to progressively establish a network of high country parks and reserves.*

### Introduction

The Cluden lease is on the dry northwest face of the North Dunstan Mountains, accessible from the Tarns end of the Lindis Pass highway. Although much of the lower country is rabbit ravaged and infested with hieracium and a new spreading problem weed, St John's Wort, it has high country, extending across to the Lauder Conservation Area, with high ecological and landscape values. Within the lower altitude country are a number of areas worthy of protection identified from the PNA survey some years ago and from the more recent inspections.

### The proposal:

#### Land to be restored to Crown Control

##### 2.1. Land to be restored to full Crown ownership and control.

- 2.1.1. Conservation Area CA1, an area of approximately 300ha to be restored to full Crown ownership and control.

This area is known as the Blue Slip and contains significant shrubland containing *Carmichaelia kirkii* and *Olea lineata*, both threatened shrubland species. It also has species more commonly associated with forest cover (*Myrsine divaricata* and *Hebe rakaiensis*) and is a potential habitat for the threatened cress *Pachycladon cheesemanii*. Two threatened moths have been found within the CA and there are impressive rockfall areas. Without rabbit pressure natural values will be expected to increase.

Fencing is only proposed between points Y and Z and we consider this unsatisfactory and consider that provision for fencing the whole of the CA be put in place should active



monitoring, including photopoints, show that recovery is unsatisfactory. The fencing should be designed to exclude both rabbits and goats as well as stock incursions.

We strongly suggest that in fact CA1 should be joined to CA2 to provide an important altitudinal sequence which does not seem to be in place on this proposal as it stands. This could be achieved by extending CA1 up along its catchment boundary (which has 4WD tracks on either side) up to the boundary of the proposed CA2 conservation area.

We would then accept the need for an easement for stock passage, perhaps close to the fence on the lower boundary of CA2 at about 1250m

We note that the public Easement "b-c" for foot and mountain bike access runs along the northern boundary of CA1, thus providing good public access into this CA.

## **2.2. Land to be restored to Crown control subject to a qualified designation**

2.2.1. Conservation area (CA2), an area of approximately 2080ha to be restored to Crown control under Section 35(2)(b)(i) CPL Act subject to a qualified designation.

*The values of CA2 are well outlined in the proposal document where it states that "The proposed conservation area comprises the upperflanks of the north Dunstan Mountains and hill slopes within the Dunstan Creek catchment. The proposal includes diverse tussock grassland, grey shrublands, boulderfield and alpine wetlands and cushionfield vegetation. The proposed conservation area adjoins existing conservation land on the south eastern boundary.*

*The proposal contains a range of significant landscapes which are spectacular both on site and from the wider geographic area. The range of landscapes includes an undulating plateau landscape on the upper level of the north Dunstan Mountains with an extensive area of largely intact snow tussock grassland. This grassland is recognised as one of the best examples in the immediate vicinity. Also within the alpine area are a number of wetlands and flush zones and in some areas rock pavement and rock tors. Adjacent to and at lower altitudes are highly modified tussock grasslands, but this zone continues the integrity of the mountain land landscape.*

*The area includes the crest of the Dunstan Mountains extending to the Chain Hills above Dunstan Creek includes seven plant species that are under various levels of threat including *Mysosotis cheesemanii*, *Carmichaelia crassicaule*, *Carex muelleri*, *Carmichaelia vexillata*, *Coprosma intertexta*, *Plantago obconica*, *Ranunculus maculatus* and a species of *Melicactus* that may be threatened. A further 3 uncommon plant species are found within this zone. The slim leafed snow tussock grasslands on the summit crest of the Dunstan Mountains and Chain Hills are uncommon within this particular district. This area is also relatively rich in fauna and includes a threatened beetle and two threatened lizard species.*

*In addition to the significant inherent values found within this area it is noted that this area offers quality recreational opportunities and an attractive natural setting. The Dunstan Mountains are a relatively prominent mountain range and from the crest excellent vistas are available in all directions. While there is little current use it is expected that this area would be popular for mountain biking, horse riding and day walks and potentially back country skiing in winter" - to which we would add opportunities for the 'botanical tramper'.*

**We support the return of this area to full Crown ownership and control as a CA but, as already explained, believe it should be enlarged to form an altitudinal sequence with an expanded CA1 and should include all of the Dunstan RAP A1 to protect the values within it. We also consider that CC5 (an area of tussock grassland on the Chain Hills which is closely**

related to similar vegetation in CA2) and CC6 (a significant shrubland which includes the rare tree daisy *Olearia*) should be added to CA2.

We submit that the lower boundary fence from point 'T' towards point 'n' proposed for CA2 is not well sited from a landscape point of view and suggest a new line running down the slope between the gullies from point 'T', continue via point 'm', and include CC6 to join the proposed new fence 'W-X'.

### 2.2.2. Qualified Designation:

**Concession Easement under Section 36(1)(a) CPL Act for farm management purposes over existing vehicle tracks shown as "h-i-k", "i-j", "o-p", "s-r-t", "u-t-v", and "w-x" on the proposed designations plan.**

We have no objections to this easement for farm management purposes.

**Historic Reserve (HR1)**, an area of approximately 5ha to be restored to full Crown ownership and control under Section 35(2)(a)(ij) CPL Act.

We endorse the creation of this Historic Reserve to protect a rock shelter with an interesting example of rock art on the walls; it was used by Maori travelling between the Mackenzie Country and Central Otago.

### 2.3. Approximately 10,000ha to be disposed of on freehold title to the current holders subject to protective mechanisms and a qualified designation pursuant to Section 35(3) CPL Act.

This area comprises the balance of the pastoral lease, other than the areas of CA1 and CA2 specified above. We are also aware that an important objective of the tenure process is *"to promote the management of the Crown's high country in a way that is ecologically sustainable"* and have some reservations that the management of some parts of Cluden Station may not be ecologically sustainable. We have reservations as to whether the higher parts of Cluden are capable of supporting ecologically sustainable pastoral use. Above about 1,000m the land is dominated by soils, classified as LUC Class VIIe, which have very limited suitability for pastoral farming. These areas above about 1,000m, which support tall tussock grasslands, have higher conservation value than pasture production value.

**We therefore recommend that the land above 1000m be included in CA2 and returned to Crown management for conservation purposes.**

#### Areas to be Covenanted, CCI-CC6

- CC1. This area CCI is on the true right bank of the Cluden Stream and contains riparian shrublands worthy of protection.
- CC2. Covenant area CC2 corresponds with RAP A2 in a lower Cluden Tributary valley which contains dense mixed scrub including *Olearia* and the endangered species *Carmichaelia kirkii*. This RAP was ranked high for its Representativeness, Special Features and Viability. The area of the covenant seems not to include the steep gorge faces, surely an important feature.

#### **The steep gorge faces should be included**

- CC3. Situated in an unnamed narrow Lower Cluden Tributary and will provide protection for riparian shrublands.

CC4. Situated in a Mid Cluden tributary valley, this is the area of RAP B1 This RAP also contained dense mixed scrub along the streamside, dominated by *Coprosma* and including *Olearia* and some *Carmichaelia kirki*. The riparian shrubland in CC4 exhibits greater diversity and stature than RAP A2.

CC5. This an area of tussock grassland on the Chain Hills which is closely related to similar vegetation in CA2. We note that the proposal states that CCS is more modified than CA2.

There now seems to be some doubt over the correct location of the lease boundary of CC5 on its eastern (Dunstan Creek) side which may be incorrectly shown on the designations plan. If the boundary is in fact Dunstan Creek as we believe, then there are wetland areas on the west side of the Creek which should be protected. Public access should also be secured by an easement along the road running beside Dunstan Creek since the road formation about 500m north of the ford at OR H40 506.004) is within the Cluden lease.

**As we have already stated we believe that CC5 should be added to CA2, thereby using the protection mechanism preferred in the CPL Act 1998.**

CC6. Adjoins CA2 on the southern boundary(ofCC6), CC6 has a significant shrubland containing a rare *Oleolia* and we believe the whole ofCC6 should be included in CA2 where fencing will ensure its protection,

**Should be included in CA2**

**We endorse the need for protection of all of these CCs, but suggest this would be better achieved if they were to be fenced to deter incursions of rabbits, stock and goats. At the very least, especially in the case of CCI-CC4 where stock access is to be allowed photopoint monitoring must be included in the conditions to allow remedial measures, such as fencing, to be taken if damage to the covenants does occur.**

### **2.3.2 Qualified Designations:**

**a) An easement in gross under Section 36(3)(b) CPL Act for public vehicle, foot, horse and non motorised vehicle access and access for management purposes over an existing vehicle track on the property shown as "a-b-s" on the proposed designations plan.**

This easement will provide limited public vehicle access to near the crest of the North Dunstan Range, non motorised public access to the Dunstan range tops and over to the valley of the Dunstan Creek. We see this as a positive move to enhance the recreational activities.

**We endorse these provisions for access**

**We agree that the access routes are only suitable for true off-road vehicles, but have a problem understanding just how restriction to experienced drivers will be enforced and suggest the access should go further than limited summer use.**

### **Summary of Recommendations**

- 1. We support the creation of Conservation area CA1 but, believe it should be enlarged to form an altitudinal sequence with an expanded CA1 and should include all of the Dunstan RAP A1 to protect the values within it.**
- 2. We consider that CC5 (an area of tussock grassland on the Chain Hills which is closely related to similar vegetation in CA2) and CC6 (a significant shrubland which includes the rare tree daisy *Olearia*) should be added to CA2.**

- 3. We submit that the lower boundary fence from point 'I' towards point 'n' proposed for CA2 is not well sited from a landscape point of view and suggest a new line running down the slope between the gullies from point 'I', continue via point 'm', and include CC6 to join the proposed new fence 'W-X'.**
- 4. Land to be freebolded - We recommend that the land above 1000m be included in CA2 and returned to Crown management for conservation purposes**
- 5. We agree that the access routes are only suitable for true off-road vehicles, but have a problem understanding just how restriction to experienced drivers will be enforced and suggest the access should go further than limited summer use.**
- 6. We endorse the need for protection of all of the proposed CCs, but suggest this would be better achieved if they were to be fenced to deter incursions of rabbits, stock and goats.**
- 7. The steep gorge faces should be included in Covenant CC2**
- 8. Especially in the case of CCI-CC4 where stock access is to be allowed, photopoint monitoring must be included in the conditions to allow remedial measures, such as fencing, to be taken if damage to the covenants does occur.**

We would like to thank DTZ Ltd for arranging the access to the lease and Lesley and Ben Purvis and Agent Ray Macleod for taking the time to show us round the lease and discussing the proposal with us. We thank the Commissioner of Crown Lands for the opportunity to comment on the Preliminary Proposal of this pastoral lease.

*Janet Ledingham*

Janet Ledingham,

For the Management Committee of the Dunedin Branch, Royal Forest and Bird Protection Society.

5



FEDERATED MOUNTAIN CLUBS OF NEW ZEALAND (Inc.)

P.O. Box 1604, Wellington



24 March 2009

The Commissioner of Crown Lands  
c/- DTZ Ltd.  
PO Box 27  
ALEXANDRA

DTZ ALEXANDRA

26 MAR 2009

RECEIVED

Attention: Ken Taylor

Dear Sir,

**Re: Preliminary Proposal for Tenure Review: Cluden Pastoral Lease (Po 213)**

I write on behalf of Federated Mountain Clubs of NZ Inc. (FMC) which represents some 13,000 members of tramping, mountaineering, climbing and other outdoor clubs throughout New Zealand. We also indirectly represent the interests and concerns of many thousands of private individuals who may not currently be members of clubs but who enjoy recreation in the back country.

On their behalf, FMC aims to enhance recreation opportunities, to protect natural values, especially landscape and vegetation, and to improve public access to the back country through the tenure review process.

FMC fully supports the objectives of tenure review as set out in the Crown Pastoral Land (CPL) Act 1998, and the more recently stated government objectives for the South Island high country especially the following:-

- to promote the management of the Crown's high country in a way that is ecologically sustainable.*
- to protect significant inherent values of reviewable land by the creation of protective measures; or preferably by restoration of the land concerned to full Crown ownership and control.*
- to secure public access to and enjoyment of high country land.*
- to ensure that conservation outcomes for the high country are consistent with the NZ Biodiversity Strategy.*
- to progressively establish a network of high country parks and reserves.*

[EDC Min (03) 5/3; CAB Min (03) 11/5 refer]

FMC appreciates this opportunity to comment on the Preliminary Proposal for the review of Cluden Station Pastoral Lease. We also appreciate DTZ facilitating access for inspection, and the holder for permission to inspect the property on 12 March 2009.

**THE PRELIMINARY PROPOSAL**

The general description of the Preliminary Proposal is as follows:-

**General description of proposal:**

**2.1 Land to be restored to full Crown ownership and control.**

- 2.1.1 An area of approximately 300ha to be restored to full Crown ownership and control as a conservation area (CA1) under Section 35(2)(a)(i) CPL Act.
- 2.1.2 An area of approximately 8ha to be restored to full Crown ownership and control as an historic Reserve (HR1) under Section 35(2)(a)(ij) CPL Act.

**2.2 Land to be restored to Crown control subject to a qualified designation**

- 2.2.1 An area of approximately 2080ha to be restored to Crown control as a conservation area (CA2) under Section 35(2)(b)(i) CPL Act subject to a qualified designation.

**Qualified Designation:**

- 2.2.2 Concession Easement under Section 36(1)(a) CPL Act for farm management purposes over existing vehicle tracks shown as "h-i-k", "i-j", "o-p", "s-r-t", "u-t-v", and "w-x" on the proposed designations plan.

**2.3 Approximately 10,000ha to be disposed of on freehold title to the current holders subject to protective mechanisms and a qualified designation pursuant to Section 35(3) CPL Act.**

**2.3.1 Protective Mechanism:**

Conservation covenant under Sections 40(2)(a), 40(2)(b) and 41(b) CPL Act over approximately 306ha shown as CC1, CC2, CC3, CC4, CC5 and CC6 on the proposed designations plan.

**2.3.2 Qualified Designations:**

- a) An easement in gross under Section 36(3)(b) CPL Act for public vehicle, foot, horse and non motorised vehicle access and access for management purposes over an existing vehicle track on the property shown as "a-b-s" on the proposed designations plan.
- b) An easement in gross under Section 36(3)(b) CPL Act for public foot, horse and non motorised vehicle access and access for management purposes over existing vehicle tracks within the property shown as b-c-d-e-f-g", "c-q", "g-h", "f-l" and "e-m-n" on the proposed designations plan.
- c) An easement in gross under Section 36(3)(b) CPL Act for management purposes over existing vehicle tracks within the property shown as "m-o" on the proposed designations plan.
- d) Continuation in force of an irrigation agreement with Her Majesty the Queen, a land improvement Agreement pursuant to the Soil Conservation and Rivers Control Act 1941 and an easement in favour of Lindis Irrigation Limited.

**FMC COMMENTARY AND SUBMISSIONS**

FMC was refused permission to inspect the property in 2004 but a report was written based on the

author's prior knowledge of the property gained from legitimate visits, and various other sources described in the report. That report was entitled "Preliminary Report on the Recreational and Related Significant Inherent Values CLUDEN STATION" (March 2004). For your information we append a copy of that Report to this submission.

The FMC Report (2004) concluded that: "*secure public access for foot and mountain bike use, and possibly horse riding, over and along the Dunstan Mountains is the most important recreational issue in the tenure review of this property*". It is pleasing to note that to a large extent this has been recognized in the Preliminary Proposal. Additionally, there are many farm tracks on Cluden which have important actual or potential value for recreation. Some of these have also been recognized. We envisaged in 2004 that there could be extensive future foot and mountain bike use of tracks leading to the Dunstan Mountains and over to St Bathans via the Dunstan or Cluden Passes. We are delighted that an opportunity is now being created for that future use to develop.

We are somewhat disappointed that the area proposed for return to full Crown ownership is smaller than that identified in the FMC Report(2004) and the recommendations in the CRR (2005), but we recognize that several important areas of significant inherent natural or historic value are proposed for protection under Conservation Covenants.

We do have reservations about some of the provisions in this Preliminary Proposal which will be explained in detail in the sections which follow.

The details of FMC views on the preliminary proposal are presented below. Our comments are arranged in the same sequence as the various designations in the proposal.

## **PROPOSAL 2.1**

### **2.1 Land to be restored to full Crown ownership and control.**

#### **2.1.1 An area of approximately 300ha to be restored to full Crown ownership and control as a conservation area (CA1) under Section 35(2)(a)(i) CPL Act.**

We understand that this is an area locally known as the Blue Slip which includes significant shrubland with threatened plant species of Carmichaelia and Olearia. We appreciate that at present its degree of naturalness is low, largely due to rabbit grazing pressure, but the area includes impressive rock-fall areas as well as species more commonly associated with forest cover. The proposal document anticipates that with the removal of grazing associated with rabbit control, natural values will in time be strengthened.

We believe for this vegetative recovery to occur, fencing to exclude rabbits (and probably goats too) from the area of CA1 will be essential, but there is no mention of such fencing in the proposal. There should be provision in the proposal for shared costs of fencing.

FMC understands that the original recommendations for this review included the designation of the Top Richmond block as part of the area to be returned to full Crown ownership. This area lies between the top of CA1 and the lower boundary of CA2 and includes significant landscape values as well as the continuity of an altitudinal sequence from valley floor (~500m) to range tops (~1,500m). Such a sequence, with public access nearby, would be extremely valuable to both the general public and the scientific community.

It appears from the Designations Plan that the public Easement "b-c" for foot and Mountain bike access runs along the northern boundary of CA1, thus providing public access into CA1. This should be confirmed in the Substantive Proposal.

**FMC Submission**

*FMC fully supports the proposal to designate the area known as the Blue Slip as Conservation Area CA1 in order to protect natural values and threatened species, and to promote vegetative recovery from rabbit grazing. In order to achieve this objective we believe that fencing to exclude rabbits and probably goats, will be essential. We submit that there should be provision in the proposal for shared costs of fencing.*

*FMC submits that there is a strong case for an altitudinal sequence of biota and landscape from valley floor to range tops which would include CA1 and CA2, linked by the addition of the Top Richmond block, as originally recommended in the CRR (2005). We strongly recommend that this should be reconsidered.*

*We understand that public access to CA1 may be available from the access Easement "b-c". However, this needs to be confirmed in the Substantive Proposal.*

**2.1.2 An area of approximately 8ha to be restored to full Crown ownership and control as an Historic Reserve (HR1) under Section 35(2)(a)(ij) CPL Act.**

We understand that this proposed Reserve consists of a small rocky outcrop beside the true left bank of Lindis River in the SW corner of the main block of the property. It includes a rock shelter used by Maori travelling between the Mackenzie Country and Central Otago. It includes an interesting example of rock art on the walls of the shelter.

**FMC Submission**

*FMC is pleased that this historic feature on an ancient Maori trail has been identified. We fully support its protection as an Historic Reserve.*

**2.2 An area of approximately 2080ha to be restored to Crown control as a conservation area (CA2) under Section 35(2)(b)(i) CPL Act subject to a qualified designation.**

FMC notes that this area consists of some 2,000ha of the highest land on Cluden, extending from about 1,000m (in the headwaters of Big Spur Creek) to over 1,500m in places on its SE boundary along the crest of the Dunstan Mountains. Although smaller than the area identified in the FMC Report (2004) it includes much of the same tussock and tor landscape and some of the area designated as a Recommended Area for Protection (Dunstan RAP A1) identified by the Protected Natural Area (PNA) Survey published in 1994. We note however, that not all of RAP A1 is included with the proposed area of CA2 and recommend that the Proposal be reconsidered to include the entire area of RAP A1.

We note that CA2 adjoins the Lauder Conservation area, formerly the Lauder Tussock Reserve, which was landlocked and not accessible to the public. Although other possible means of public access are emerging through tenure review it is pleasing to note that secure public access will become available through the tenure review of Cluden Station.



The significance of having this important tussock reserve adjacent to a similar community on the Cluden tops was discussed in the FMC Report (2004). *"The scenic and natural values of the tussock grassland and tor landscapes on the range crest were recognised by the PNA survey team who identified and recommended a large area for protection (Dunstan RAP A1). This covers about 800ha on Cluden Station and a much larger area on the neighbouring property. The public and natural value of this area [on Cluden] is made more important by the fact that it is adjacent to the already existing Lauder Basin Conservation Area"*. The entire area of RAP A1 should be included in CA2.

FMC accepts that the values of this area are adequately described in the proposal document where it states that *"The proposed conservation area comprises the upper flanks of the north Dunstan Mountains and hill slopes within the Dunstan Creek catchment. The proposal includes diverse tussock grassland, grey shrublands, boulder field and alpine wetlands and cushion field vegetation. The proposed conservation area adjoins existing conservation land on the south eastern boundary.*

*The proposal contains a range of significant landscapes which are spectacular both on site and from the wider geographic area. The range of landscapes includes an undulating plateau landscape on the upper level of the north Dunstan Mountains with an extensive area of largely intact snow tussock grassland. This grassland is recognised as one of the best examples in the immediate vicinity. Also within the alpine area are a number of wetlands and flush zones and in some areas rock pavement and rock tors. Adjacent to and at lower altitudes are highly modified tussock grasslands, but this zone continues the integrity of the mountain land landscape.*

*The area includes the crest of the Dunstan Mountains extending to the Chain Hills above Dunstan Creek and includes seven plant species that are under various levels of threat including *Mysosotis cheesemani*, *Carmichaelia crassicaule*, *Carex muelleri*, *Carmichaelia vexillata*, *Coprosma intertexta*, *Plantago obconica*, *Ranunculus maculatus* and a species of *Melicytus* that may be threatened. A further 3 uncommon plants species are found within this zone. The slim leafed snow tussock grasslands on the summit crest of the Dunstan Mountains and Chain Hills are uncommon within this particular district. This area is also relatively rich in fauna and includes a threatened beetle and two threatened lizard species.*

*In addition to the significant inherent values found within this area it is noted that this area offers quality recreational opportunities and an attractive natural setting. The Dunstan Mountains are a relatively prominent mountain range and from the crest excellent vistas are available in all directions. While there is little current use it is expected that this area would be popular for mountain biking, horse riding and day walks and potentially back country skiing in winter".*

We would add that the outcome of this proposal will offer excellent settings for a variety of recreational activities and will opens up extended opportunities for tramping and mountain bike travel along and over the Dunstan Range into the Dunstan Creek catchment.

FMC is concerned about the proposed siting of new fencing below Cluden Pass. The proposal is for a new fence diagonally across a tussock face from point "l" towards point "n" which would bisect a uniform land unit and create maintenance problems where it crosses two prominent sharp erosion gullies. Later in this submission we argue that the covenant area CC6 should be included in CA2, and if this is done it could include a new alignment for the proposed new fence from point "l" to point "n".

We propose that the new fence should run down the slope between the gullies from point "l", continue via point "m", and include CC6 to join the proposed fence "W X" at map reference G40 477.944. This would also serve the purpose of including an area originally recommended in the CRR for return to full Crown ownership as conservation area.

**FMC Submission**

*FMC welcomes this proposed addition to the public conservation estate because of its outstanding natural values, and new opportunities for recreation in Central Otago. FMC is pleased that much of the area identified in the FMC Report (2004) for return to Crown ownership has been included in the proposed Conservation Area CA2. We do however, recommend that the area should be extended to include all of RAP A1, and that the proposed fence "W X" should be realigned so as to run between points "l" and "m", include CC6 in CA2 (see submissions under section 2.3.1) and join the proposed fence "W X" at map reference G40 477.944.*

*FMC is pleased to note that as an outcome of this Proposal, secure public access to the former Lauder Tussock Reserve will be provided.*

*The value of the whole area of CA2 and its association with the Lauder Conservation Area will be greatly enhanced by the linking of this area with the Proposed CA1 Conservation Area to form a continuous sequence from valley floor to range crest (see submission under section 2.1.1 above).*

**2.2.2 Qualified Designation:**

**Concession Easement under Section 36(1)(a) CPL Act for farm management purposes over existing vehicle tracks shown as "h-i-k", "i-j", "o-p", "s-r-t", "u-t-v", and "w-x" on the proposed designations plan.**

*FMC accepts the points made in the proposal that "Cluden is dissected by a number of incised gullies making access difficult. Often it is necessary to travel up ridges to the top of the mountain range to get around the top of these gullies onto the next ridge. The holder therefore needs to preserve this access where it falls into the conservation land. The routes through CA2 also provide access for fence maintenance and mustering".*

FMC therefore has no objection to the proposed qualified designation providing an easement over conservation land for farm management purposes.

**FMC Submission**

*FMC has no objection to the proposed easement over conservation land for farm management purposes.*

**2.3 Approximately 10,000ha to be disposed of on freehold title to the current holders subject to protective mechanisms and a qualified designation pursuant to Section 35(3) CPL Act.**

FMC is aware that this area comprises the balance of the pastoral lease, other than the areas of CA1 and CA2 specified above. We are also aware that an important objective of the tenure process is "to promote the management of the Crown's high country in a way that is ecologically sustainable".

We have some reservations that the management of some parts of Cluden Station may not be ecologically sustainable. We suspect that for areas such as the Hieracium and St John's Wort infested slopes on Brown Grey (semi arid) Alexandra Steepland soils, a sustainable management covenant may be a preferred option, as discussed in the FMC Report (2004).

We also have serious reservations as to whether the higher parts of Cluden are capable of supporting ecologically sustainable pastoral farming. Areas above about 1,000m are dominated by Dunstan Steepland High Country Yellow Brown Earth soils, which have been classified as Land Use Capability Class VIIe, and have very limited suitability for pastoral farming. These areas are of low fertility and require fertilizer application to replenish losses incurred in removals in animal products. However above about 1,000m it is generally agreed that there is no economic justification for fertilizer application because pasture growth response is small due to climatic limitations. This issue was discussed more fully in the FMC Report (2004).

These areas of Dunstan Steepland soils above about 1,000m, which generally carry tall tussock grasslands, have higher conservation value than pasture production value. We therefore recommend that they be included with CA2 and returned to Crown management for conservation purposes. If this recommendation is implemented the area available for freehold disposal will be reduced by a corresponding amount.

It was strongly recommended above that the Top Richmond block should be included in the land to be returned to full Crown ownership, thereby further reducing the area available for freehold disposal.

### *FMC Submission*

*FMC supports the proposal that some parts of the remaining 10,000ha should become freehold. However, we submit that the worst Hieracium and St John's Wort infested land on Alexandra Steepland Brown Grey Earth soils is unlikely to be capable of being managed in an ecologically sustainable manner, but instead should be managed under a sustainable management covenant.*

*Furthermore, we consider that the higher areas of Dunstan Steepland soils (above about 1,000m) are equally unlikely to be capable of supporting ecologically sustainable pastoral production, for the reasons discussed above. These lands would be better added to CA2 and managed for conservation purposes. Similarly we have strongly recommended that CA1 be linked with CA2, by the addition of the Top Richmond block to the area to be returned to full Crown control.*

*We accept that the remainder, after reallocation of the areas specified above, may be suitable for freeholding subject to the designation of the Conservation Covenants (CC1 to CC6) covering some 300ha. Note that our submissions below recommend enlargements of some of these covenant areas and that if upheld, this recommendation may reduce the area available for disposal as freehold.*

#### 2.3.1 Protective Mechanism:

Conservation covenant under Sections 40(2)(a), 40(2)(b) and 41(b) CPL Act over approximately 306ha shown as CC1, CC2, CC3, CC4, CC5 and CC6 on the proposed designations plan.

FMC is pleased to note that two of these covenant areas (namely CC2 and CC4) approximately correspond with areas recommended for protection (RAPs) during the Protected Natural Area Survey carried out in the 1980s, the results of which were published in 1994. Covenant area CC2 corresponds with RAP A2 in a lower Cluden Tributary valley which contains dense mixed scrub including *Olearia* and a climbing broom. The PNA survey reported that this may be the largest remaining population of endangered species *Carmichaelia kirkii*. This RAP was ranked high for its Representativeness, Special Features and Viability, so it is satisfying to see that this has been recognised in the proposed Covenant protection status.

We note however, that fencing is not considered a priority in the proposal. FMC submits that provision should be made in the Covenant document for regular monitoring of shrubland condition, and erection of fencing if that is warranted by declining condition. This should be at the Minister's discretion.

Covenant area CC4 corresponds with RAP B1 in a Mid Cluden tributary valley. This RAP also contained dense mixed scrub along the streamside, dominated by *Coprosma* and including *Olearia* and some climbing broom. The riparian shrubland in CC4 exhibits greater diversity and stature than RAP A2. This site was ranked high for Viability with the comment that the shrubland was in good condition. It is pleasing to note that that this RAP is to be protected by Covenant CC4.

However, field inspection reveals that the proposed covenant areas are significantly smaller than the area covered on the ground by the described vegetation communities. We recommend that the areas proposed for CC2 and CC4 be revisited to consider inclusion of the steep gorge faces in CA2 and an extended area of shrubland on the true left of the tributary gully included in CC4.

The other Covenants, CC1 and CC3, are also designed to provide protection for riparian shrublands. CC1 is on the shady right bank of the Cluden Stream main stem, while CC3 is situated and in another unnamed narrow Lower Cluden Tributary. Collectively, Covenants CC1 to CC4 will provide protection for a variety of examples of riparian shrublands in the Cluden catchment.

CC5 covers an area of tussock grassland on the Chain Hills which is closely related to similar vegetation in CA2. We note that the proposal differentiates between CC5 and CA2 on the basis that the former is more modified. FMC considers this a moot point and believes that because of the basic similarity of both areas, that CC5 should be added to CA2, thereby using the protection mechanism preferred in the CPL Act 1998.

There seems to have been an error made in the map showing the property boundary of CC5 in the valley of Dunstan Creek, and an oversight made in not providing secure public access along the road beside Dunstan Creek. We understand the actual boundary to coincide with Dunstan Creek. This means that the legal alignment of the road formation in the valley lies to the east of Dunstan Creek (ie outside the Cluden boundary, while the actual road formation (for some 500m north of the ford at map reference H40 506.004) lies within Cluden. In order to secure public access over this section of the road formation on Cluden it will be necessary to designate an easement for public vehicle, foot, bike and horse traffic. Furthermore there are important wetland communities on the valley floor to the west of Dunstan Creek (ie on Cluden land) which deserve protection. This strengthens the case for return of CC6 to full Crown ownership and control.

CC6 is claimed to be a significant shrubland which includes the rare tree daisy *Olearia*. We note that this area adjoins CA2 and is situated between about 900 and 1,100m in the headwaters of Cluden Stream. As was discussed for other areas of Dunstan Steepland soils at or above 1,000m there is considerable doubt as to whether such areas can support ecologically sustainable pastoral farming. We submit that given the conservation values for which the Covenant is proposed, addition to CA2 would be a better proposition, because this would then also comply with the CPL Act stated preference for "restoration to full Crown ownership".

We note that short stock access corridors are to be allowed across Covenant areas CC1, CC2, CC3, and CC4. We accept the management reasons for these access corridors but we have concerns as to the damage that could be done by stock using these crossings. This problem strengthens our case that provision should be made in the terms of the Covenant for monitoring and fencing if monitoring of vegetation condition warrants better protection. We therefore submit that the proposal should provide for monitoring of vegetation condition adjacent to these access corridors, and that if monitoring reveals a deterioration of condition the Minister should have discretion to recommend appropriate remedial action. That might be fencing, or closure of the offending access corridor.

### *FMC Submission*

*FMC supports the designation of 4 areas of riparian shrublands for protection under Conservation Covenants CC1, CC2, CC3, and CC4. We note particularly that 2 of these areas had been identified in the PNA Survey programme as Recommended Areas for Protection (RAP A2 and RAP B1). However, we believe that the proposed areas are too small and that the area of covenant CC2 should be enlarged to include the steep rock bluffs on the true left of the tributary gorge, and that an enlarged area of shrublands on the true left of the tributary should be included in CC4.*

*We recommend that provision should be made in the Covenant conditions for the monitoring of vegetation, especially in the vicinity of the marked stock routes through Covenant areas, and that provision should be made for fencing if monitoring suggests that this is necessary. This should be at the Minister's discretion.*

*We do not believe that covenanting is the best way to protect the conservation values in CC5 and CC6, but instead recommend that these areas should be restored to full Crown ownership (as preferred by the CPL Act) by addition to Conservation Area CA2 for reasons we describe above.*

*Because of a cartographic error there is no provision for secure public access along the formed road in the Dunstan Creek on Cluden land. An easement for public vehicle, foot, bike and horse traffic to pass and repass along this road is required. Because of the same error the wetland values on the valley floor of Dunstan Creek have been overlooked. The presence of these significant inherent values adds to the case for the incorporation of CC6 into the Conservation Area CA2.*

### 2.3.2 Qualified Designations:

a) An easement in gross under Section 36(3)(b) CPL Act for public vehicle, foot, horse and non motorised vehicle access and access for management purposes over an existing vehicle track on the property shown as "a-b-s" on the proposed designations plan.

FMC is very pleased that the proposal includes provision for public access to the Dunstan range tops and to the passes over to the valley of the Dunstan Creek.

FMC is also pleased to note that this proposal will provide limited public vehicle access to about 1,300m near the crest of the North Dunstan Range. This will greatly facilitate the recreation opportunities and activities on the Dunstans.

We support the proviso that vehicle use is only suitable for true off-road vehicles, but we question the restriction to experienced drivers and limited summer use. We cannot visualise how the stipulation for use only by experienced drivers will work, or how it will be policed.

Restricting use to the summer months could be controlled by locked gates, but this would seem to eliminate the use of the route for cross country skiing, unless some provision could be made for access with the landowners' permission when weather and track conditions are suitable. We recommend that provision be made for such negotiated winter use.

**FMC Submission**

*FMC supports the proposal to provide recreational access over the route "a-b-s" by public vehicle, foot, horse and non-motorised vehicle, and we have no objection to the use of this route for management purposes.*

*FMC is pleased to note that some limited vehicle access will be provided to the Dunstan Range tops but we submit that provision should be made for negotiated access over a longer season.*

*We support the restriction to use by true off-road vehicles only.*

*As stated above, an easement for public vehicle, foot, bike and horse traffic to pass and re-pass along the formed road on the Dunstan Creek valley floor on Cluden land is also required.*

**b) An easement in gross under Section 36(3)(b) CPL Act for public foot, horse and non motorised vehicle access and access for management purposes over existing vehicle tracks within the property shown as "b-c-d-e-f-g", "c-q", "g-h", "f-l" and "e-m-n" on the proposed designations plan.**

FMC understands the reasoning for the creation of an easement up the Cluden where a legal road already exists. We would argue that a better strategy would be to formally recognise the track formation on the ground as the legal road. The purpose of the legal road was surely to provide practical access up the valley to the Richmond Yards and over the Cluden and/or Dunstan Passes.

We recognise and appreciate that as well as the main access up the Cluden Valley, the other designated easements provide public access to various parts of the new conservation land in CA1 and CA2, and to the range tops and passes over to the valley of the Dunstan Creek.

It is pleasing to us to note that most of these new access routes coincide with the access recommendations made in the FMC Report (2004).

**FMC Submission**

*Whilst FMC understands the reasoning behind the proposal for an easement over the route "b-c-d-e-f-g" we do not consider this the best option. FMC submits that a better strategy would be to seek formal recognition of the track formation on the ground as the legal alignment.*

- *FMC is pleased to note that many of the recreational access routes proposed in our Report (2004) are included in the easements proposed here. These new easements will provide recreational access for increasing future use of the Dunstan Range and crossings into the Dunstan Creek catchment providing access from the Upper Clutha/Lindis area to St Bathans.*

c) **An easement in gross under Section 36(3)(b) CPL Act for management purposes over existing vehicle tracks within the property shown as “m-o” on the proposed designations plan.**

FMC has no objection to the use of the vehicle track “m-o” for management purposes.

**FMC Submission**

*FMC has no objection to the use of the vehicle track “m-o” for management purposes.*

d) **Continuation in force of an irrigation agreement with Her Majesty the Queen, a land improvement Agreement pursuant to the Soil Conservation and Rivers Control Act 1941 and an easement in favour of Lindis Irrigation Limited.**

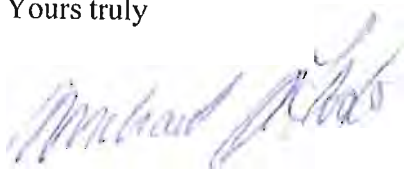
FMC has no objection to the continuation in force of an existing irrigation agreement, a land improvement agreement and an easement in favour of Lindis Irrigation Ltd.

**FMC Submission**

*FMC has no objection to the continuation in force of an existing irrigation agreement, a land improvement agreement and an easement in favour of Lindis Irrigation Ltd.*

Finally FMC thanks the Commissioner of Crown Lands for this opportunity to comment on the Preliminary Proposal for the tenure review of Cluden Station. We are also grateful to DTZ Ltd for facilitating an inspection of the property, and to the agent, Ray MacLeod, of the Landward Management Group and the Purvis family for permission and hosting NGO inspections of the property in February and March 2009.

Yours truly



pp Phil Glasson,  
Hon Secretary, Federated Mountain Clubs of NZ. Inc.

APPENDIX. 1.

**RECREATIONAL AND RELATED SIGNIFICANT INHERENT  
VALUES of CLUDEN STATION**

**A Report for FMC based on field inspection and other research  
to assist in the Pastoral Lease Tenure Review Process**

*March 2004*

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*A map showing the preferred allocation of conservation and freehold land (green and red outlines respectively), a proposed 'Sustainable Management Covenant' (orange outline) and important recreational access routes (in yellow)*

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Fig. 1 Cluden Station spreads over some 12,000ha and occupies a commanding position at the northern end of the Dunstan Mountains. The view here is from one of several spurs leading down to the Cluden Stream. These spurs command expansive views of the Upper Clutha area which makes a very scenic backdrop to the many potential recreational opportunities on the Dunstan Mountains.



Fig. 2 This view shows the junction of the Cluden Stream and the Lindis River near the western boundary of Cluden Station. The Cluden Valley forms a natural east-west communication route between the Lindis and Dunstan Creek valleys and could provide recreational access to St Bathans. Topography rises from about 300m at the Lindis to more than 1,500m on the crest of the range.

Fig. 3 Cavalcaders take a break on the northern slopes of the Dunstan Mountains and look back to the Richmond Valley and Dunstan Pass (D). A legal road leads over the Pass to Dunstan Creek in the valley below the dominant escarpment of the St Bathans Range. Although no vehicle track crosses Dunstan Pass, there is a track over Cluden to the right of this picture. It is important that public access is secured through tenure review.

Fig. 4 Cluden Station contains a wide range of land types including the downland in the foreground, very small areas of alluvial flats, semi-arid north facing slopes in the middle distance and rolling, tor-studded tussock tops extending up to 1,500m and more the skyline. Much of this land has been classified LUC Class VIIe with severe limitations for pastoral use.

Fig. 5 Cluden Station homestead is situated near the Lindis Pass Highway where it passes through Tarras. There are irrigated flats in the foreground which support an intensive deer farming enterprise on freehold land. The homestead is on a low alluvial terrace in the middle distance, while the pastoral leasehold land begins some 6km closer to Lindis Pass, on Cluden Hill.

Fig. 6 The fresh spring growth of the willows contrasts sharply with the almost barren, semi-arid, Hieracium-infested north-facing slopes to the east of the Lindis River. It is hard to imagine how these slopes could be managed in a way that would promote ecologically sustainable land use. Conservation values, other than recovery potential in the absence of all grazing (including rabbits), are also low with the land in its present state.

Fig. 7 Here, one of the Otago Goldfields Cavalcade Trails makes its way along the Dunstan tops between Cluden Pass and Cloudy Peak. This route is likely to become increasingly popular in future as traditional NZ trampers and outdoor people look for alternatives because they are being displaced from places like National Parks and the increasingly well known 'Great Walks' which are becoming dominated by overseas visitors.

Fig. 8 From the Dunstan tops there are expansive views to the Manuherikia and Central Otago, to the Upper Clutha and, on a fine day, as far away as Mt Aspiring and even Mt Cook. Such scenic experiences add greatly to recreational values of these great upland landscapes. Some small areas of stony, deflated soils can be seen in the middle distance before the tor-studded skyline is reached.

Fig. 9 There is a smaller area of Arrow Steepland soils on the shady faces, as seen here on the true right of Cluden Stream below McPhies Ridge, which is more productive, mainly because it is less arid than so much of the other north-facing depleted land. This land has been classified LUC Class VI with moderate limitations for pastoral use. With appropriate maintenance to replenish nutrients removed in animal products, it should be possible to manage such areas in a sustainable manner so that they are suitable for freeholding.

Fig. 10 The best soils on Cluden Station are confined to very limited areas on alluvial flats on the floors of the Lindis and Cluden Stream Valleys. These have been classified LUC Class III with only minor limitations for pastoral use and are therefore eminently suitable to become freehold. The flats here are squeezed between the downlands and the semi-arid, degraded slopes to the east of the Lindis River.

Fig. 11 Public access up the Cluden Valley over a legal road and beyond, to the Dunstan Pass is important for through trips to St Bathans, but it is also valuable for shorter, day trips by locals from the Upper Clutha. Here a group from Wanaka is enjoying a day trip in the mid-reaches of the Cluden Stream, with the kind permission of the runholder to make the return trip via McPhies Ridge.

Fig. 12 The Cluden Bridge over the Lindis River not only gives access to the Cluden Stream and its valley, but is also a convenient starting point for gentle walks along the banks of the Lindis River. Although marginal strips have been laid off, in places these are not wide enough to negotiate bluffs and wetlands adjacent to the river. Appropriate widening should be included in the tenure review provisions.

Fig.13 There has been a traditional camping spot beside the Lindis River, near Cluden Hut, for many years. This is thought to be only partly on the marginal strip and it would be beneficial to recognise this recreational use by establishing a small Recreational Reserve through tenure review.

Fig. 14 Several significant inherent values are illustrated in this view on the crest of the Dunstan Mountains, along the back boundary of Cluden Station. These include the healthy tussock grasslands, the wide-sweeping tussock and tor landscapes, and commanding views over the Otago block mountains to the main divide.

### RECREATIONAL AND RELATED SIGNIFICANT INHERENT VALUES of CLUDEN STATION

#### INTRODUCTION

This report has been prepared following the Early Warning Meeting in September 2003 at which the properties entering the tenure review process in 2003 were introduced. Brief notes on behalf of Federated Mountain Clubs (FMC) were provided at that time, and this report now provides more detail. An inspection of the property was planned for February or March 2004, but permission for access was not granted by the runholder. This report is therefore written without the benefit of detailed knowledge of the property but instead is based on prior knowledge of The Dunstons and on information gathered from other sources (see Methods of Survey and Assessment section below). This report is offered as a contribution to the statutory consultation process undertaken by the Department of Conservation.

The report focuses on those features of Cluden Station which are important for public recreational interests. It should be noted that while much of this interest focuses on access, the natural values and landscapes of the areas concerned have a fundamental impact on the recreational value of the property and greatly influence the quality of recreational experience enjoyed. It is for this reason that reference is also made to both natural and landscape values in this report.

This pastoral lease is situated in a dominant position on the northern end of the Dunstan Mountains. It straddles the range from the Lindis River in the west to Dunstan Creek (at the foot of the St Bathans Range) in the east. It occupies most of the catchment of the Cluden Stream and rises to more than 1,500m on the crest of the range and covers more than 12,000ha. The homestead and about 150ha of associated freehold land is situated close to the Lindis Pass highway (SH 8) in Tarras.

There are other pastoral leases in this area which are, or have been, involved in the tenure review process. These include Ardgour and Cloudy Peak to the South, and Mt St Bathans (including Dunstan Peak) and the Lindis Group of leases to the north of Dunstan Pass. These latter properties provide access to the Chain Hills and the natural landscapes of Dunstan Creek and the St Bathans Range from the Lindis Pass highway (SH 8), and recreational use of this whole area is likely to increase in the future. It is important that a broad view is taken of the overall outcomes of the provisions for public use and access as each lease is reviewed. Particular attention needs to be given to the emerging network of recreation opportunities, and how each lease under review can contribute to that overall network of opportunities.

The PNA survey which inspected then area in the mid 1980s described the Dunstan Mountains as follows:- *"The Dunstan Mountains are the driest of the alpine Central Otago ranges because their location is the most central. The Pisa Range and Lindis Mountains provide extra shelter from the north-west; the Old Man Range from the south-south-west, particularly the snow-bearing winds of winter; while 120 kilometres of basin, range and plateau country lie to the south-east and east.*

*The Dunstan Mountains typify the Central Otago pattern of fault-block mountain ranges uplifted along faults on their south-eastern edges and tilted to the north-west. The mid-Tertiary peneplain surface is expressed as long gently sloping ridges on the north-west slope and the smooth crest of the range.*

*There is no evidence of the Dunstan Mountains ever having generated glaciers - an indication of the low precipitation in comparison with the adjacent Old Man Range of similar height which has several notable cirques and small glacial valleys. Schist tors and periglacial phenomena (in particular soil hummocks) are very well developed on the higher parts of the upland surface.*

*Apart from these minor effects, the absence of glaciation results in a simple topographic pattern, with steep slumped slopes characteristic of the dissected fault scarp on the southeast face, contrasting with the long north-west slope."*

Mason (1988) has described the general area as follows:- *"The Dunstons are tilted block mountains of schist, situated between the upper Clutha and Manuherikia valleys. The eastern escarpment rises moderately steeply from the Manuherikia basin. The western slopes have a rough, craggy appearance at their base (the Northburn and Bendigo localities are notable for these landforms), with a pattern of low, shallow valleys and ridges. With increasing altitude the landscape becomes progressively subdued and indistinct as the broad summit crests are reached.*

*The Dunstan Mountains are connected to the Lindis country by the relatively low Chain Hills divide between the Lindis and Dunstan Creek catchments."*

The PNA Report described the Cluden Land System as follows:- *"This is the more northerly part of the north-west slope of the Dunstan Mountains. It is characterised by a regular pattern of long rounded ridges derived from the tilted peneplain surface, with sizeable valleys entrenched 200-300m deep between them. The valley sides are predominantly slumped, although some stable buttress rock outcrops and colluvial slopes do occur. Some incised stream margins have provided sufficient refuge from fire for the survival of diverse matagouri - Coprosma scrub. The vegetation for the most part is highly modified except at higher altitudes where the valley heads and ridges merge into the summit dome."*

Understanding the underlying geology and the effects of geomorphological processes assists recreational visitors to the Dunstan Mountains to get a deeper understanding of the landscape and scenery, and of those factors and processes affecting the ecological distribution of native species.

The most important recreational issues in this tenure review are related to access. Some legal roads exist and over these, secure public access needs to be confirmed. It will also be important to secure public access from Cluden Bridge to the Richmond Yards via the Cluden Stream valley, over Dunstan and Cluden Passes to Dunstan Creek and St Bathans, and along the crest of the Dunstan Mountains with access from Richmond Yards and Cluden Stream.

#### METHODS OF SURVEY AND ASSESSMENT

A site visit and field inspection was planned for February or March 2004, but the runholder refused permission for access. This report is therefore written without the benefit of an inspection specifically for the purposes of tenure review. The author is however, familiar with the property as a result of other legitimate trips over the Dunstan Mountains and up the valley of the Cluden Stream. This report is based in part on that knowledge and in part on information gathered from other sources. The other sources include studies of topographical and Land Use Capability (LUC) maps, consultation with recreational user groups and a general knowledge of the landscapes seen from the Lindis Pass/Upper Clutha area. A study of "Outdoor Recreation in Otago" was undertaken by Mason (1988) and published by FMC. Reference is made to this Recreation Plan for Otago in the recreation section below. The Survey Report of the Protected Natural Area (PNA) Programme for Lindis, Pisa and Dunstan Ecological Districts (1994) and the Conservation Management Strategy for Otago have also been used as a sources of reference.

### GENERAL DESCRIPTION OF CLUDEN STATION

Cluden Station is a relatively large pastoral lease (12,400ha), which is much larger than most of the neighbouring properties. It occupies a dominating position at the northern end of the Dunstan Mountains (Fig. 1), reaching 1,565m at its highest point and dropping to 300m on Archies Flat in the Lindis in the west, and 700m at the ford over Dunstan Creek in the east. The valley of Cluden Stream forms a natural communication route from east to west (Fig. 2) rising gradually from 300m to almost 700m before dropping to the Richmond Valley. From here a crossing to Dunstan Creek can be made via the Dunstan or Cluden passes (Fig. 3), although there is no vehicle track over the Dunstan Pass.

The northern boundary of Cluden Station runs parallel to Cluden Stream, along the crest of the prominent McPhies Ridge which drops gradually in altitude westwards to the Lindis valley. The pastoral lease includes Cluden Hill and some terrace land west of SH 8, and some alluvial flats by the Lindis River (Fig. 4). The homestead and some associated freehold land is situated on terrace country close to SH 8 in Tarras (Fig. 5).

Most of the pastoral lease occupies a series of north-west trending spurs running off the north western end of the Dunstan Mountains. It occupies most of the catchment of the Cluden Stream. The property is well served by internal tracking as each of these spurs carries a track leading down to the Cluden valley.

Three areas were recognised by the PNA survey team as Recommended Areas for Protection (RAPs). One of these (RAP A1) covers almost 3,000ha on the crest of the range, about 800ha of which lies on the highest part of Cluden Station. The other two (RAP A2 and RAP B1) include native shrublands in steep sided gullies which are unnamed tributaries of Cluden Stream.

Much of the property lies to the sun and there is a large area of semi-arid land heavily infested with scabweed and Hieracium on north-facing slopes below about 1,000m. This can be clearly seen from the Lindis Pass highway at Cluden Hill (Figs 4 and 6).

The recreational significance of Cluden Station is related to its strategic position at the northern end of the Dunstan Mountains which provide opportunities for both range crossings and a long distance traverse of the Dunstan Mountains (Fig. 7). Crossings of the range can be made between the Lindis Country and St Bathans (Fig. 3), and Cluden Station could provide access to the start of an extended traverse along the length of Dunstan Mountains southwards to Cloudy Peak, Bendigo, Leaning Rock and the Cromwell Gorge (Figs 7 and 8). These opportunities will be discussed in the recreation section below.

Conservation interests (associated with enhancing the recreational experience) are primarily focused on the landscape values of the higher country, including the crest of the Dunstan Mountains, and the passes leading to Dunstan Creek and St Bathans, but also include the RAPs referred to above, and described in detail below.

### LAND RESOURCES OF CLUDEN STATION

There is a very large area (8,500 to 9,000ha) of land on Cluden Station which has been classified Land Use Capability (LUC) Class VIIe (Fig. 4). This is all erosion-prone land with severe limitations for pastoral use. It is not confined to the high country and extends down the sunny north-facing slopes to the valley of the Cluden Stream and Lindis River (Fig. 4). This land is mainly composed of Dunstan Steepland High Country Yellow Brown Earth soils on the high country above about 1,000m where the dominant vegetation is tussock grassland. At lower altitudes the soils are Arrow Steepland Yellow Grey Earths between about 500 and 1,000m, while on the lowest north-facing slopes (between about 300 and 600m) there is a significant area of Alexandra Steepland and Conroy Hill semi-arid Brown Grey Earth soils which carry abundant scabweed, and are heavily infested with the mouse-eared hawkweed or Hieracium. About half the property is still in semi-natural vegetation which has been modified by pastoral use, while the other half has been improved by oversowing and topdressing.

There is a smaller area (about 3,000ha) of LUC Class VI Arrow Steepland and Blackstone Hill Yellow Grey Earth soils on shady slopes between about 500m and 1,000m which have generally been improved by oversowing and topdressing (Fig. 9) and are more productive. This area has moderate limitations for pastoral use but with appropriate treatment to ensure that the removal of essential nutrients in animal products (meat and wool) is balanced by fertiliser application to maintain nutrient reserves, it should be capable of ecologically sustainable pastoral production. So long as the nutrient balance is maintained and pests are kept under control, this land should be suitable for freeholding.

About 500ha of Clyde semi-arid Brown Grey Earth soils occur on the high terraces and downland at about 500m west of the highway at Cluden Hill (Fig. 4). This has been classified LUC Class IV with high suitability for pastoral production. There is also a very small area (perhaps 100ha) of LUC Class III alluvial soils on Archies Flat and along the Lindis River (Fig. 10). With appropriate maintenance this LUC Class III and Class VI area will be suitable for freeholding.

There are serious problems with land use and appropriate allocation to conservation or freehold on land classified LUC Class VIIe. On the high country, above about 1,000m, natural soil fertility is low and grazing and burning remove essential nutrients from soil reserves. Unless removals through burning and in animal products (meat and wool) are balanced by replenishment in the form of fertiliser, soil depletion will be inevitable and the system will be unsustainable. Nutrient balance might be maintained by fertiliser use but at these higher altitudes plant growth response is small and it is usually not economically justifiable to apply the necessary fertiliser. Furthermore the term 'ecologically sustainable' is not defined in the CPL Act, 1998.

It has been suggested that 'ecological sustainability' will involve maintenance of not only nutrient status, but also biological diversity. Pastoral use, especially if that included fertiliser use and burning would not favour or promote biodiversity. For all these reasons, freeholding would not promote 'ecologically sustainable' land use. Under these circumstances conservation values need to be assessed and considered as an alternative to unsustainable pastoral use.

At lower altitudes, and especially on sunny north-facing slopes characterised by Arrow Steepland Yellow Grey soils, or on the lowest slopes, Alexandra Steepland semi-arid Brown Grey soils, the land has already been depleted by a history of overgrazing by rabbits (and sheep) and Hieracium invasion (Figs. 4 and 6). Very little semi-natural, or indeed any useful pasture vegetation remains, and such land has severe problems for both farming and conservation (see section below on Significant Inherent Values).

#### RECREATIONAL USE AND POTENTIAL NEW OPPORTUNITIES

The recreational significance of this pastoral lease lies in its strategic location at the northern end of the Dunstan Mountains. Access is available at the western end via the Cluden Road (Fig. 11) which is a legal road to a point part way up the Cluden Stream, or from the east from St Bathans and the Dunstan Creek then over the Dunstan or Cluden Passes (Fig. 3). From either the eastern or western access it is then possible to ascend the northern end of the Dunstan Mountains and traverse south (Figs. 7 and 8) over Cloudy Peak, Ardgour and Bendigo to Leaning Rock above the Cromwell Gorge. All these properties have been through, or are still in the tenure review process.

The fact that all these properties along the Dunstan Mountains, and a group of six other properties in the Lindis area, to the north of Dunstan Pass, are all involved in tenure review, highlights the need to consider the emerging network of recreational opportunities as each individual property is reviewed.

In the FMC Report on the tenure review of Cloudy Peak it was stated that: "*The linkage between the North Dunstan area [including Dunstan Pass and the upper reaches of the Dunstan Creek catchment] and Thomsons Saddle (and the Thomson Gorge Road) is likely to become increasingly important as a recreational resource in future.*"

Thus, increasing usage is anticipated but currently recreational use of Cluden Station is relatively light because the opportunities are largely unknown. The crossings of the range from Cluden Stream to Dunstan Creek and St Bathans, and the traverse along the tops would be suitable for tramping, mountain bike and horse travel. As a result of the Goldfields Cavalcades (Figs 3 and 7), the route over the Dunstan Pass and the traverse along the tops has become more widely known but is still little used. Local walkers enjoy gentle trips along the Lindis River and the water race (Fig. 12), while there has been a traditional camping spot at the Cluden Hut for many years (Fig. 13). Because it is not clear if this camping area is within the marginal strip, it would be useful if the traditional recreational use was recognised and a small Recreation Reserve created out of tenure review.

Traditional NZ trampers and other outdoor enthusiasts are increasingly seeking new recreational opportunities as the more popular National Parks and 'Great Walks' are more and more becoming dominated by overseas tourist visitors. The traditional NZ users are being displaced and these people are now looking to new areas for recreation such as those likely to become available through the tenure review process. It is thus important that this need is recognised and new provisions are made through the tenure review process.

Another reason for increasing demand has been provided by Mason (1988) who stated: "*The Northern Dunstan PNA [Protected Natural Area at the head of Lauder Creek] is an unknown as far as the recreational public is concerned, although no doubt this situation will change with greater awareness of its natural values and its potential for cross country skiing.*" Mason also observed that with greater awareness of the same features, it could be anticipated that summer visitation will also increase.

Mason (1988) has observed that there may be some potential for cross country skiing on parts of the Dunstan Mountains but that the amount of snowfall is frequently limited by the orientation of the range to the southerlies which bring most of the snow. In some years however, snow does lie long enough for recreational use.

The recreational significance of pastoral leases like Cluden Station should be assessed not only on their present usage but also on potential. This is because current usage is much less than its potential for a number of reasons. Partly because of lack of awareness and partly because of the current land tenure under pastoral lease, access to the ridge system has not been easy in the past and the recreational use of the Dunstan Mountains is less than it might have been if access was freely available. There is significant potential for greater use and it is the full range of possibilities which should be considered during this tenure review.

An increasing problem for people wishing to do trips involving overnight stays in the backcountry is security of car parking at road ends. Consideration should be given during the tenure review process to making provision where possible for car parking off highways, and in the most secure places possible near the start of new easements over land which becomes freehold through tenure review. In the case of Cluden Station, consideration should be given to future opportunities for off-road parking at some convenient place in the valley of the Cluden Stream.

In summary, this assessment indicates that there is considerable scope in crossings of and a traverse along the Dunstan Mountains for mountain bike trips, tramping, and possibly horse riding. It is recommended that public access for all these activities should be secured as an outcome of tenure review. The riverside also offers opportunities for camping and more gentle day walks, and if it does not already exist, a marginal strip or easement along the true left of the Lindis River should be included.

### **SIGNIFICANT INHERENT VALUES AND THEIR IMPORTANCE FOR RECREATION**

This report focuses on those features of Cluden Station which are known to be important for public recreational interests. It should be noted that while much of this interest focuses on access, the natural values and landscapes of the areas concerned and views to be had from the key vantage points have a fundamental impact on the recreational value of the property and greatly influence the quality of recreational experience enjoyed. It is for this reason that reference is also made to both natural and landscape values of this property (Fig. 14).

Mason (1988) has commented on the vegetation of the Dunstan Mountains as follows: "*Tall tussock grassland has a more complete presence north of Thomsons Saddle although this is moderately to severely depleted. Only a relatively small area of alpine herbfield occurs on the northern crest. Short fescue and silver tussock grassland cover lower slopes. Pockets of shrubland occur throughout this half of the range, being mainly confined to deeply incised gullies.*"

The scenic and natural values of the tussock grassland and tor landscapes on the range crest (Fig. 14) were recognised by the PNA survey team who identified and recommended a large area for protection (Dunstan RAP A1). This covers about 800ha on Cluden Station and a much larger area on the neighbouring property. The public and natural value of this area is made more important by the fact that it is adjacent to the already existing Lauder Basin Conservation Area. This RAP (A1) and two other RAPs are described in more detail below.

As discussed in the Land Resources section above, there is a real problem with land use and land allocation relating to the remaining LUC Class VIIe land on lower sunny north facing slopes with Arrow Steepland and semi-arid Alexandra Steepland soils. Much of this land is severely depleted and infested with scabweed and Hieracium (Figs. 4 and 6). It is now of very low value for pastoral farming and it is difficult to imagine what could be done to promote its management in a way that is ecologically sustainable as required by the CPL Act 1998 (S. 24). On the other hand, the land currently has very little in the way of conservation value, other than its potential for recovery in the complete absence of grazing and burning. Even this would be difficult to achieve as much of the damaging grazing has been and is increasingly again being done (after a respite due to RHD) by rabbits. Special arrangements will need to be made for some kind of stewardship in this particular case. The best ecological solution would be total rest from grazing and productive use, but this would also require pest management and control by the land owner/manager. Because of high costs and nil returns it seems that possible solutions are (a) for return of the land to full Crown ownership and control or (b) stewardship protection under a Sustainable Management Covenant in favour of the Commissioner as provided for by CPL Act (S97). This arrangement would provide the long-term stewardship required to encourage slow progressive vegetative recovery with minimal competition from pests and weeds. Special funding may need to be provided to allow this to happen.

### **RECOMMENDED AREAS FOR PROTECTION (RAPs)**

PNA survey teams inspected the Lindis and Dunstan Ecological Districts in the mid 1980s and their report was published in 1994. Three areas on Cluden Station were identified as Recommended Areas for Protection (RAP A1, RAP A2 and RAP B1). These are described below.

### **Dunstan RAP A1 (North Dunstan)**

The first and highest of these areas is the Dunstan RAP A1 (North Dunstan) which covers some 2,760ha on the crest of the range. About 800ha of this RAP occurs on Cluden Station (Fig. 7). The landform was described as follows:- *"The summit plateau remnant around the head of Lauder Creek features very broad gently undulating ridges culminating in the unnamed highest point of the Dunstan Mountains (1690 m). The ridge crest southwest of this point is mainly a deflated stony pavement, but soil hummocks are characteristic elsewhere on the summit ridges. Other relict periglacial phenomena are localised solifluction lobes and scattered tors. The generally stable colluvial slopes steepen towards the streams and Lauder Creek becomes deeply gorged towards the end southwestern edge of the RAP. The main ridges of the Cluden land system in the west generally slope 5-10 degrees NW, but tributaries of Cluden Stream are strongly incised. These valleys are asymmetric because of the moderate northerly dip of the Haast Schist here. Sunny aspects tend to be slumped while shady aspects are more commonly stable though steeper."*

Vegetation communities within the RAP were described:- *"Slim snow tussockland of moderate to high density dominates the broad summit ridges and upper slopes. Several minor communities are closely associated with slim snow tussockland. Alpine flushes are numerous and relatively extensive, commonly up to several hectares. Cushionfields dominated by *Dracophyllum muscoides* with *Raoulia hectori*, blue tussock and *Luzula rufa* are commonly associated with tors on exposed sites, especially in the east. Other small areas of deflated stony soils are dominated by *Chionohebe densifolia* and blue tussock with other tussockland herbs and grasses. Slim snow tussockland extends downslope to a generally abrupt boundary with narrow-leaved snow tussockland at an altitude between 1350-1400 m on sunny faces. Only a narrow zone of narrow-leaved snow tussockland is present in the west, it gives way downslope to fescue tussockland generally of low naturalness."*

Some important discoveries were made by the survey team in respect of new, rare and endangered species. They reported as follows:- *"A newly discovered tiny *Gentiana* species is common in many alpine flushes, and has since been described and named *Gentiana lillipuntiana* (Webb, 1990). Small populations of rare *Myosotis oreophila* and *M. cheesemanii* occur locally on exposed sites on the ridge southwest of the high summit. These populations have been documented and further research is currently underway to learn more of their population dynamics. Edelweiss, found here, is uncommon in the District. Also found were *Microseris scapigera* and *Carpha alpina*, and a trifid leaved form of *Chionohebe densifolia* which is seemingly characteristic of the northern Dunstan Mountains."*

The PNA team concluded that: *"The northern Dunstan Mountains have been little studied by biologists, as emphasised by the discovery of a locally common new gentian species. The priority area is of outstanding significance for the extensive intact snow tussocklands on the summit area. Slim snow tussockland on the broad upper slopes and plateau surface is the most extensive in the Lindis, Pisa and Dunstan Districts. It is in conspicuous contrast with the southern Dunstons, Pisa and Old Man Ranges where cushionfield dominates under conditions of generally similar altitude, terrain and annual precipitation. The alpine zone of the North Dunstan priority area is of major importance for an understanding the alpine ecological history of the Central Otago Region."*

The significance of their findings is summarised by the following assessment criteria which were ranked High (H), Medium (M) or Low (L):

**Representativeness (H)** Excellent representation of original alpine communities

**Diversity (H)** Wide range of tussocklands and associated alpine communities, also of subalpine-montane woody communities.

**Naturalness (H)** Unusually high naturalness overall, especially in alpine zone.



**Special Features (H)** Numerous rare or uncommon species.  
**Viability (H)** Communities intact and functioning in natural relationships..  
**Buffering (H)** Summit plateau surface well buffered by isolation.  
**Threat (M)** Fire (shrubland and tussockland), stock impact in alpine flushes.  
**Landform (H)** *Good representation of northern Dunstan land system.*

#### **Dunstan RAP A2 (Lower Cluden Tributary)**

The PNA Report stated that this RAP occupied *“The lower-mid reaches of a tributary valley of Cluden Stream, incised into the gentle northwest slope of the western flank of the northern Dunstan Mountains (Cluden Land System).”*

Its vegetation was described as:- *“Dense mixed scrub along the streamside is dominated by Coprosma propinqua, with abundant Olearia odorata, Aristotelia fruticosa and matagouri. Less diverse matagouri shrubland with some briar and Coprosma propinqua generally occurs away from the stream, especially on sunny aspects, and partially buffers the mixed shrubland. Olearia odorata is prominent on some moist shady faces.”*

A special feature of the RAP was: *“Carmichaelia kirkii, a vulnerable native climbing broom which has suffered much restriction of its range, is scattered through much of the dense mixed scrub.”*

The PNA survey concluded that Dunstan RAP A2 (Lower Cluden Tributary) was:- *“An excellent example of the diverse Coprosma/matagouri dominated scrub in riparian zones of steep-sided valleys characteristic of the dry (550-650 mm annual rainfall) northwest Dunstan Mountains (Cluden Land System) and adjacent areas of the Lindis District.”* It was also observed that: *“This newly found site of C. kirkii includes possibly the largest remaining population, and is of viable size for long term survival, provided burning and browsing of this palatable species can be prevented.”*

**The significance of their findings is summarised by the following assessment criteria which were ranked High (H), Medium (M) or Low (L):**

**Representativeness (H)** Typical of important communities.  
**Diversity (M)** Variety of shrublands.  
**Naturalness (M)** Generally low in tussocklands, otherwise high.  
**Special Features (H)** *Carmichaelia kirkii*, relatively large proportion present.  
**Buffering (M)** Partially buffered by matagouri.  
**Viability (H)** Shrublands in good condition.  
**Threat (M)** Shrubland clearance/burning, browsing.  
**Landform (M)** *Part of a typical incised valley in the Cluden land system.*

#### **Dunstan RAP B1 (Mid Cluden Tributary)**

The vegetation in the Mid Cluden Tributary RAP was described as follows:- *“Dense, mixed scrub along the streamside is dominated by Coprosma propinqua with much Aristotelia fruticosa, koromiko, matagouri and Olearia odorata. Matagouri (including scattered large plants up to 4 m) dominates shrublands on the lower slopes and side gullies. Briar is frequent below 700 m, especially on sunny aspects.”*

Some notable features were observed: *“A few plants of the vulnerable climbing broom Cannichaelia kirkii were noted near the lower boundary. Large (3 m tall) Olearia nummularifolia occur near the upper boundary. Coral broom is scattered in the upper portion of the area.”*

The significance of their findings is summarised by the following assessment criteria which were ranked High (H), Medium (M) or Low (L):

**Representativeness (M)** Typical of important montane communities.

**Diversity (M)** Variety of shrublands.

**Naturalness (M)** Generally low in tussocklands, otherwise high.

**Special Features (H)** Some *Carmichaelia kirkii*, other uncommon species..

**Viability (H)** Shrublands in good condition.

**Buffering (M)** Steep riparian sites give partial buffering.

**Threat (M)** Shrubland clearance/burning, browsing.

**Landform (M)** Typical inner valley of the Cluden land system.

On the basis of the PNA Reports and these assessment criteria it is believed that all three RAPs have very significant inherent values which are worth of protection. Protection by return to full Crown ownership, or under a secure binding covenant would ensure that the threats identified above are minimised through tenure review.

### AREAS TO BE PROTECTED

There is a real problem with the dry north-facing slopes (LUC Class VIIe Arrow and Alexandra Steepland soils) which are badly infested with scabweed and Hieracium and should be destocked. This should allow very slow recovery of native species and shrubland to come back but the conservation values are very low at present. Stewardship is required. Because weed and pest control costs would need to be met but there would be no income from production, it seems that the possible solutions are (a) for return of the land to full Crown ownership and control or (b) stewardship protection under a Sustainable Management Covenant in favour of the Commissioner as provided for by S.97 CPL Act 1998. This arrangement would provide the long-term stewardship required to encourage slow progressive vegetative recovery with minimal competition from pests and weeds. In the event that the land is not returned to full Crown ownership and control, it is recommended that this area should be treated as a long-term stewardship area under a Sustainable Management Covenant as provided for by S.97 CPL Act 1998.

The large area of RAP A1 on the tops should be included within an area of high country to be returned to full Crown ownership and control and become conservation land. As well as Dunstan RAP A1 (North Dunstan) this conservation area should include all the LUC Class VIIe land on Dunstan Steepland soils above about 1,000m on Cluden Station. It was explained above that it is unlikely that such land can be managed in a way that is ecologically sustainable. This land does however have very significant landscape value which should be recognised. The value of this entire area is enhanced by the fact it adjoins the already existing Lauder Basin Conservation Area. It is recommended that this entire area (indicated with a green outline on the attached map) should be returned to full Crown ownership to be managed for conservation and recreation purposes.

The other RAPs recognised by the PNA survey team should also be protected because of their significant inherent values which are described above. In this case, the two RAPs are situated in separate unnamed tributaries of the Cluden Stream, within an area which may become freehold. If freehold tenure is the outcome of tenure review, the most appropriate form of protection for Dunstan RAPs A2 and B1, will be under a binding covenant registered on the freehold title.

The traditional camping spot beside the Lindis River near the Cluden Hut should be formally recognised. Because it is not clear if this camping area is entirely within the marginal strip, it is recommended that a small Recreation Reserve covering the entire camping area should be one of the provisions of this tenure review.

### ACCESS REQUIREMENTS

The following access provisions will be required:-

Marginal strips should be laid off on all qualifying waterways.

Walking access is required along the banks of the Lindis River and the associated water race. There should already be marginal strips along the banks of the Lindis River which could be used by locals and others for a gentle riverside walk. Part of this area, in the vicinity of Cluden Hut, has been traditionally used for camping, and the legality of this usage should be confirmed. Similarly, the legal existence of the marginal strips along the river should also be confirmed as part of this tenure review.

Public access for foot, mountain bike and possibly also horse riding will be required over a number of routes on the Dunstan Mountains. Some of these routes are on, or close to legal roads as follows:-

1. There appears to be a legal road up the Cluden Valley for about 9km which may or may not coincide with the road formation on the ground. As an outcome of tenure review, there needs to be secure foot, non-motorised vehicle and horse access to the Richmond Valley. This would preferably be achieved by confirming the legal road. Failing that, an alternative might be the establishment of an easement for public access as defined above. Vehicle access with land owner permission should be considered.
2. From the Richmond Valley, a legal road appears to lead over Dunstan Pass to Dunstan Creek. There is no vehicle track to Dunstan Pass so the actual alignment of the legal access (perhaps as a poled route) should be made clear as an outcome of this tenure review.
3. There is also a legal road leading from Richmond Valley to Cluden Pass, but its relationship with tracks on the ground is not clear. In this case, the track on the ground should be recognised as the legal alignment as it was clearly intended that the legal road should provide public access to Cluden Pass.
4. From Cluden Pass the access to Dunstan Creek is mainly over the neighbouring property, but there is a section of track on Cluden Station pastoral lease leading to the ford (at Map Reference H40 523.982) which should be formally recognised as public access (probably as an easement) during this tenure review.
5. An Easement for public foot, non-motorised vehicle and horse access is also required from Cluden Pass to any new conservation land created on the crest of the Dunstan Mountains. This would provide a link for a future traverse southwards to Bendigo and Leaning Rock as well as to the Lauder Basin Conservation Area which abuts the Cluden Station boundary along the ridgeline.
6. From the crest of the Dunstan Mountains there is a need for at least one accessway to the Cluden Stream to provide opportunities for round trips, and an emergency route in the event of bad weather. This route might be by way of points 1,527m, 1,405m, 1,248m, 1,027m and 887m, or by way of points 1272m, 782m and the airstrip road down to the Apple Tree Yards. The latter route is preferred as it would make a much better round trip.
7. If the two RAPs in unnamed tributaries of Cluden Stream are protected as a result of this tenure review, public access will also be required to these new conservation areas.

All the recreationally important access routes are indicated in yellow on the attached map.

### CONSERVATION MANAGEMENT STRATEGY FOR OTAGO

There are important statements in the Conservation Management Strategy (CMS) for Otago, in which the North Dunstan Mountains are recognised as a Special Place. It is noted in the CMS that the Lauder Basin Conservation Area is landlocked and that public access to the area is required. The objective for this Special Place is:- *"To extend protection in the area to cover the remaining higher altitude areas of nature conservation importance, and to secure appropriate public access."*

Implementation includes:- *"Pastoral lease tenure review on properties in the area may provide opportunities to negotiate to protect the areas of interest. Overall management of these new areas with the existing conservation areas will confer net conservation and management benefits."*

This objective and intended implementation accord very closely with the recommendations made in the present report. Furthermore, it should be noted that the priority for the North Dunstan Mountains Special Place is:- *"The negotiation of protection arrangements for areas of biodiversity importance and recreational opportunities and access are the priority activities in this Special Place."*

## CONCLUSIONS

The tenure review of the Cluden Station pastoral lease presents an important opportunity to enhance the recreational potential and use of the Dunstan Mountains area. There is also an opportunity to enhance the quality of recreational experience on those lands by recognising and protecting the significant landscape and other natural values described above.

This property occupies a key position at the northern end of the Dunstan Mountains in that it provides access to crossings of the range leading to the Cluden and Dunstan Passes, Dunstan Creek and St Bathans. It also provides access to the Lauder Basin Conservation Area, and the Lindis group of pastoral leases currently under review. If the recommendations in the Preliminary Proposals for the Lindis leases are gazetted, the need for secure access over the Dunstans and between the Lindis area and St Bathans increases in importance.

A significant part of Cluden Station pastoral lease is likely to become freehold as a result of tenure review. Consequently, secure public access for foot and mountain bike use, and possibly horse riding over and along the Dunstan Mountains is the most important recreational issue in the tenure review of this property.

The outcome of the tenure review of Cluden Station, if it includes the important recreation and conservation recommendations included in this report, could contribute significantly to the achievement of the objectives declared for the North Dunstan Mountains Special Place in the Conservation Management Strategy for Otago.

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