

## **Crown Pastoral Land Tenure Review**

**Lease name : THE WANDLE**

**Lease number : PO 328**

### **Conservation Resources Report**

As part of the process of Tenure Review, advice on significant inherent values within the pastoral lease is provided by Department of Conservation officials in the form of a Conservation Resources Report. This report is the result of outdoor survey and inspection. It is a key piece of information for the development of a preliminary consultation document.

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

cc LINZ  
A/M Coastal  
13/8/12

## **Addendum to The Wandle Pastoral Lease (P328) Conservation Resources Report**

### **1. INTRODUCTION**

A reassessment of the significant inherent (botanical) values of The Wandle Pastoral Lease (PL) was undertaken 23<sup>rd</sup> March 2005. The purpose was to determine if changes were required to the Conservation Resources Report which was based on information derived from the original inspection in 1997 and a subsequent inspection in 2001.

Due to foggy and wet weather conditions the upper parts of The PL were not able to be reassessed but advice from the LINZ contractors present during the reassessment suggested that no significant changes to farming practices had occurred since 2001. On that basis the values identified then and contained within the current CRR were assumed to be unchanged. Likewise, the values previously identified in the main stem of Last Creek were confirmed.

The reassessment was therefore focused on the lower north-eastern hill slopes.

The PL was transferred to Lonestar Farms in 2009. The current lessees have applied to the Commissioner of Crown Lands (CCL) for a review of their pastoral lease tenure.

An additional inspection of the PL was conducted on May 3<sup>rd</sup> 2012. Observations made on this day have been added to this addendum.

### **2. SURVEY METHOD**

#### **2005**

Vehicles were left at the base of the track which winds uphill south of Last Creek. From there access was by foot, northwards into the small tributary of Last Creek. Views were obtained of the upper parts of the catchment from the spur dividing this small tributary from the main stem of Last Creek. The return to the vehicle included a traverse through the extensive shrublands of the main stem of Last Creek.

#### **2012**

The PL was visited on May 3. The boundary of deer fencing erected by the current lessees adjacent to the south side of Last Creek was GPS'd. A traverse was made on foot across the top block to the northern boundary with Taieri Lake Station before descending close to the Taieri Lake Boundary fence.

### 3. VEGETATION DESCRIPTION

#### 2005

The lower parts of the small northernmost tributary of Last Creek have a dense predominantly riparian mixed indigenous shrubland. Common shrubs include matagouri (*Discaria toumatou*), *Corokia cotoneaster*, *Coprosma propinqua*, *C. rugosa*, *C. crassifolia*, *C. sp 't'*, *Olearia bullata*, *Carmichaelia petriei*, koromiko (*Hebe salicifolia*) and porcupine shrub (*Melicytus aff. alpinus*). A small concentration of an introduced tree, probably alder (*Alnus sp.*) occurs in the bottom corner of the lease, other woody weeds are restricted to occasional elder (*Sambucus nigra*) and gorse (*Ulex europaeus*). There is an abundance of indigenous lianes including bush lawyer (*Rubus schmidelioides*), native jasmine (*Parsonsia sp.*), climbing fuchsia (*Fuchsia perscandens*), pohuehue (*Muehlenbeckia australis*) and introduced bittersweet (*Solanum dulcamara*). Ground cover commonly includes prickly shield fern (*Polystichum vestitum*), alpine hard fern (*Blechnum penna-marina*).

On the margins of shrub remnants and on spur crests at lowest elevations in the catchment, browntop (*Agrostis capillaris*) and occasional silver tussock (*Poa cita*) provide the dominant cover.

A similar woody community to that described above occurs higher up the catchment, but has the addition of small trees of broadleaf (*Griselinia littoralis*). Upslope on the north-facing true right of the catchment is a small grove of c. 20 kowhai (*Sophora microphylla*) trees ranging in height from 1 m to 6 m tall (GPS ref NZTM E1378349 N 4969478) Further upslope, on to the crest of the spur separating this catchment from the main branch of Last Creek, are several rock piles supporting dense *Coprosma crassifolia* stands.

On the true left, beyond the riparian zone, a belt of mostly pure matagouri extends up slope increasingly mixing with narrow-leaved tussock (*Chionochloa rigida*) until narrow-leaved tussock is the dominant cover.

Although the vegetation of the main stem of Last Creek has already been documented (original CRR), an additional inherent value was noted during a traverse through shrublands. A single shrub of the acutely threatened scrambling broom (*Carmichaelia kirkii*) occurs in a wet grassy gully (GPS ref NZTM E1378182 N4969393) with prickly shield fern and scrambling fuchsia. It is surrounded by shrubland dominated by *Coprosma rugosa*, *C. propinqua*, broadleaf and *Carmichaelia petriei*.

#### 2012

Previously identified values were confirmed to be present.

Tussock grasslands were found to be in excellent condition reflecting an absence of grazing and burning in the top block over recent years. That part of Last Creek which is

fenced off from the deer farming operation appears to have been subject to a conservative grazing regime. Vegetation in the upper two thirds of the Last Creek Block appears to be virtually 'ungrazed'.

Of significance was the 'discovery' of living Halls totara (*Podocarpus cunninghamii*) within the Last Creek Block. A dead tree spar was found on a rock out crop at GPS ref NZTM E1377599 N4970153 at 680 m a.s.l. Live semi prostrate totara foliage was found near the base of the dead spar. A second live Halls totara tree was observed some 80 metres down slope and to the south of the GPS'd tree.

Below 600 m a.s.l there is a rapid transition from intact *Chionochloa rigida* to brown top dominated grasslands. However these grasslands are interspersed with numerous pockets of native shrublands and tall tussock. Slopes above Last Creek support native woody vegetation including matagouri, broadleaf, snow tussock and the native broom *Carmichaelia petirei* down to the point where it exits its gorge near the base of the Last Creek block.

## **Problem Plants**

### **2005**

A small number of potentially troublesome woody weeds and lianes are present. A small cluster of trees tentatively identified as alders occur amongst shrubland at the most downstream extent of the tributary of Last Creek. Likewise a patch of gorse occurs in the same general locality. Both are unlikely to spread upstream but given their small spatial extent are good candidates for eradication. Trees of elder are scattered through the lower parts of the shrubland along with the liane bittersweet. Both should be monitored to ensure they remain minor components of the flora.

### **2012**

A large area of recently sprayed gorse was noted to be present in the lower most corner of the Last Creek block. Elderberry was observed in this corner along with trees from the *Prunus* genus.

Gorse at the base of the proposal was observed during the 2012 inspection to have been recently sprayed

A small patch of broom is present below the farm track at GR NZMS E2287417 N5530888. These were treated with Prills during the May 2012 inspection but will no doubt require further attention.

### Significance of Botanical Values

Diverse mature shrublands as found throughout the lower reaches of Last Creek are a rare ecosystem in the montane zone. Tiny remnants of kowhai and broadleaf are highly significant relicts of the former forest cover that would have clothed the lower slopes in pre-human times. The importance of woody vegetation in Central Otago has been given prominence by Walker et al. (2003). The examples remaining on this PL form a core from which recovery to their former extent could occur. The recovery of shrublands in the absence of grazing and fire has been demonstrated at several sites in Central Otago (Walker loc.cit.).

The chance discovery of the 'At Risk – Declining' climbing broom (*Carmichaelia kirkii*) in the main stem of Last Creek opens up the likelihood that targeted survey would find this plant to be present in other tributaries within the Last Creek Block.

The recent (2012) find of Halls totara is significant. There is only one other record of this species on the eastern flanks of the Rock and Pillar Range. The drier western flanks support a few isolated stands. Although once widespread on the margins of Otago's inland basins, in drier areas Halls totara are now rare having succumbed to Polynesian fires and more recent burning associated with pastoralism.

Walker et. al (2005) have identified New Zealand's land environments (LENZ; Leathwick et al. 2003) that are most vulnerable to biodiversity loss. Two criteria are used to identify biodiversity that is most vulnerable (most likely to be lost). These are (1) poor legal protection (reflected by low percentages legally protected) and (2) past habitat loss (reflected by low percentages of remaining indigenous cover). Based on these two criteria, they recommend five categories of threatened environments to identify environments containing indigenous biodiversity at most risk of loss. The much-reduced and highly modified areas of indigenous cover remaining in these threatened environments support a disproportionately large percentage of New Zealand's most seriously threatened species, habitats, and ecosystems. The protection of what remains in these environments is essential to halt the decline of New Zealand's indigenous biodiversity.

Level IV of LENZ more adequately reflects the distribution of biodiversity, past clearance and current vulnerability across the landscape than higher levels of LENZ (e.g. Level II). Consequently, threat classification at Level IV rather than Level II will result in substantially more effective and efficient identification of threatened remaining indigenous cover.

Almost two-thirds of New Zealand's Level IV Land Environments are classified within one of five categories of threat based on indigenous cover loss and poor protection. Between 60% and 90% of remaining indigenous cover in these threat categories is not legally protected. High proportions of this remaining indigenous cover are on land of low value for agricultural production. This area of The Wandle PL falls predominantly

within Level IV Land Environments Q2.2a (Critically Underprotected), Q4.3a and Q2.1c (At Risk), and Q4.3b (Critically Threatened).

### **Rare Ecosystems**

Terrestrial ecosystems that were rare before human colonisation of New Zealand often have highly specialised and diverse flora and fauna characterised by endemic and nationally rare species. Rare ecosystems are defined as those having a total extent less than 0.5% (i.e. < 134 000 ha) of New Zealand's total area (268 680 km<sup>2</sup>). A framework has been developed (Williams et al. 2007) based on descriptors of physical environments that distinguish rare ecosystems from each other and from more common ecosystems. Using this framework 72 rare ecosystems have been defined using pertinent environmental descriptors selected from soil age, parent material, soil chemistry and particle size, landform, drainage regime, disturbance, and climate.

On the PL four rare ecosystems were identified, all in the wetland category (cushionbog, ephemeral wetlands, seepages and flushes).

### **Key Ecosystems**

Extensive intact snow tussock grasslands are present throughout the mid to upper reaches of the PL.

The observation that the condition of native vegetation in the Top and Last Creek Blocks has improved markedly between 1999 and present, adds to the significance of previously identified inherent values.

The area assessed as containing significant inherent botanical values is marked on Map 3 attached to this addendum.

## **4. ADDITIONAL HISTORIC INFORMATION 2012.**

### **Pastoral features**

A hut ruin (H42/129) has been recorded on the true right bank of the south branch of Last Creek ca.1km west of Wandle Road (Jill Hamel 1994: page 3 and Fig 2). See Photo 6. The ruin is cited at the mouth of the gully at the creek coming down off the hill. The hut is large (5.4 x 3.6 metres) with intact walls but no roof. The hut is thought to have been occupied by an early farming family, the O'Connell's (Ross Allen pers. comm.: cited in Hamel 1994: 3). It is sited immediately upstream of one of the first farmsteads in the area, Taieri Lake. Hamel noted the chimney was unusual having been built into the wall with no outside projection. This design was more thermally efficient but would require more skill to build. The hut appears to have no openings for windows.

The hut site is marked on Map 3.

### **Significance of Historic Values**

The hut ruin is a relatively intact example of accommodation built by early pastoralists. Adding to its significance is its sturdy construction and location at the base of Last Creek where natural values prevail. The site helps us better understand the challenges faced by our forbears.

### **5. CONSULTATION**

Conservation resources on The Wandle were discussed at a meeting with “umbrella” recreation and conservation groups (NGOs) on March 6<sup>th</sup> 1997.

Key points raised at the meeting were:

- The upper block should be restored to full public ownership as conservation land.
- Access via the spur on the true right of Last Creek would provide a round trip option in conjunction with the Kinvara Track.

The PL was again discussed at an Early Warning meeting on 22nd September 2011 and a follow up meeting on April 18<sup>th</sup> 2012. Additional points/issues raised were:

- There is some confusion as to whether totara present in Last Creek (this was subsequently clarified during the 2012 DOC inspection).
- There is round trip potential using existing Taieri Lake easement and then down ridge on true right of Last Creek noted.
- Significance of Last Creek shrublands/woodlands was noted.

Subsequent written input was received from FMC, CORUF, Professor Alan Mark and Forest and Bird Dunedin Branch. Points raised in these reports are summarized in Table 1 below and attached in full as the appendix.

Table 1

NGO	Recommendations			
	CORUF	Alan Mark	Forest & Bird Dunedin	FMC
Restore Land above snow line fence to public ownership	✓	✓	✓	✓
Restore Last Creek block to full public ownership.		✓	✓	✓
Recommend a conservation covenant (or greater protection) over the Last Creek Block	✓			
Secure public access up Last Creek or track near the southern end of the PL.	✓	✓	✓	✓
Recommend Landscape Covenant over land to be freeholded between ~ 500 m.a.s.l and snow line fence.		✓	✓	
Fence boundary riders hut off from, stock and secure formal protection.		✓	✓	✓



**REFERENCES CITED:**

**Hamel, J. 1993:** Heritage values on some Rock and Pillar pastoral leases. A Report to the Department of Conservation, Otago Conservancy, Dunedin.

**Hamel, J. 1994:** Along the Mountain. A Report to the Department of Conservation, Otago Conservancy, Dunedin.

**Leathwick, J., Wilson, G., Rutledge, D., Wardle, P., Morgan, F., Johnston, K., McLeod, M., Kirkpatrick, R. 2003:** Land Environments of New Zealand. Ministry for the Environment.

**Walker, S.; Lee, W. G.; Rogers, G.M. 2003:** The woody vegetation of Central Otago, New Zealand: its present and past distribution and future restoration needs. Science for Conservation 226. 99 p.

**Walker, S.; Price, R.; Rutledge, D. 2005:** New Zealand's remaining indigenous cover: recent changes and biodiversity protection needs. Landcare Research Contract Report: LC0405/038.

**Williams, PA, Wiser S, Clarkson B, Stanley MC 2007:** New Zealand's Historically Rare Terrestrial Ecosystems Set in a Physical and Physiognomic Framework. New Zealand Journal of Ecology 31(2): 119-128

PHOTOGRAPHS



**Photo 1. Looking North into Last Creek at ~ 880m a.s.l. Note outstanding condition of narrow leaved snow tussock grasslands both above and below snow line fence.**

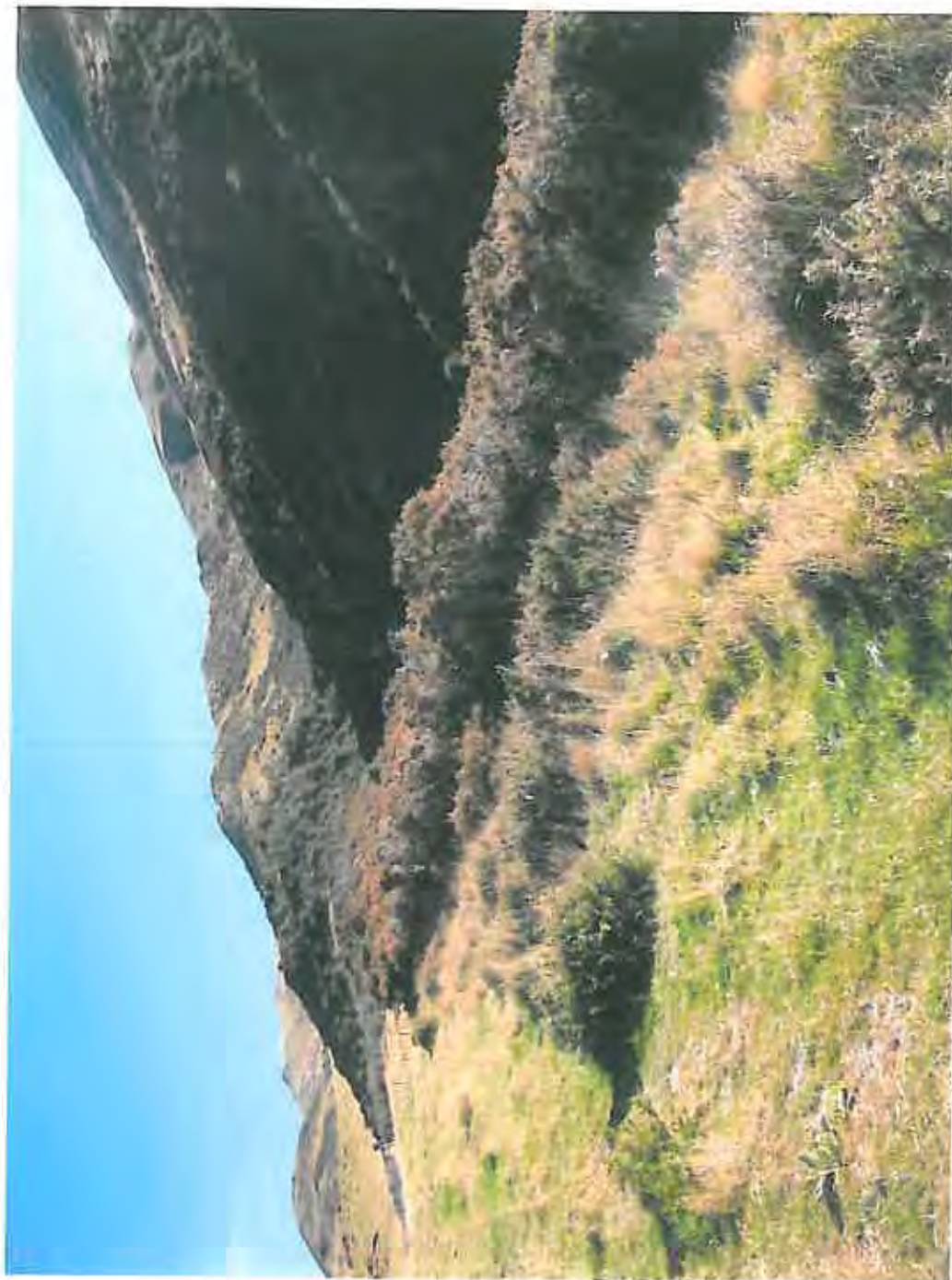


**Photo 2. A relicts Halls totara in Last Creek at ~ 650m a.s.a.l.**



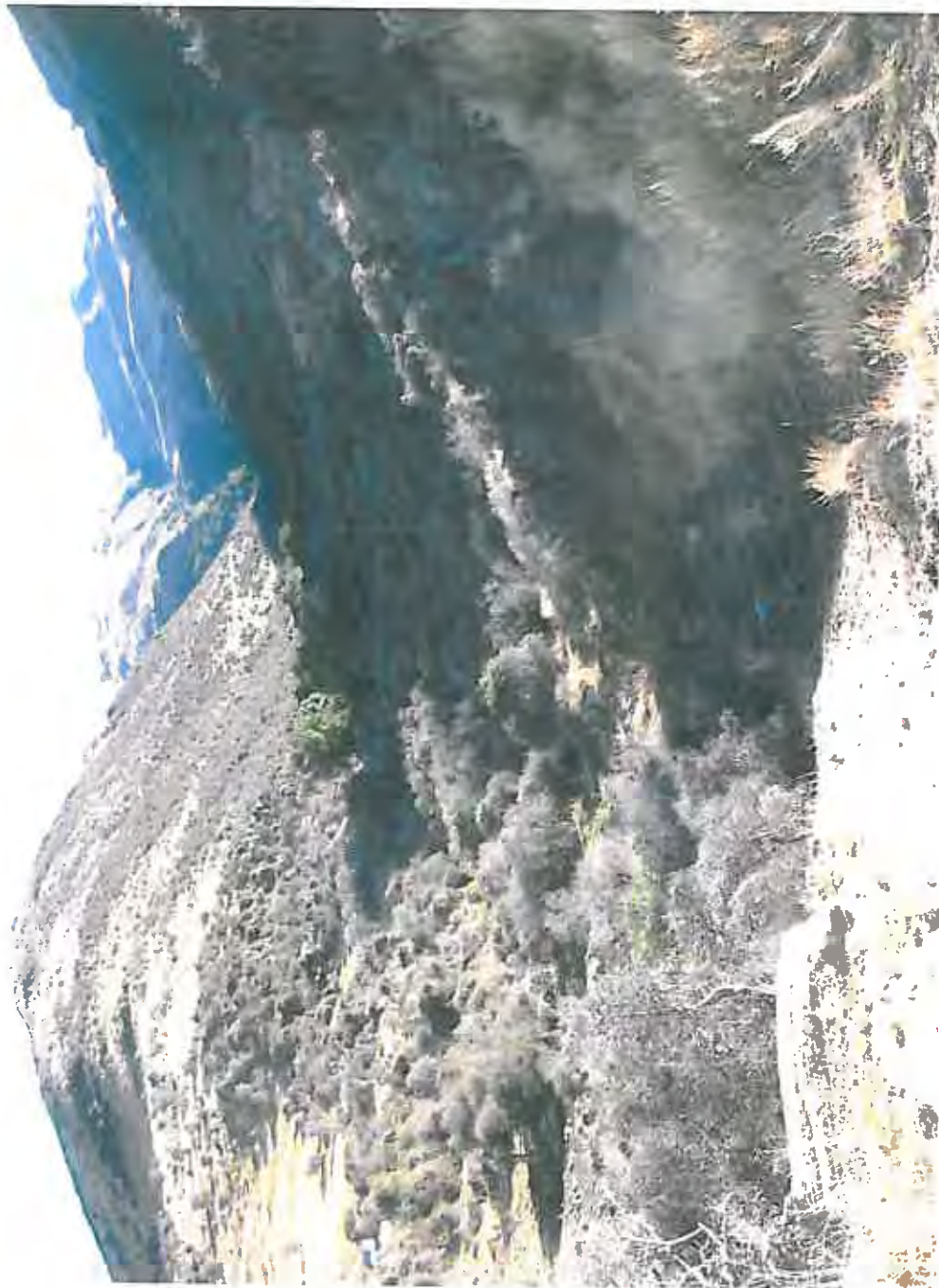


**Photo 3. Narrow leaved snow tussock at 690 m.a.s.l in Last Creek. Mean top height exceeds 1 metre.**



**Photo 4. Sprayed gorse in the Lower most corner of the Last Creek Block**





**Photo 5. Lowermost reach of Last Creek within The Wandle Pastoral Lease**



**Photo 6. Hut Ruin – Lower Last Creek**

## **ADDITIONAL INFORMATION**

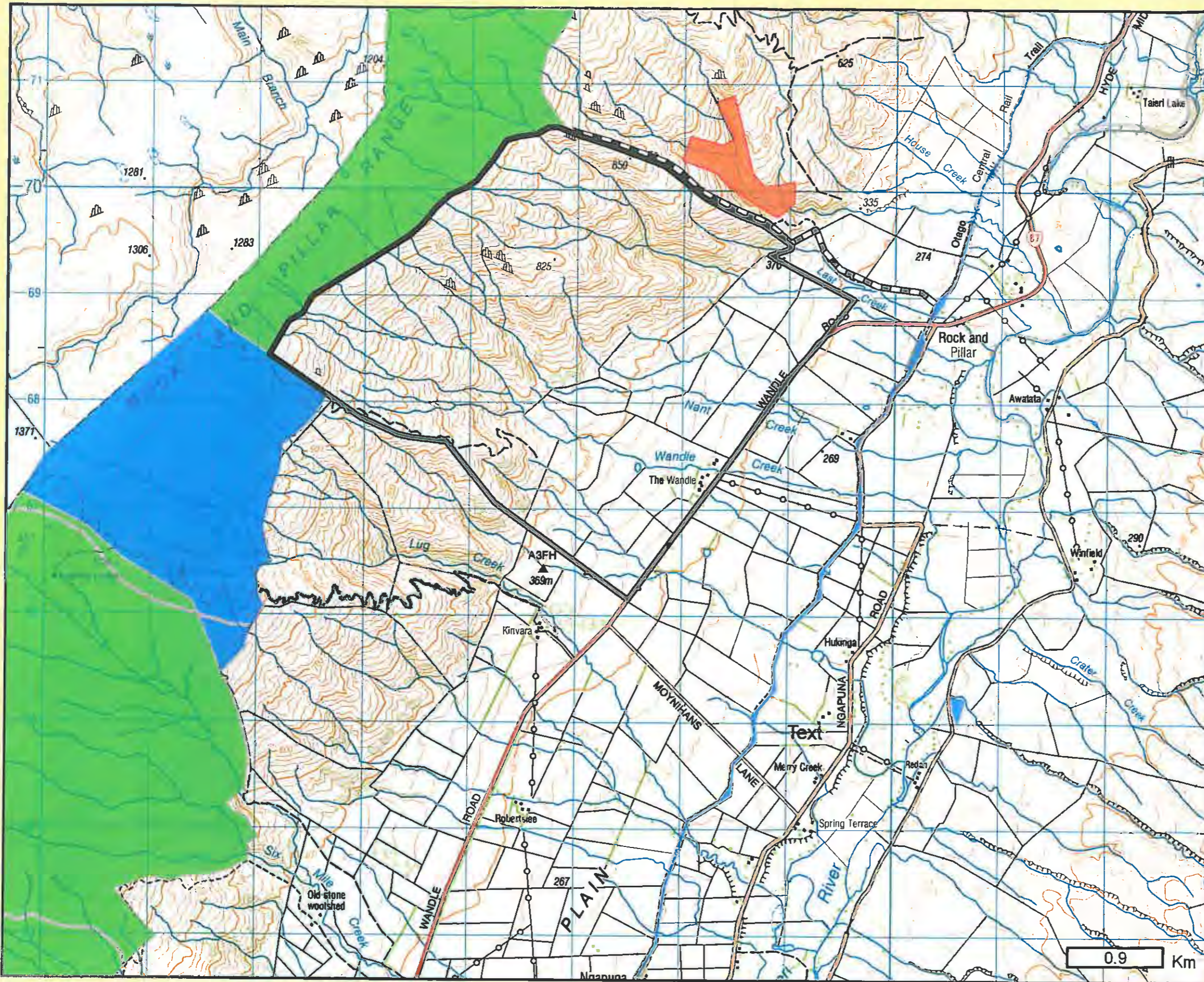
### **Illustrative Maps**

- Map 1. Amended CRR Plan- Ecological, Recreation and Historic Values
- Map 2. Level IV LENZ Environments – Threat Status
- Map 3. Amended Map of Significant Inherent Values

### **Photographs**







### **Appendix – NGO Reports**





**Map.1 Topocadastral**  
The Wandle Pastoral Lease

**Legend**

-  The Wandle Pastoral Lease Boundary
-  Public Access Easement
- Conservation Units**
- Leg\_Code**
-  Stewardship
-  Marginal Strip
-  Reserve
-  Reserves Act Conservation Covenant

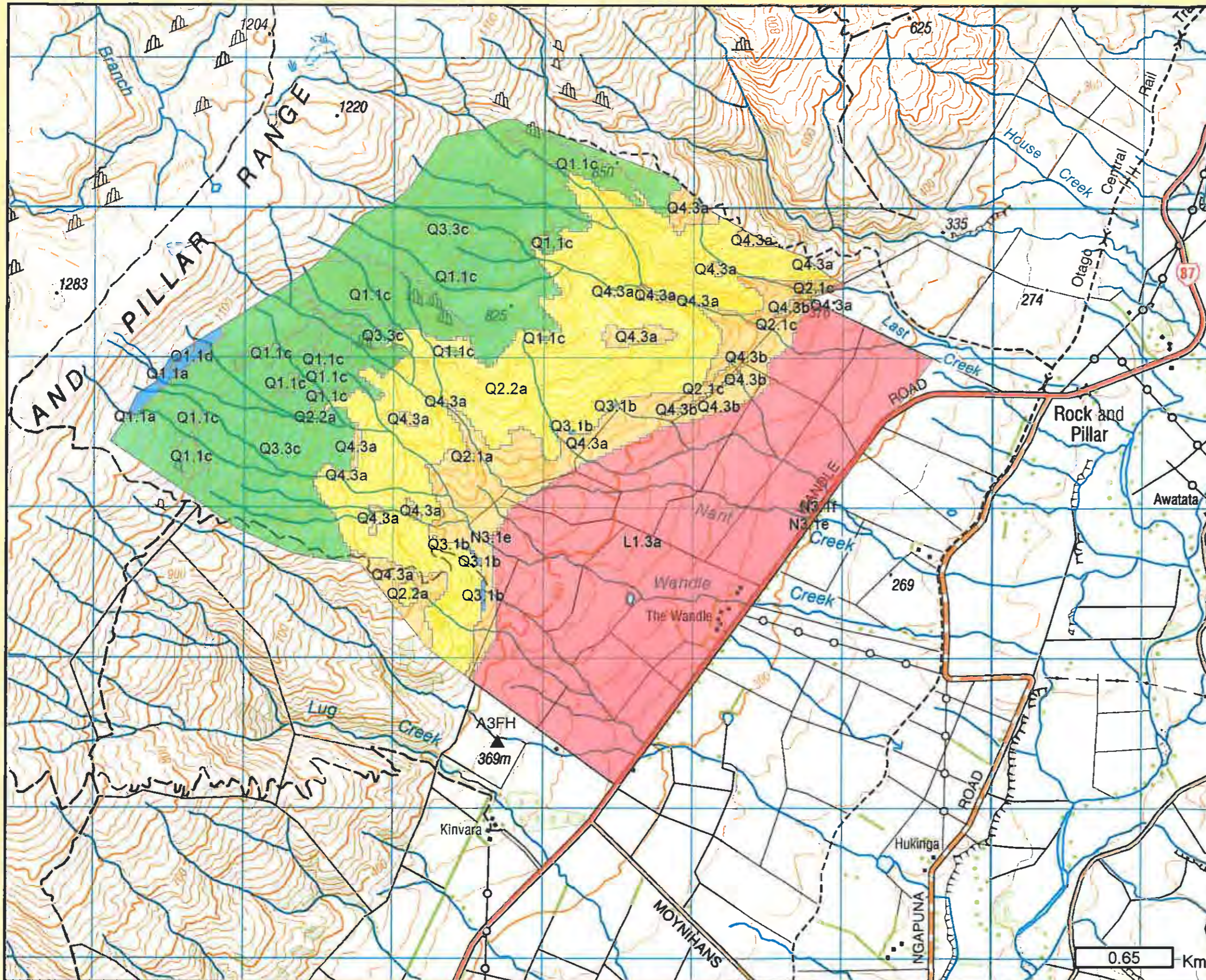


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Date: 19/07/2012



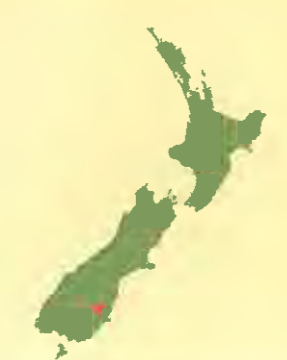
Department of Conservation  
*Te Papa Atawhai*





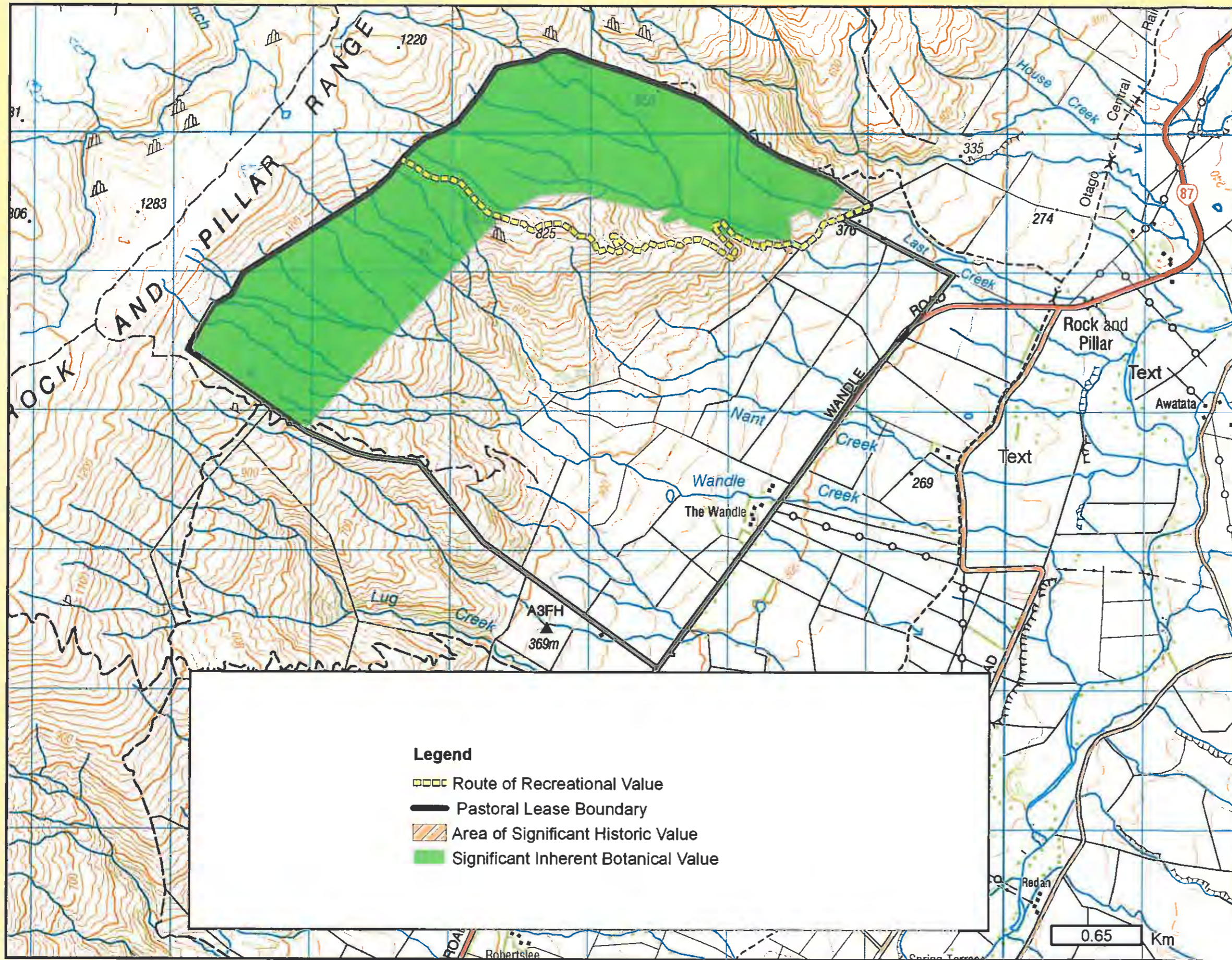
Map 2.  
LENZ Threat Category

- Legend**
- The Wandle LENZ 4 Threats**
- THREAT CATEGORY**
- Acutely Threatened
  - Chronically Threatened
  - At Risk
  - Critically Underprot
  - Underprotected
  - Less Reduced and Better Protected



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 NZGD 2000 New Zealand Transverse Mercator  
 User: Rwardle  
 Date: 25/07/2012





**Map 3**  
**Values - Ecological, Recreational & Historic**



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 NZGD 2000 New Zealand Transverse Mercator  
 User: Rwardle  
 Date: 24/07/2012



**Appendix: NGO Reports**

- (a) A.F Mark**
- (b) Central Otago Recreational Users Forum**
- (c) Forest and Bird Protection Society – Dunedin Branch**
- (d) Federated Mountain Clubs**



**THE WANDLE Pastoral Lease:  
Preliminary Report on its Natural Heritage Values and Recommendations for the  
Outcome of Tenure Review.**

Alan F. Mark, Department of Botany, University of Otago, PO Box 56, Dunedin.

**Introduction.**

This report follows the Early Warning Meeting of September 2011 when its tenure review was introduced, and an on-site visit on April 5 last with three others and with the kind permission of the lessee, Lonestar Farms and their manager, Mr John McLean. Other relevant information consulted includes the Otago CMS (1998), the DOC Conservation Resources Report of 2005 on the property, the Land Use Capability Classification on the property, and also the 1983 Pastoral Lands Assessment Report, Rock and Pillar Range, Otago (with which I was involved). The tenure review will be subject to the Crown Pastoral Land Act 1998.

**The Property.**

The Wandle pastoral lease occupies some 1250 ha north of centre of the south-eastern (scarp) face of the Rock and Pillar Range from the Strath Taieri plain at ~360m up to a boundary at ~1100m, established several years ago as a condition of a Run Management Plan. It is bounded to the north by the Taieri Lake property (which has already completed tenure review) and on the south by the Kinvara Pastoral Lease on the mid-lower slopes (to ~900m), and also by conservation land, part of the Rock and Pillar Conservation Area, above this elevation and also across its upper boundary. The hill slopes of The Wandle form an integral part of the **impressive tussock grassland-tor landscape** of the south-eastern slope of the Rock and Pillar Range, as viewed from the Strath Taieri Plain and surrounding areas, including SH 87.

Above ~900-1000m the changing **soil and climatic conditions** are such that the upper slopes are classified as **Land Use Capability Class VIIe**, implying they have only very limited capacity for sustaining pastoral farming. I note that a CPL Act requirement is to "*promote the management of reviewable land in a way that is ecologically sustainable.*"

Results of the **1983 Clayton Report** implementation: **Pastoral Lands Assessment of the Rock and Pillar Range** (G. Holgate, et al., 1983), recognised, among the three options available, **Potential Reserve** lands along the crest of the range down to an elevation of ~1050m (including The Wandle), but also including an east-west transect across the Range involving Gladbrook and Homestead Runs. Below this elevation were zones classed as **Multiple Use: Range Land**, implying a mix of both pastoral and conservation values, and **Public Lands**. This will be referred to later in this report.

**2012 inspection of The Wandle.**

Given my good knowledge of the property from the southern (Kinvara) end, based on my long-term studies here, including water yield from a range of cover types at three elevations (1000, 1140 and 1340m), it was decided to inspect the northern end, Last Creek catchment, given the impressive information on this area in the Conservation Resources Report. We inspected the lower hill slopes of this catchment on foot before

traversing the 4WD track up the catchment to its limit at ~900m, with frequent stops and inspections along the way.

### **Last Creek Catchment.**

The catchment of Last Creek, which forms the northern boundary of the property, contains a most impressive mix of indigenous communities above the change of slope at ~400m where Last Creek emerges from its gorge. Here there is the remains of an **historic stone building** with impressive intact walls and a dense cover of scrambling native pohuehue (*Muehlenbeckia australis*) across the otherwise, apparently collapsed roof (Fig. 1). According to the property manager, Mr McLean, this was the boundary rider's cottage, close to the boundary between the original Gladbrook and Taieri Lake Runs. As such, it has considerable historical value, either in its present state, or appropriately restored. Surprisingly it doesn't feature in any of the reports on the area. However, this building justifies formal recognition, particularly if it is to be within land to be freeholded. I therefore **recommend** this be achieved with a **Covenant** with conditions which would ensure both its recognition and protection.

The lower, mostly gorged section of Last Creek catchment, up to ~600m, contains a most impressive, closed-canopy **native forest-woodland** (Figs. 2 – 4), of mostly of broadleaf (*Griselinia littoralis*) trees, but with scattered marble leaf (*Carpodetus serratus*) and kowhai (*Sophora microphylla*), and numerous tall shrubs of matagouri (*Discaria toumatou*), *Coprosma propinqua*, *C. rugosa*, *Hebe salicifolia*, *Carmichaelia petriei*, with scattered climbing fuchsia (*F. perscandens*, ranked as Nationally Uncommon), *Muhlenbeckia australis*, *Parsonsia ?heterophylla*, and *Rubus cissoides*. The C.R. Report also lists several other species: *Pittosporum tenuifolium*, *Pseudopanax colensoi*, *Melicope simplex*, *Coprosma ciliata* and *Corokia cotoneasta*, none of which were seen on our visit. Isolated small trees of broadleaf are common as outliers well above the main stands of woodland (Fig. 4), indicating the potential of a much more extensive woodland on these low-mid altitude slopes. Exotic **woody weed species** are virtually absent in this woodland, only one elderberry tree and one gorse bush were seen.

Another most impressive feature of the lower slopes of this catchment is the extensive stands of excellent condition **narrow-leaved snow tussock** (*Chionochloa rigida*) grassland on the south-aspect slopes, down to the edge of the woodland (Figs 2 – 4), and descending as low as 430m (Fig. 2), almost to the developed farmland. Scattered tussocks of **toetoe** (*Cortaderia toetoe*) are prominent among the snow tussocks here and elsewhere.

The near-continuous **snow tussock grassland cover** also extends above the woodland in the mid-upper catchment of Last Creek (Fig3), to provide the dominant cover with scattered shrubs of *Dracophyllum*, *Hebe* and *Ozothamnus* in the subalpine and low-alpine zones Figs. 3, 5, 6a, 6b).

The diverse indigenous cover in the Last Creek catchment clearly justifies **recognition and appropriate protection** as probably the least disturbed, mid-lower catchment, indigenous vegetation on the south-eastern face of the Rock and Pillar Range. An obvious boundary for a protected area on the southern side would be the 4WD access track (Fig. 4) and, towards its upper extent, the fenceline which it crosses, to the upper limit of this block where the 4WD track ends at 890m.. Here it adjoins the deer-proof fence which runs southward along the ~900m contour as far as the Kinvara property

boundary (Fig.7). This access track would provide a fenceable boundary, but an alternative would be the existing fence which runs somewhat to the south of the 4WD track (Fig. 4). This alternative, however, would have implications for available grazing since: 1) the track would be within a protected area, and 2) it would be desirable to remove stock grazing from at least that part of the Last Creek catchment below the track and transfer it to a **conservation area** so as to allow the full potential of the indigenous plant cover to be realised. A poorer alternative would be a fenced formal **covenant** with light grazing of sheep only, without prescribed burning.

#### **The upper slopes: ~900-1100m.**

The **narrow-leaved snow tussock grassland** across the upper slopes of the property between the deer-proof fence at ~900m and the property's upper boundary at ~1100m is in **excellent condition** (as stated in the C.R. Report) and apparently has been unburnt and ungrazed for some time. According to the farm manager, Mr McLean, there are no plans to graze this area in the foreseeable future as it is considered unsuitable for the current farming programme. Indeed, their intention would be to **relinquish the grazing rights** and create a formally protected area. This being the case, I would **strongly recommend** that the lease on this ~300ha area, currently in five fenced blocks, be relinquished and returned to full Crown ownership and control as **conservation land**. Not only would this allow the lower boundary of the conservation area on this part of the Range to coincide with the existing lower boundary to the south, above the Kinvara property, but it would also provide a very **important water supply area** for the many uses (irrigation and other) now being sought downstream. Results from our **water yield studies** at a similar elevation on the adjoining Kinvara property, would indicate that mean annual yields of 61-63% of the mean annual precipitation of 1260-1500mm could be expected from the existing snow tussock cover, which is significantly more than would be yielded from any alternative cover: recently burned or heavily grazed snow tussock, blue tussock (*Poa colensoi*), or even bare soil (Holdsworth & Mark 1990; Mark & Dickinson 2008).

I was impressed with the relatively minor role of exotic weed species on the areas inspected, a value also noted in the CR Report.

#### **Freehold disposal.**

I would not object to the **freeholding** of the ~700ha of land below the ~900m fenceline and outside the Last Creek catchment. However, the overall **very high landscape value** of the hill slopes on The Wandle is also a **very important heritage** and this should be retained, in future, as part of the overall unique natural landscape value of the seaward slopes of the Rock and Pillar Range (recognised as an "**Outstanding Landscape Area**" in the Dunedin City District Plan. To ensure this landscape value is retained on The Wandle I **strongly recommend** a formal **Landscape Covenant** which would not allow exotic forestry, cultivation, buildings or further tracking above ~500m and only exceptional early spring burning up to ~750m elevation, to be followed by at least two seasons spelling areas of snow tussock grassland from grazing, to provide for its recovery (Mark 1994).



### Access.

The securing of public access to .... reviewable land is a requirement of the CPL Act 1998 which would thus apply to tenure review of The Wandle pastoral lease. Although formal public walking access (and discretionary 4WD vehicle access) is already available through the **Kinvara** property to the south on to the crest of the Rock and Pillar Range and from there, north along its crest, where it intersects similar access easement through the **Taieri Lake** property to the conservation area above, these are considered **inadequate** for **public access** in to the **Last Creek** catchment of The Wandle where there is an important altitudinal sequence of native vegetation. This sequence begins at the edge of the Strath Taieri farmland, where there is an historic boundary-rider's stone hut, and continues on to the upper slopes of the Range, to ~900m where, desirably, it would provide access to the lower boundary of a future conservation area, as described and **recommended** above. **Public access** up this **existing 4WD track** would be most desirable and is **strongly recommended**, as well as **across the downland** from the highway, via an easement defined within the flood plain of Last Creek, or alternatively across the Taieri Lake property, although this would require a bridge across the creek on to its true right side to access the existing 4WD track.

### Other relevant information.

The **1983 Pastoral Lands Assessment Report, Rock and Pillar Range** by G. Holgate, et al. included separate maps indicating **Recreation** (Map 3A) and **Conservation** (3B) values, as well as a final **Recommendation** Map (4), all of which showed a lower elevation limit on The Wandle of 3100ft (940m) at its south end running up to 3600ft (1070m) in the north (Fig. 8). Although this is a fairly generalised map it is indicative of considerations of the time, when conservation values were less appreciated than to-day.

The current **Otago Conservation Management Strategy** (1998), with which I was involved as Chair of the Conservation Board, is more relevant to contemporary attitudes. The CMS identifies the Rock and Pillar Range as one of the 41 Special Places (No 15: H43 054), with specific objectives stated as: *"To nurture and encourage study of the natural processes to allow healing of the vegetation after grazing and fire and to improve landscape values. To continue to document the values and permit research where it will lead to conservation benefits. In the case of the Rock and Pillar range, to extend the protected area along the summit and to take in altitudinal sequences and secure access where opportunities arise."* In terms of "Implementation" it states: *"Pastoral lease tenure review on properties on the Rock and Pillar Range will provide opportunities to achieve protection of areas of significant landscape, scientific, natural and historic resource and recreational value. ... Management of contiguous areas will be integrated and public awareness developed through the concept of a Rock and Pillar Conservation Park."* In terms of "Priorities" it states: *"Negotiation, principally through pastoral lease tenure review, of an extended protected area along the crest of the Rock and Pillar Range will be a priority in this Special Place."*

### Conclusion.

Tenure review of The Wandle P. L. provides an important opportunity to further the implementation of the Otago Conservation Management Strategy, and acceptance and implementation of the recommendations contained in this report would clearly be consistent with advancing the purpose of the Otago CMS. I therefore trust that this report will be given serious consideration in planning for the tenure review of The Wandle Pastoral Lease.

Sincerely,

Alan F. Mark. FRSNZ, KNZM. Emeritus Professor.

**References:**

- Holdsworth, DK., Mark, AF. 1990. Water and nutrient input:output budgets: Effects of plant cover at seven sites in upland snow tussock grasslands of eastern and Central Otago. *J. Royal Soc. N.Z.* 20: 1-24.
- Mark, AF. 1994. Effects of burning and grazing on sustainable utilization of upland snow tussock (*Chionochloa* spp.) rangelands for pastoralism in South Island, New Zealand. *Aust. J. Botany* 42: 149-61.
- Mark, AF., Dickinson, KJM. Maximizing water yield with indigenous non-forest vegetation: a New Zealand perspective. *Frontiers in Ecology and the Environment* 6: 25-34.



Fig. 1. View up Last Creek showing the historic boundary-rider's stone cottage at ~400m just beyond the mouth of lower gorge. Although the walls are intact there is a dense cover of climbing Pohuehue (*Muehlenbeckia australis*) over the collapsed roof.

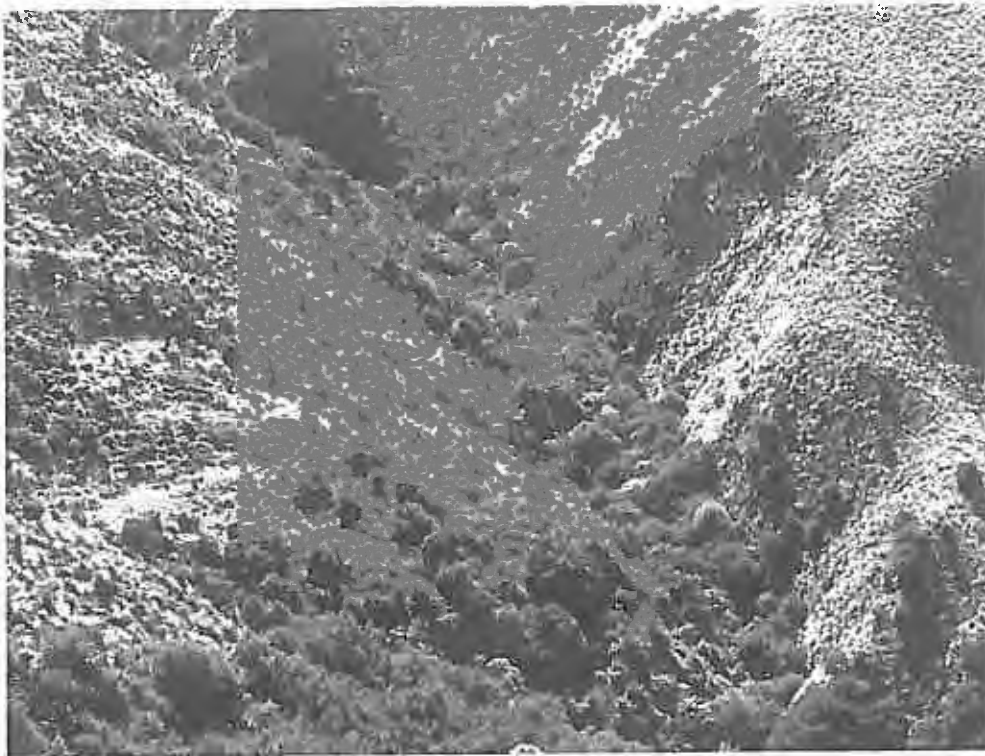


Fig.2. Lower reaches of the Last Creek catchment, viewed from the 4WD track at ~550m, showing broadleaf-dominated forest in the gully and extending up the slope in the foreground with mixed shrubland and snow tussock on the north-aspect slope (left) and snow tussock dominating the south slope(right), with occasional outliers of small broadleaf. Trees with pale canopies in the gully are mostly marble leaf.



Fig. 3. View up the mid reaches of Last Creek catchment showing the upper limit of the main forest (mostly broadleaf) stand at ~600m, with mixed shrub-snow tussock beyond, grading into pure snow tussock grassland in excellent condition on the upper slopes.



Fig. 4. View down Last Creek from ~580m showing the mixed shrub-tussock above the valley woodland, with scattered outliers of broadleaf trees (centre), extending almost to the 4WD track. Silver tussock (*Poa cita*) dominates the drier sunny slope in the foreground. A fence to protect this area of native plant communities could be erected on the lower side of the track or the existing fence up the spur at the right might be preferred. Either way, a public walking access easement up this track would be most desirable.



**Fig. 5. View north across the mid-upper reaches of the Last Creek catchment from the 4WD track at ~650m, showing the generally dense and healthy cover of narrow-leaved snow tussock throughout the subalpine and low-alpine grassland here.**



Fig. 6a, b. Two views of upper Last Creek from ~900m, showing dense narrow-leaved snow tussock low-alpine grassland in excellent condition throughout, and the impressive tor-studded, tussockland landscape, typical of the property.



**Fig. 7. View southwest along the upper slopes of The Wandle from near the end of the 4WD track at 890m, showing the deer-proof fence (right) running along the contour (to the property boundary with the Kinvara Run in the left distance) and the excellent condition narrow-leaved snow tussock low-alpine grassland on both sides of the fence and generally along this slope.**

**Fig. 8. Map 4, of the 1983 Pastoral Lands Assessment Report, Rock and Pillar Range, Otago, showing areas recommended for formal protection on The Wandle and adjoining properties. [to be added].**





## CENTRAL OTAGO RECREATIONAL USERS FORUM

186 Faulks Road,  
RD 2,  
Wanaka 9382.  
23 April 2012

Tony Perrett  
High Country Tenure Review Manager  
Department of Conservation,  
PO Box 5244  
DUNEDIN

Dear Tony

### **Tenure Review Report: The Wandle, Lease PO 328**

CORUF thanks you for the opportunity to comment on this Lease.

One of our committee visited the lease by permission of the Lessee, and has contributed to this report.

We have the following comments to make on behalf of CORUF, and hope that they are helpful to you.

Jan Kelly  
Secretary  
Central Otago Recreational Users Forum.

## **THE WANDLE, Lease PO 328.**

### **A. NATURAL LANDSCAPE**

1. CORUF recommends that the upland portion of this lease becomes a Conservation Area, "filling in" between Rock and Pillar conservation area to the north, and Rock and Pillar Scenic Reserve to the south, at about the same altitude as the lower boundary of the latter.
2. That is from about 850-900m upwards.
3. The landscape at this altitude is so attractive and so coherent that it is important that it becomes an integral part of the conserved land on this eastern edge of the Rock & Pillar summit.
4. The photo below, taken at 825 m, indicates that at this altitude there is no clear division on the slope in terms of intrinsic quality. Because the change to pasture is gradual, the dividing off of conservation land could well be made on a slope-by-slope basis, to prevent the creation of hard lines across a landscape that at present doesn't have them



*Photo: S. Stevens*

### **B. ALTITUDINAL SEQUENCE**

5. We recommend that the gully at the northern end of the lease, the Last Creek, has sufficiently interesting natural values to represent an altitudinal sequence on the face of the Rock & Pillar. The CRR report, and those who visited the site, report good native shrubland in the lower gully of this creek.
6. It would seem reasonable to recommend that an effective conservation covenant, at least, is placed over this gully.

### **C. ACCESS**

- 7. There is a substantial access route just south of the lease, by Kinvara Track to Rock & Pillar Scenic Reserve. It is a long, tight zigzag.**
- 8. North of The Wandle boundary fence, a walking track rises up through Taieri Lake Station. Should this be developed, as the CRR says it will, this would be most acceptable access on this face of the range.**
- 9. Our members prefer**

**(a) a round trip rather than a one-way trip. To go up the range by Taieri Lake Walking Track, and descend by Kinvara Track, traversing the crest in between, would be a most satisfyingly long day.**

**Alternatively one could rise up on one of the farm tracks on the lease, and come down by either by Taieri Lake Station track or by Kinvara Track, shortening the route but maintaining the idea of circuit. We note a well-defined track on the ridge just south of Last Creek that could link to the conservation land above, and allow a day trip on foot.**

**Similarly there is one on the last ridge southward, just inside the Wandle boundary fence.**

**(b) a route where in at least one instance they can gain some altitude by vehicle. This option allows for recreationists who are not fit enough, or are elderly, or are children, to access Conservation Land from time to time, where the land is generally steep and the elevation to be gained is considerable.**

**The driving route already established up Kinvara Track to the Scenic Reserve satisfies this requirement. Being able to take a vehicle, (by arrangement) creates safety, in that members of the public who are not physically capable can not only get up to conservation land, they can get out again in safety should the weather deteriorate.**

**(c) a route whereby hunters can get their dogs and guns to the start of a hunting block, by permission of the landowner, using a route that is not prohibited to them by the terms of an Easement.**

- 10. We are pleased to see this part of the 'jigsaw puzzle' of pieces that make up conservation land on the Rock & Pillar coming into the pattern, and express the hope that Rock & Pillar Conservation Park will become a reality at some time.**

**Thank you for the opportunity to comment.**

**Jan Kelly,**

**Secretary**

**CORUF**





## THE WANDLE

### **Preliminary Report on the Conservation, Recreation and Historic Values and Recommendations for the Outcome of Tenure Review.**

This submission is written on behalf of the **Dunedin Branch of the Royal Forest and Bird Protection Society** which has approximately 1100 members with strong interests in botany and natural history in general and in the High Country. 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.

In making these recommendations we are mindful of the fact that under the CPLA Section 24 (b), significant inherent values must be protected by the creation of protective mechanisms (e.g. conservation covenants) with a preference to return to full Crown ownership and control.

This submission is made on the basis of an inspection trip in April 2012 and some knowledge of the area gained during frequent visits to the adjoining land on Rock and Pillar over many years.

We have also consulted the Conservation Resources Report (CRR) dated 2005, and the Conservation Management Strategy (CMS) for Otago.

#### **Introduction**

The Wandle lease on the eastern side of the Rock and Pillar Range covers an area of approximately 1262ha and originally extended up to approximately 1200m. It lies towards the northern end of the range 15km beyond Middlemarch with Taieri Lake on its northern boundary and Kinvara on the southern boundary. The land above the about the 1100m contour and the top of the range has already been surrendered and is a part of the Rock and Pillar Conservation Area. The Wandle hill slopes are very much part of the wider Rock and Pillar landscape as viewed from SH87 and indeed the Strath Taieri Plain.

The soils on the steep slopes of both branches of Last Creek are Classified LUC Class VIIe due to their potential for erosion. Above about 1,000m the soils are also classified LUC Class VIIe, thus both these areas are unable to support pastoral use in a way that is ecologically sustainable. On the other hand up to about 900m the balance of the lease is designated as LUC Class IV and VI and therefore should be capable of fulfilling the requirement to "*promote the management of reviewable land in a way that is ecologically sustainable*". This land should therefore be suitable for freehold disposal.

#### **Significant inherent values on the lease.**

There are two main areas on the lease containing very significant inherent values worthy of protection, the **extensive snow tussock grassland extending down to the 900m contour** (and indeed below that at the northern end of the lease) and the Last Creek and its catchment.

### **1. Snow tussock between approximately 900m and the current top boundary at about 1100m.**

We note that the area of The Wandle lease above approx. 1100m has already been surrendered and is part of the Rock and Pillar Conservation Area. The area above 900m is high quality tall snow tussock with rich inter-tussock species and is well described in the 2005 CRR. With a soil classification of VIIe it is not capable of supporting sustainable pastoral use. We understand that the lessees may not be opposed to surrendering this area as it is of little use to them for grazing. We would fully endorse this suggestion. It would then take the Conservation Area down to a level of that on the adjoining Kinvara lease and can certainly be justified in terms of water conservation, very important in this type of country, and for the biodiversity present.

**We note that access provisions already in place following the Taieri Lake review would provide for public access to this land.**

### **2. Last Creek Conservation Area (Figure 4-11)**

Last Creek with its significant diverse shrubland, low treeland and the tussock tongues extending from the ridge down to the trees on the true left has a number of significant inherent values both in terms of vegetation, water conservation and landscape. It is an incised Creek close to the northern boundary of the lease and supports important diverse native shrublands. The shrubland cover extends up from about 400 m just above the point where there is the remains of an old boundary riders hut. At this point it is possible to walk up the Creek for some distance. On just a short walk we noted *Coprosma propinqua*, *C. rugosa*, matagouri, bush lawyer – *Rubus cissoides*, *Carmichaelia petriei*, broadleaf, *Muehlenbeckia australis*, the climbing tree fuschia - *Fuchsia perscandens* (nationally uncommon) and a profusion of *Parsonsia*. Cattle are currently in the area and there is some pugging at the edge of the Creek. We noted a that were good numbers of small native birds around the shrubs and trees.

Further up kowhai, marbleleaf, koromiko and even more broadleaf (some quite tall) were seen. The Creek branches to the north higher up and the branch similarly supports the same cover of vegetation.

The CRR dated 2005 description of the vegetation in Last Creek states - "*The mid and lower sections of Last Creek contain significant shrubland and low treeland. At the upper limit of this continuous vegetation zone (approx. 600 metres asl) scattered trees of broadleaf and marbleleaf are surrounded by a low shrubland of matagouri, Coprosma rugosa, C. ciliata, Carmichaelia and koromiko.*

*In the lower reaches, tall broadleaf trees in association with occasional kohuhu and five-finger form a narrow band over topping the creek bed. Adjoining this on both sides of the creek is a dense shrubland dominated by matagouri and coprosma and but also including Corokia cotoneaster and Melicope simplex. Pohuehue (Muehlenbeckia australis), the climbing fuchsia (Fuchsia perscandens) [which is nationally uncommon] and bush lawyer are common throughout. At least two kowhai trees are present on slopes above the main shrub concentration."*

The upper catchment of Last Creek above the shrub and tree line has a healthy tall snow tussock component and some wet flush areas, obviously important for water conservation and in maintaining the integrity of the Creek and the vegetation surrounding it.

### **Recommendation**

**The desired outcome for protection of Last Creek and its catchment would be to designate it as Conservation Area, ideally bounded to the south by the fence adjoining the 4WD track and running up to about 890m where it meets a further deer fence running east along the Range, or by a new fence at the 4WD track road line.**

**We believe that ideally all stock, certainly cattle, should be excluded from the Last Creek shrublands and the Creek itself.**

We believe that the CPL Act clause "*S24 (b) (ii) To enable the protection of significant inherent values of reviewable land (preferably) by the restoration of the land concerned to full Crown ownership and control*" should be applied here as use of a Covenant for protection would not secure public access as of right and we submit that the public should be allowed to enjoy the botanical values and environment in the lower reaches above 400m through to the upper catchment.

In discussion with the Manager, John McLean it seemed likely that retaining the grazing adjoining the 4WD track up would be desirable for them.

**A compromise might be to allow sheep grazing only, at a specified stocking level, but to exclude cattle as a means of protecting the Creek and its environment.**

#### **Access**

**A 'walking only' easement along the true right of Last Creek from where the public access track on Taieri Lake comes from the SH to a point opposite the site of the old boundary riders hut would allow people to enjoy and botanise the lower reaches of the Creek.**

**We note that access provisions already in place following the Taieri Lake review would provide for access to the upper reaches of the Creek and the catchment above.**

**We also would advocate for provision for an enjoyable day walk for both trampers, botanical trampers and those interested in the birdlife of the the Last Creek shrublands. This would be possible by starting from the Taieri Lake access from the rail trail close to where the trail crosses the SH north of Last Creek bridge and then crossing the Creek opposite the old hut ruin and walking up either on the 4WD track or partially up the Creek itself. An enjoyable day could then be completed by crossing over to the Taieri Lake access track higher up and concluding a round trip with wonderful views across the Strath Taieri on the descent..**

Last Creek is an area that deserves to be accessible for public enjoyment as specified in one of the objectives of the CPL Act *S24 (c) (i) The securing of public access to and enjoyment of reviewable land*

#### **Landscape**

The lease has high landscape values both as an integral part of the eastern side of the Rock and Pillar Range (Figures 1,2) all of which (according to the 2005 CRR) were included in the proposed Dunedin City District Plan "Outstanding Landscape Areas".

**While we have no objection to freeholding of the land below 900m with the exception of that we have proposed above for a 'Last Creek Conservation Area' we do feel that there should be a landscape covenant which would not allow burning, erection of buildings, cultivation and new tracking above about 500m.**

As we have already stated, The Wandle hill slopes are very much part of the wider Rock and Pillar 'outstanding' landscape as viewed from SH87 and indeed the Strath Taieri Plain.

General comment on access and recreation values.

#### **Historical SIV's**

The only item of historical importance that we are aware of is the remains of an old boundary riders hut (Figure 30 close to Last Creek just before the 4WD track starts to climb up the hill., used to patrol the boundary between the original Taieri Lake and Gladbrook runs. It still has substantial walls – and a solid creeper roof of *Muehlenbeckia*. There were cattle nearby and signs they had been



close to the hut. We believe it should at least be fenced off to prevent accidental damage to the remaining structure.

**This structure is worthy of some recognition and restoration/protection by covenant.**

### **Otago CMS**

WE note that the Rock and Pillar Range is identified in the Otago CMS as one of the 41 Special Places. Specific objectives for Rock and Pillar are : *“To nurture and encourage study of the natural processes to allow healing of the vegetation after grazing and fire and to improve landscape values. To continue to document the values and permit research where it will lead to conservation benefits. In the case of the Rock and Pillar range, to extend the protected area along the summit and to take in altitudinal sequences and secure access where opportunities arise.”* The CMS also states: *“Pastoral lease tenure review on properties on the Rock and Pillar Range will provide opportunities to achieve protection of areas of significant landscape, scientific, natural and historic resource and recreational value. ... Management of contiguous areas will be integrated and public awareness developed through the concept of a Rock and Pillar Conservation Park.”* *“Negotiation, principally through pastoral lease tenure review, of an extended protected area along the crest of the Rock and Pillar Range will be a priority in this Special Place.”*

### **Acknowledgements**

We wish to thank Lonestar Farms for permission to inspect the lease and also to thank the manager John McLean for facilitating this and for discussion with us.

Janet Ledingham

For the Dunedin Branch of Forest and Bird  
PO Box 5793, Dunedin. 9010

April, 2012

## Figures



**Figure 1.** View from the access track on Taieri Lake 100m along the rail trail north of the Last Creek bridge. The green paddocks in the foreground are on Taieri Lake. Last Creek Valley, on The Wandle is just to left of centre. Typical eastern Rock and Pillar landscape. The Taieri Lake track up to the tops appears to go up the ridge at right of the picture.



**Figure 2.** Looking into Last Creek. The start of the 4WD track up the ridge is seen at left.



**Figure 3.** The old boundary riders hut close to the Creek at the base of the slope. There are signs of cattle grazing around it – it should have some protection to prevent accidental damage from them.



**Figure 4.** Looking up the Creek at the diverse shrubland from near the old hut.



**Figure 5.** At about 600m looking up towards the eastern fork of the Creek



**Figure 6.** The junction of the two main branches of Last Creek. Healthy snow tussock cover above.



**Figure 7.** Looking downstream to where the top fork of the Creek comes in.



**Figure 8.** A wonderful expanse of snow tussock looking up from the top fence at about 900m.



**Figure 9.** View from the end of the track at the fence around 900m. Typical Rock and Pillar tors on the right ridge and vigorous snow tussock to the left.



**Figure 10.** Looking south along the range from the 900m fence.





**Figure 11.** Looking back down to the plain. Note the tussock dipping down to the bushlines on the true left of Last Creek.

**PRELIMINARY REPORT ON THE RECREATIONAL, LANDSCAPE, HISTORIC  
AND OTHER CONSERVATION VALUES, AND RECOMMENDATIONS  
FOR THE OUTCOMES OF TENURE REVIEW ON THE WANDLE**

**A Report for FMC based on Field Inspections and other research  
to assist in the Crown Pastoral Lease Tenure Review Process**

**April 2012**

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## LIST OF FIGURES

Fig. 1 The Wandle once stretched from the floor of the Strath Taieri to the crest of the Rock and Pillar Range (1283m). Some 300ha were retired as part of a government assisted 'Run Plan' some years ago. Its back boundary is now at approximately 1,100m but the entire face still has important landscape values which should be protected under Covenant, from inappropriate subdivision, use or development.

Fig. 2 The property includes between 200 and 300ha of paddocks and downland at the foot of the Rock and Pillar Range. The face of the Range includes some deeply incised gullies, like Last Creek (on the left) which provide shelter for important biodiversity including coastal broadleaf forest remnants, and shrublands.

Fig. 3 Looking down the Last Creek gully to the Strath Taieri Plain. On the spur to the right of the gully can be seen a 4WD track which provides fine views into the forest and shrubland below, and could also provide a walking track to enable a fine round trip in conjunction with the Kinvara Track (to the south, or the new public access route on Taieri Lake to the north).

Fig. 4 Last Creek gully is a refuge for a significant remnant of coastal broadleaf forest, which also contains a wide biodiversity of shrubs and climbing plants such as the nationally uncommon climbing fuchsia (*Fuchsia perscandens*). There are also extensive tall tussockgrasslands above the gully which are in excellent condition. All these features should be protected by return to full Crown ownership and control.

Fig. 5 There is an historic building near the bottom of Last Creek gully. The very solid walls of this little old cottage remain intact but the building is smothered in Muehlenbeckia. It is understood to have been the boundary rider's cottage when there was no physical boundary between the original Taieri Lake and Gladbrook runs. If this location becomes freehold, the building should be protected under covenant to ensure its protection and maintenance.

Fig. 6 The outstanding example of forest remnant and surrounding shrubland in Last Creek should be protected by return to full Crown ownership and control to be managed for conservation and recreation. The value of this feature lies not only in its important biodiversity, but also in its association with the snow tussock grassland, which is in excellent condition, and with the tor-studded landscape above the confines of the gully. This view is from about 580m showing the Last Creek forks at 500m.

Fig. 7 This view down the spur on the true right of Last Creek shows both the 4WD track, branching left, and the existing fenceline running over the crest of the spur. Either one could become the boundary of the proposed Conservation area, and if the existing fence was utilised it would avoid the cost of building a new one. This choice could however, lead to the loss of some 100ha of good downland grazing land from the new freehold area.

Fig. 8 This view shows the existing fence which runs very close to the track at about 600m, so at this point the choice between the existing fence and a new fence beside the track would have the same end result.

Fig. 9 The tall tussock and tor-studded landscape at the head of Last Creek are a perfect complement to the forest and shrubland biodiversity in the lower part of the catchment. Here Sir Alan Mark is capturing an image of the landscape with which he was greatly impressed and also believes it should be

protected as a new Conservation Area. The gate is at 890m, at the start of a deer fence which traverses the face to the Kinvara boundary.

Fig. 10 A good example of tall snow tussock grassland in good condition with Gentians among the more attractive plants in the inter-tussock vegetation. Such associations have botanical value and are also important for members of the public visiting new Conservation Areas.

Fig. 11 The deer fence which traverses the Rock and Pillar face of The Wandle between about 900 and 1,000m. It meets the boundary below the 1,000m contour near the retirement fence on Kinvara. This ensures a smooth landscape line across both properties. The Wandle Manager has indicated that he would not be opposed to the designation of the land above this fence (between about 900 and 1,100m) as Conservation land.

Fig.12 Access to the Rock and Pillar Conservation Area is also available from the Rail Trail and over an easement on Taieri Lake. Car parking might be available by the Rail Trail and the Taieri Lake easement would provide access to the proposed Conservation Area in the Last Creek gully, which can be seen directly above the stile in this picture.

## **INTRODUCTION**

This report has been prepared following the Early Warning Meeting in September 2011 at which the properties entering the tenure review process in 2011 were introduced. An inspection of The Wandle pastoral lease was carried out by the author of this report in April 2012, with the kind permission and co-operation of the lessee, Lonestar Farms Ltd. and their on-site manager John McLean. This report is based on that inspection and other material listed below. The report is offered as a contribution to the statutory consultation process undertaken by the Department of Conservation.

The Wandle had been under tenure review in 1998, but only a very brief set of recommendations were submitted by FMC at that time (See Appendix 1).

The purpose of this (2012) report is to identify those features, resources and characteristics of this pastoral lease property which are relevant to tenure review and are important from a recreation and conservation perspective. The report will include an examination of the key issues and why they are considered important. The rationale underlying decisions related to the Crown Pastoral Land (CPL) Act, future land tenure, protection of natural, landscape and historic values, and public access will be discussed. The final section of the report will deal with these issues and the recommended outcomes for the tenure review The Wandle from a recreation and conservation perspective.

The Wandle (Po 328) is a small pastoral lease of rather less than its original 1,482ha, due to the retirement of some 300ha of land above about 1100m some years ago as one of the conditions of a "Run Plan" (Fig. 1). It had formerly stretched from the valley floor to the crest of the Rock and Pillar Range at about 1,200m. That top block included a section of the Sow Burn water race which fed the gold workings at Hyde.

This report focuses on those features of The Wandle which are important for public recreational interests. It should be noted that while some of this interest focuses on access the natural values and landscapes of the place 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 made to these values in this report.

The south eastern, scarp face of the Rock and Pillar Range dominates the landscape above Middlemarch and the Strath Taieri so it is important that the retirement fence is carefully located. It is also important that the natural values and landscape of the mountain range are protected from the adverse effects of future inappropriate developments.

## **METHODS OF SURVEY AND ASSESSMENT**

This report is based on the author's April 2012 field inspection and, in part on information gathered from other sources. These include studies of topographical and Land Use Capability (LUC) maps, consultation with recreational user groups and a knowledge of the landscape seen from highway SH 87 through the Strath Taieri.

A study of "Outdoor Recreation in Otago" was undertaken by Mason (1988) and published by FMC. Reference is made below to this Recreation Plan for Otago. The 1998 Otago Conservation Management Strategy (CMS) and the DOC Conservation Resources Report (CRR) have also been used as a sources of reference.

## **GENERAL DESCRIPTION OF THE WANDLE**

The Wandle pastoral lease (Po 328) now only covers about 1,100ha on the scarp face of the Rock and Pillar range and includes some 300ha of paddocks and downland between 300 and 400m (Fig. 2) adjacent to Wandle Road. (SH 87).

*Mason (1998) has described the Rock and Pillar Range as follows:- " The Rock and Pillar Range is the easternmost Central Otago range, being a fault-bound block mountain. The Hyde Fault forms the boundaiy between the moderately steep eastern escarpment and the Strath Taieri basin. The western back-slope is gentle but considerably dissected at lower elevations above the Maniototo basin. The broad, gently rounded range crests average 1,370 m above sea level, with the summit at 1450 m. This is notably lower than other Otago block mountains.*

*Clusters of shaft and block tors of schist bedrock litter summit crests in random fashion (Fig. 1): 'Stonehenge' and 'Castle Rock' are among the more spectacular and better known examples. Small nivation cirques (caused by snow-patch erosion) developed along the lip of the leeward scarp during the Pleistocene, leaving short, steep headwall faces. Periglacial patterned ground features include earth hummocks, miniature stone stripes and nets, solifluction terraces and sliding boulders."*

Most of the higher altitude features of the Rock and Pillar Range described by Mason and the western back-slope are absent from The Wandle as this property now only extends up to about 1100m on the eastern scarp face.

The Wandle is bounded by Taieri Lake to the north and Kinvara to the south. There is good public access to the crest of the Rock and Pillar Range up the Kinvara Track but public access via the track on the true right of Last Creek (on The Wandle) would provide not only access to the important native forest and shrubland in the Last Creek gorge, but also enable a round trip in conjunction with the Kinvara Track (Fig. 3).

The valley floor and downlands of The Wandle are characterized by fertile alluvial soils and Blackstone Hill Yellow Grey Earths classified Land Use Capability (LUC) Class IV and VI respectively (Fif. 2). The soils on the steep slopes of both branches of Last Creek (Fig. 3) are Classified LUC Class VIIe due to their potential for erosion. Above about 1,000m the Carrick Hill, High Country Yellow Brown Earth soils are also classified LUC Class VIIe. It would therefore appear that almost all the residual part of the lease (below about 900m) should be capable of supporting ecologically sustainable pastoral use. The only exceptions would be the steep valley sides of Last Creek.

## **RECREATIONAL ACTIVITIES AND POTENTIAL**

Mason (1988) has written extensively about winter recreation on the Rock and Pillar Range starting from the 1930s when the Otago Ski Club was formed and made good use the range because of its proximity to Dunedin. Two huts were built on the range but the development of more advanced skiing techniques, unreliable snow conditions and frequently 'dreich' – a very descriptive Scottish word - weather were responsible for declining winter use of the Rock and Pillars, particularly as travel became easier and better facilities were developed on Coronet Peak in Central Otago. More recently cross country skiing has increased in popularity and the huts on the Rock and Pillars are again coming into use - much more commonly now than they were just a few decades ago.

In summer the range is visited by walkers and trampers with interests in bird watching and botany and mountain bike riding along the crest of the range has also increased in popularity. The Kinvara Track provides good access for recreational users to the northern end of the range and, as noted above a good round trip would be enabled by the establishment of public access via the track on the true right of Last Creek on The Wandle (Fig. 3).

There is occasional hunting for pig, quail and chukar on the range.

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

The lower two thirds of The Wandle have been extensively subdivided into paddocks and developed into improved pastures. Consequently there is little of natural value or biodiversity except in the Last Creek catchment, and in the tussock grasslands above about 900m (Fig. 4).

Mason (1988) recognized the natural values in the deeply incised gullies like Last Creek when he wrote about the Rock and Pillar Range:- *"Forest remnants, chiefly of broadleaf but with some Hall's totara are concentrated in the deepest gullies on the lower eastern slopes"*. The forest remnant in Last Creek is a good example of this.

The DOC Report (CRR) of 1998 described the vegetation as follows:- *"The mid and lower sections of Last Creek contain significant shrubland and low treeland. At the upper limit of this continuous vegetation zone (approx. 600 metres asl) scattered trees of broadleaf and marbleleaf are surrounded by a low shrubland of matagouri, Coprosma rugosa, C. ciliata, Carmichaelia and koromiko.*

*In the lower reaches, tall broadleaf trees in association with occasional kohuhu and five-finger form a narrow band over topping the creek bed. Adjoining this on both sides of the creek is a dense shrubland dominated by matagouri and coprosma and but also including Corokia cotoneaster and Melicope simplex. Pohuehue (Muehlenbeckia australis), the climbing fuchsia (Fuchsia perscandens) [which is nationally uncommon] and bush lawyer are common throughout. At least two kowhai trees are present on slopes above the main shrub concentration."*(See Fig. 4).

The report summarized the vegetation of The Wandle as follows:-

*"The vegetation of this property retains a moderate degree of naturalness (down to approximately 700 metres), as characterised by a generally even cover of narrow-leaved snow tussock and predominantly native inter-tussock species. Below 700 metres there is significant invasion of introduced pasture grasses and fragmentation of tussock cover. A significant shrubland and low treeland with good species diversity occurs in the mid to lower portion of Last Creek. The downlands observed have little botanical conservation value."*

There is an historic building at the top of the downlands where Last Creek emerges from its gorge (Fig. 5). This is the ruin of a very solidly built stone hut which is largely covered in creeper. We understand that this was formerly a boundary rider's cottage (in about the 1850s or 60s) when there was no physical boundary between the original Taieri Lake and Gladbrook runs. This ruin, when cleared of its creeper, would provide added interest for visitors who come to see the natural values in the Last Creek gorge, or take a walk to the top of the range. There may be no need for physical protection of this ruin but if the

boundary is drawn such that the stone cottage is located within the new freehold, then a covenant with conditions to ensure its maintenance, might be appropriate.

It should be noted that the Doc Resources Report (CRR) states that "*There are no NZ Archaeological Association recorded sites located on this property*". Perhaps this former boundary rider's cottage was overlooked.

### **AREAS TO BE PROTECTED**

There are two areas of significant inherent value on The Wandle. These are:- first and foremost, the outstanding remnant of coastal broadleaf forest in Last Creek (Fig. 6). Not only is this of high natural value in its own right, as recognized by Mason and by DOC in its CRR, but additionally it is surmounted by a fine example of a tor-studded landscape carrying snow tussock in very good condition. This is clearly worthy of protection as a new Conservation Area returned to full Crown ownership and control to be managed for conservation and recreation purposes.

There may be some debate as to where the boundary of this natural area should be drawn and fenced. The northern and western boundaries should be clearly defined by the boundary with Taieri Lake, and by the retirement fence respectively. The debate would be where to locate the southern boundary: One possibility would be to use the line of the track on the spur on the true right of Last Creek (Fig. 7). The alternative would be to utilize the existing fence a little further south of the track, and which runs very close to the track in places (Fig. 8). The latter choice would have the advantage of avoiding the cost of new fencing, and would run up to the top of the track where it ends at almost 900m. It would have the disadvantage, from a farm perspective that up to about 100ha of pastureland would be included within the proposed Conservation Area.

The other area of significant inherent value is the tall tussock grassland below the retirement fence, down to about 900m (Figs 9, 10 and 11). There is an existing fence running across the face of the range enclosing the five larger blocks across the top of the property at about 900 to 1,000m (Fig. 11). This fence would run from the end of the Last Creek track referred to above to the northern boundary of Kinvara where the Reserve on Kinvara is already fenced to just below the 1,000m contour. This tussock grassland is in excellent condition and we understand from the farm manager that it is currently not grazed. For this reason he indicated to us that he would be favourably disposed to these five top blocks being designated as a Conservation Area.

We therefore recommend that the tussock grassland in the top five blocks (above 900m) should be amalgamated with the tussock, tor landscape and forest remnant in Last Creek to form a continuous reserve along the northern and western boundaries of The Wandle. This whole area of about 300ha should be returned to full Crown ownership and control, to be managed for conservation and recreation purposes.

### **ACCESS REQUIREMENTS**

The CPL Act 1998 requires "*the securing of public access to and enjoyment of reviewable land*", and this of course applies to The Wandle. We have noted above that public access to the track on the true right of Last Creek, in association with the access already available on the Kinvara track would make an excellent round trip (Fig. 3). As proposed it would have high natural values in the Last Creek gorge, and across the tall tussock grasslands together with the landscape values of the tor-studded landscape above the gorge and the historic value of the former boundary rider's cottage at the mouth of the gorge.

Car parking should be possible beside the Rail Trail (Fig. 12) and access across the downland could be within the flood plain of Last Creek, or the new access easement across the Taieri Lake downland could be utilized with a creek crossing near the mouth of the gorge. It is suggested that a walking track should continue beside the creek in the gorge and later link onto the track on the spur on the true right of Last Creek. The round trip could be completed by using the Kinvara track or the easement for public access established as an outcome of tenure review on Taieri Lake (Fig. 12).

## **OTAGO CONSERVATION MANAGEMENT STRATEGY**

The Rock and Pillar Range was identified as a 'Special Place' in the Otago Conservation Management Strategy (CMS). The declared objectives for the Rock and Pillar Special Place are as follows:-

*"To nurture and encourage study of the natural processes to allow healing of the vegetation after grazing and fire and to improve landscape values. To continue to document the values and permit research where it will lead to conservation benefits. In the case of the Rock and Pillar Range, to extend the protected area along the summit and to take in altitudinal sequences and secure access where opportunities arise" .*

It was envisaged that these objectives would be achieved through a number of implementation statements which included the following which is pertinent to the tenure review of The Wandle:-

*"Pastoral lease tenure review on properties on the Rock and Pillar Range will provide opportunities to achieve protection of areas of significant landscape, scientific, natural and historic resource and recreational value.*

*Overall management of these new areas with the existing reserve will confer net conservation and management benefits (eg, fencing efficiencies), and will provide extensive recreational opportunities. Management of contiguous areas will be integrated and public awareness developed through the concept of a Rock and Pillar Conservation Park."*

Finally, it is important to note that the priority for the Rock and Pillar Special Place is:- *"Negotiation, principally through pastoral lease tenure review, of an extended protected area along the crest of the Rock and Pillar Range will be a priority in this Special Place".*

It is clear that the tenure review of The Wandle presents an excellent opportunity to advance the objectives and priority stated in the CMS. It also presents an opportunity to make progress towards the completion of the Rock and Pillar Conservation Park. Only three (out of a total of eleven) properties on the eastern face of the range have yet to complete the tenure review process: Emerald Hills and The Wandle are at the 'information gathering' stage, while The Burgan appears to be currently not in tenure review.

We understand that the Otago Conservation Management Strategy (CMS) is currently being reviewed but we also believe that the strategic analysis and setting of long term aims and objectives in 1998 represented the considered DOC and public views on conservation and recreation at that time. We believe that to a large extent those long term aims and objectives are still relevant today.

## **ISSUES AND RECOMMENDATIONS**

In this section, the resources described above, and the issues and options for their future management and allocation between freehold disposal and public interests are discussed in relation to the Crown



Pastoral Land Act, 1998. The issues and recommendations are presented in sections related to Section 24 of the Act as follows:-

*S24 (a) (i) To promote the management of reviewable land in a way that is ecologically sustainable*

*S24 (b) (i) To enable the protection of significant inherent values of reviewable land by the creation of protective mechanisms*

*S24 (b) (ii) To enable the protection of significant inherent values of reviewable land (preferably) by the restoration of the land concerned to full Crown ownership and control*

*S24 (c) (i) The securing of public access to and enjoyment of reviewable land [including recreation] and*

*S24 (c) (ii) The freehold disposal of reviewable land*

**S24 (a) (i) To promote the management of reviewable land in a way that is ecologically sustainable**

The soils and the Land Use Capability (LUC) Classification of The Wandle have been considered carefully. The entire property is situated on the valley floor and scarp face of the Rock and Pillar Range. Up to about 900m it is characterised by soils and land units classified LUC Class IV and VI. This land appears to be capable of fulfilling the requirement to "*promote the management of reviewable land in a way that is ecologically sustainable*", so long as the soils are adequately maintained to replenish nutrients lost through leaching and removed in animal products. It is therefore concluded that this land should be suitable for freehold disposal.

**S24 (b) (i) To enable the protection of significant inherent values of reviewable land by the creation of protective mechanisms**

Environmental NGOs generally agree with the preference expressed in the CPL Act for "*protection of significant inherent values of reviewable land (preferably) by the restoration of the land concerned to full Crown ownership and control.*" However, small discrete areas may be suitable for protection "*by the creation of protective mechanisms*" [ie Conservation Covenant].

In the case of The Wandle we recommend that significant areas of tussock grassland and forest remnants in Last Creek should be protected by return to full Crown ownership and control. Our arguments are explained above.

The historic ruins of a former boundary rider's cottage near the bottom of the Last Creek gorge may be located on land to be disposed to the lessee as freehold. In this case we recommend that a Covenant over a small area around the cottage, with conditions to ensure its maintenance, may be appropriate.

The landscape of the scarp face of the Rock and Pillar Range could be threatened by inappropriate subdivision, use, or development because the District Plan may not be adequately robust and durable to ensure protection of its valuable features. It is recommended that these landscape features should be considered for protection under a binding landscape protection covenant.

**S24 (b) (ii) To enable the protection of significant inherent values of reviewable land (preferably) by the restoration of the land concerned to full Crown ownership and control**

This report has focused on those features of The Wandle which are important for public recreational interests. While some of this interest focuses on access, the natural and landscape values influence the

quality of recreational experience enjoyed. This is one of the reasons why these inherent values are considered for protection.

There is an area of some 300ha adjacent to the northern and western boundaries with high conservation values. There is highly significant inherent value in the forest and shrubland remnants in Last Creek, as well as very significant landscape values associated with the tor-studded landscape above the gorge, and the good condition of the tall tussock grasslands above about 900m which extend across the scarp face to the boundary with Kinvara. The lower boundary of this area could follow an existing fence which accords well with an already established retirement line on Kinvara. This would mean the retirement of the five larger blocks across the top of The Wandle. The manager of The Wandle has indicated that this proposal is likely to be acceptable to the lessees as these top 5 blocks below the existing retirement are currently not grazed.

The southern boundary of the proposed Conservation area could follow either an existing fence on a spur on the true right of Last Creek, or the track which is slightly closer to Last Creek throughout most of its length. The advantage of utilising the existing fence would be that it would avoid the cost of building a new fence. However, the downside from the farming perspective would be that some pastureland would be incorporated into the Conservation Area.

#### **S24 (c) (i) The securing of public access to and enjoyment of reviewable land** [including recreation]

Access issues have been discussed in the "Access Requirements" section of this report.

We have recommended that public foot, access should be established by the granting of a formal Easement up the lower reaches of Last Creek and the farm track on a spur on the true right of Last Creek up to the end of the track just below 900m.

This would provide an interesting choice of round trips incorporating either the Kinvara Track or the new public access easement on Taieri Lake to the crest of the Rock and Pillar Range.

#### **S24 (c) (ii) The freehold disposal of reviewable land**

Freehold disposal of reviewable land follows as a logical consequence of the identification of those parts of The Wandle which have been assessed to be capable of being managed "*in a way that is ecologically sustainable*" and where no significant inherent values have been identified.

Accordingly, it is recommended that all LUC Class VI land and land characterised by fertile alluvial soils on the downlands in higher LUC classes be designated for freehold disposal, subject where appropriate, to Protective Mechanisms (eg a Conservation Covenant) to ensure the maintenance of the historic boundary rider's hut near the mouth of the Last Creek gorge.

### **CONCLUSION**

Finally, it is noted that the Otago CMS sets out important objectives and priorities for the Special Place Rock and Pillar which includes The Wandle pastoral lease. If the recommendations made in this report are adopted and implemented significant progress will be made towards the achievement of those objectives

## **ACKNOWLEDGEMENTS**

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## **REFERENCES**

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Mason Bruce (1988) Outdoor Recreation in Otago – A Conservation Plan. Volume One: Central Otago Block Mountains. Federated Mountain Clubs of NZ (Inc.) Wellington NZ.

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**Appendix.1 FMC Recommendations, 1998**

**The Wandle Po 328 (Middlemarch)**

1. All land above 1,100m to be transferred to DOC (or a lower altitude limit if quality of tussock grassland and co-ordination of the boundary along the front of the range merits this). This should be included in the Rock and Pillar Conservation Park which would include the top block and historic water races.
2. The Upper Block (approximately 900 to 1200m) contains high natural values, includes a significant area of LUC Class VIIe land, contains high landscape values, and is adjacent to land on Taieri Lake Station due to be transferred to DOC. It should therefore be transferred to DOC for inclusion in the Rock and Pillar Conservation Park.
3. The top two blocks should be transferred to DOC for inclusion in the Rock and Pillar Conservation Park.
4. Access via the spur on the true right of Last Creek would provide a round trip to include the Kinvara Track. This should be negotiated.
5. There is considerable historic interest in the water race at 1200m.