

**DOC REPORT TO THE  
COMMISSIONER OF CROWN LANDS ON TENURE REVIEW  
OF THE WANDLE PASTORAL LEASE**

**PART 1**

**1.1 INTRODUCTION**

The lessees of The Wandle Pastoral Lease have applied to the Commissioner of Crown Lands for a review of tenure. The property was inspected in February 1997 by DOC staff and their assessments have been incorporated into this conservation resources report.

The Wandle is a small pastoral lease of 1262 ha located on the northern end of the Rock and Pillar Range. The property is located on State Highway 87, 15 km north of Middlemarch, and extends from the highway frontage to about 1200 metres asl on the Rock and Pillar Range.

Approximately 268 ha of high altitude land above this contour and extending up to the range summit was recently surrendered as part of an Otago Catchment Board soil and water conservation plan. This land has high conservation values and is currently undergoing formal transfer to DOC, along with about 156 ha of similarly surrendered land of the adjoining Taieri Lake Station which was occupied by The Wandle. Approximately 48 ha of low-mid altitude land formerly part of Taieri Lake and also occupied by The Wandle has been incorporated into The Wandle.

The Wandle is situated in the Rock and Pillar Ecological District which includes the entire Rock and Pillar Range. In 1982/83, the Department of Lands and Survey at the request of the Land Settlement Board undertook an assessment of the conservation values of the pastoral leases on the range. This request arose from an invitation to the Board by the Government to oversee trial assessments of the findings of the Report of the Committee of Inquiry in Crown Pastoral Leases and Leases in Perpetuity (The Clayton Report).

This assessment identified a potential reserve along the summit of the range, spanning the majority of properties on Rock and Pillar. The Wandle portion of that potential reserve equated to the land proposed for surrender under the Catchment Board soil and water conservation plan.

## PART 2

### CONSERVATION RESOURCE DESCRIPTION AND ASSESSMENT OF SIGNIFICANCE

#### 2.1 LANDSCAPE

The Landscape Assessment has been compiled from information gained from adjacent property inspections.

As adopted for other assessments of the high country, the pastoral lease has been divided into a number of landscape units. The boundaries for each of these units follow marked changes in the local topography, as well as distinguishable changes in the ground cover and landuse patterns.

Besides describing the physical attributes and important landscape values, each unit has been placed into three broad categories:

1. **Natural Landscapes :**  
Natural ecosystems, containing unspoilt and distinctive geological/physiographic features.
2. **Managed Natural Landscapes:**  
Still a predominantly natural ecosystem, but where some modifications have occurred to the native vegetation through mainly extensive sheep grazing.
3. **Cultural Landscapes:**  
Land influenced by human use. This includes historic and intrinsic values.

Depending on which category the landscape unit falls within, a suggestion has been made on the orientation on future management of that particular unit.

#### Landscape Unit 1

This landscape unit comprises the belt of tall snow tussock just below the eastern crest of the tops. Its most distinctive physical feature is the ripple and hummock type of landform which is a characteristic of high mountain slopes, especially in the headwaters of streams. Within this landscape unit the frequent small streams are marked by a pattern of ill-defined water courses which become more defined further down the steep slope.

The tussock cover is in very good condition, and due to its density and stature very few intertussock species are present. From a landscape perspective the key issue is the long term sustainability of the tussock cover which gives these upper mountain slopes a feeling of coherence in both vegetation pattern and colour. This unit's general impression of uniformity helps to merge the whole of the eastern flank of the Rock & Pillars into one large landscape type, which collectively form a high country landscape which must be of regional significance.

This landscape unit acts as a transition between the high altitude country on The Wandle which has already been surrendered and the more modified lower country. This unit should be managed predominately as a natural landscape.

#### Landscape Unit 2

This landscape unit comprises the predominately native grasslands which fall within the altitudinal range from about 800 metres down to 500 metres. The numerous streams are entrenched into the steep slopes and where they emerge from the mountains onto the plains form wide fans.

The degree of naturalness of this landscape unit is influenced greatly by grazing pressure and past burn-offs but similar to landscape unit 1 the overall impression of this mid-altitudinal land is that it still conveys an appearance of continuous native grass cover (tawny colour, and fine texture). This unit is highly vulnerable to further change in land use, particularly the conversion of native grasses into exotic grasses, as well as other modifications, such as further access tracking and sub-divisional fencing.

This landscape unit would fall within the managed landscape category with controls placed over the protection of the distinctive landscape character through the Resource Management Act.

### **Landscape Unit 3**

This unit encompasses the precipitous deep gullies that are emergent onto the valley floor. From photographs, the most spectacular of these gullies would be that of lower Last Creek which would appear, due to more recent conservative farming practices, to have allowed the regeneration of native woody species such as broadleaf.

This landscape unit would fall within the natural landscape category as the gullies not only provide visual diversity to the lower slopes, but are also important for soil and water conservation and are natural firebreaks.

All three landscape units described above are located within the Dunedin City Proposed District Plan "Outstanding Landscape Areas".

### **Significance of the Landscape**

The eastern side slopes of the Rock and Pillar Range are a significant natural landscape setting for the developed farmland and settlements of the Strath Taieri Plain. Landscape Units 1 and 3 are the most important components given their high level of naturalness.

## **2.2 LANDFORMS AND GEOLOGY**

The Wandle spans an altitudinal range from 300 metres on the Strath Taieri Plain to 1200 metres up the eastern face of the Rock and Pillar Range. Approximately ¼ of the property occurs on the floor of the Strath Taieri and the remainder is on the flanks and mid slopes of the range. Lowland to low alpine bioclimatic zones are covered by this sequence. Basement geology and lithology of the Rock and Pillar Range consists of foliated quartzo-feldspathic schist and lesser chlorite schist of the Haast Schist Group (NZ Geological Survey 1963). No genuine alpine topography is included.

The steep range flanks are typical of those on adjoining properties with evidence of solifluction lobes present.

A belt of rock tors are a prominent landform feature at mid altitude rising from about 850 metres and extending across the convex slopes to 1150 metres on the adjoining Taieri Lake Station.

Streams drain off the faces with many being deeply incised.

There are no geopreservation sites recorded from the property.

### **Soils**

Soils on the property are classified as follows :

### Inland and High Country Yellow Brown Earths

- Dunstan Steepland Soils  
At high altitude, covered with snow tussock, subalpine scrub and localised fellfield with low to very low natural nutrient status.

### Yellow Grey Earths

- Blackstone Hill Soils  
On rolling ridges, steep gullies, with rock tors, native cover of fescue tussock with high natural nutrient status.
- Arrow Steepland Soils  
On steep to moderately steep land with very steep rocky gorges, native cover of fescue tussock and matagouri, snow tussock on shady faces, with medium to high natural nutrient status.
- Cluden Soils  
On lower slopes, gently rolling dissected fans, native cover of fescue tussock and matagouri with medium natural nutrient status.

### Recent Soils

- Gladbrook Soils  
On sloping fans, native cover of fescue tussock and matagouri scrub with low to medium natural nutrient status.

## 2.3 CLIMATE

The Rock and Pillar Range is subject to a coastal weather influence, especially from the southerly quarter. This cooling and more changeable influence has resulted in alpine vegetation occurring at 1200 m, markedly lower than occurring on more inland ranges where the climate is more continental.

Snow lies on the crests and flanks of the range above 1200 m during winter and can persist for up to six months of the year, with considerable redistribution by wind into drifts in depressions and leeward gullies. Snow can lie on the property for several weeks at a time. Rainfall on the property varies from 600 mm at low altitude to 1200 mm at higher altitudes. Winds are predominantly northerly. Frosts are frequent and can be severe in winter. Summer temperatures reflect the hot dry Central Otago influence.

## 2.4 VEGETATION

On the upper part of the property below the retirement fence, there is low stature *Chionochloa rigida* tussockland with scattered shrubs of *Hebe odora* and *Cassinia fulvida*. Towards watercourses stature of tussock improves and shrubs become more dominant eventually coalescing into a narrow band following the water channel. Inter-tussock vegetation consists mostly of native species with *Pentachondra pumila*, *Leucopogon fraseri*, *Gaultheria depressa*, *Pimelea oreophila* and clubmoss particularly common. Pavements of bare soil and hawkweed are locally common.

Small flushes are scattered throughout. These are dominated by *Bulbinella* and moss on interfluvies but contain an increasing diversity of small herbaceous plants at higher fertility sites near creek beds. Some wet terraces have toetoe and *Carex* spp.

all stream-side rock outcrops provide refuges for *Astelia nervosa* and the large speargrass *Aciphylla scott-thomsonii*. Other rock outcrops support localised concentrations of low shrubland, particularly snow totara, inaka and *Coprosma ciliata*.

A predominance of *Aciphylla aurea* and low stature, resprouting tussock on some north facing slopes are evidence of recent fire. Below approximately 700 metres there is significant invasion of introduced pasture grasses and fragmentation of tussock cover.

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 but also including *Corokia cotoneaster* and *Melicope simplex*.

Pohuehue (*Muehlenbeckia australis*), the climbing fuchsia (*Fuchsia perscandens*) and bush lawyer are common throughout. At least two kowhai trees are present on dry slopes above the main shrub concentration.

The downlands of the property have improved pasture on the interfluves with scattered matagouri remnants in the gullies.

### Summary

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 - lower portion of Last Creek. The downlands observed have little botanical conservation value.

### Problem Plants

The property is generally free of woody weed species. *Hieracium pilosella* and *H. lepidulum* occur in low abundance but are not considered to be a conservation threat.

### Significance of the Vegetation

Though still recovering from recent burning, the native vegetation at altitudes above 700 metres is predominantly intact and able to adequately recover in stature and conditions.

Shrubland and low treeland in Last Creek is significant, in particular the record of climbing fuchsia which is nationally uncommon and increasingly threatened. It has a good population at this site.

## 2.5 FAUNA

### Invertebrate Fauna

Native insects representative of a variety of habitats indicate that while partially modified the communities are still essentially native vegetation. These are representative of the Rock and Pillar Range as a whole and add significantly to conservation values for the range as identified in Barratt and Patrick (1987).

the retirement fence, narrow-leaved snow tussock (*Chionochloa rigida*) grassland with shrubland and wet flushes support an array of insects such as the moth *Paranotoreas brephosata*, grasshopper *Sigaus australis*, plant hoppers, butterfly *Lycaena salustius* and cicada *Kikibia angusta*. The rare caddis *Edpercivalia* sp. A. (John Ward Pers. Comm.) was recorded for the first time on the range here. Further down shrubs are confined to rocky areas and narrow gullies. In Last Creek at 700 m the fauna associated with these shrubs is still present. For example, the moth *Athrips zophochalca* from *Carmichaelia* and moth *Caloptilia* n.sp. off *Gaultheria*. The moth *Kiwaiia brontophora* was collected from rock faces here and from wetland the moths *Plutella psammochoa* and *Orocrambus scoparioides* were found. These are indicative of a functional and diverse habitat. Another species found was the 28 mm predator beetle *Megadromus bullatus* this is widespread in Otago but not found where pasture grasses dominate.

Below this area broadleaf and putaputaweta along with many shrubs, vines and ferns line Last Creek. Common aquatic and terrestrial insects were noted here and include; caddis *Oeconesus maori*, stoners *Zealandobius* species, darkling beetle *Mimopeus* species and fern moth *Ischalis fortunata*. These faunal elements are widespread and significant because the assemblage, along with the tree and shrub diversity, are at such a low elevation (~120 m) and are rare on the east escarpment of the Rock and Pillar Range.

### Vertebrate Terrestrial Fauna

Not surveyed.

### Aquatic Fauna

WANDLE CREEK		
Map No.1	Grid Ref.	Fish Species
H 43	8740 2915	Salmo trutta (brown trout)
H 43	8675 2950	Salmo trutta
H 43	8640 2955	Nil
NANT CREEK		
H 43	8735 2980	Salmo trutta
LAST CREEK		
H 42	8790 3105	Salmo trutta
H 42	8760 3110	Salmo trutta

There were no native fish species found in any of the three streams and there were significant numbers of brown trout. All three streams are stable mainly due to the riparian margin being in reasonable condition.

### Problem Animals

Pig are occasionally found on the property but are highly mobile along the range. Adequate control is achieved by recreational hunting. Possums occur in low numbers in lowland shrubland but do not pose a threat to conservation values at existing numbers.

Hares are common throughout the property.

## HISTORIC

There are no New Zealand Archaeological Association recorded sites located on the property.

The Strath Taieri area is unusual for the richness of Maori material found in rock clefts. The presence of artefacts found in the district typical of both early moa hunters (the Patea and Waitaha people) and later classic Maori (Kai Tahu and Kati Mamoe) indicates a long period of use and occupation.

The northern end of the Rock and Pillar (Patearoa) has recently been surveyed for Maori sites but none have been recorded on The Wandle.

Pastoral farming occupation commenced in the late 1850s, when the property formed part of the original R213 originally taken up by Harris and Innes, pastoralists from South Canterbury.

Up until 1969, The Wandle was part of the adjacent Kilmory Station (now known as Kinvara). At that date the Matheson Bros partnership split to create separate properties.

## 2.7 PUBLIC RECREATION

### 2.7.1 Physical Characteristics

The Wandle is part of the Rock and Pillar Range. Most recreational activity focuses on the summit plateau, eg cross country skiing and tramping etc on land recently surrendered from the property. The upper eastern faces of the property comprises part of the recreation setting of the range. The summit plateau has several new public accessways from the Strath Taieri plain, arising from other tenure reviews, to complement the original but limited legal roads.

### 2.7.2 Public Access

#### Marginal Strips

There are no existing marginal strips on the property. None of the creeks located on the property appear to be of sufficient size to warrant marginal strips being created.

#### Legal Roads

There are no legal roads, formed or unformed, contained within the boundaries of the property. An unformed legal road adjacent to State Highway 87 was stopped and incorporated into the lease in 1993. The eastern boundary of the property adjoins the state highway.

Within the property is a good network of farm access 4WD tracks.

#### Other Access

A public foot access easement on Taieri Lake Station along the northern boundary of The Wandle is agreed to be created as part of the tenure review of Taieri Lake Station. This easement will provide access to the summit of the range from the state highway.

To the south, public foot, mountain bike access and vehicle access by arrangement has been created through the acquisition by DOC of the Kinvara Station track. This track will provide access from the highway to the Rock and Pillar Scenic Reserve and the summit of the range.

### 2.7.3 Activities

Recreational use of this part of the Rock and Pillar Range is concentrated on the summit plateau and upper slopes, ie essentially the land recently surrendered out of the pastoral lease. Activities

olve cross country skiing, tramping, mountain biking and 4WD vehicle use of the track along the summit.

Little recreational use occurs on the pastoral lease although the upper slopes with their intact natural cover would contribute to the recreation setting. The surrendered land is reasonably close to the two tramping club huts on Glencrag to the south, which provide an important base for overnight trips.

Actual recreational use of the pastoral lease is limited to casual pig hunting.



## PART 3

### CONSULTATION AND DISTRICT PLANS

#### 3.1 CONSULTATION

The property was commented on by NGOs at an early warning meeting on 6 March 1997. Key points raised were:

- Upper slopes above 800 metres have a good cover of intact snow tussockland.
- No requirement for public access through the property given the close proximity of the Kinvara Track and public access easement at Taieri Lake Station.

Additional written comment was supplied by Mike Floate representing Federated Mountain Clubs and is as follows:

- 1 All land above 1100 m 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 1200 m) 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 to be transferred to DOC. It should therefore be transferred to DOC for inclusion in the Rock and Pillar Conservation Park.
- 3 Access via the spur on the true right of Last Creek would provide a round trip to include the Kilmory Track. This should be negotiated.

#### 3.2 DISTRICT PLAN

There are two operative plans covering the property.

##### (i) Silverpeaks Country Transitional Plan

The property is zoned Rural B which provides for pastoral farming as a predominant use. Reserves under the Reserves Act 1977 are a conditional use.

##### (ii) Dunedin City Proposed District Plan

The property has a Rural zoning which provides for farming and forestry as predominant activities. Recreation is a controlled activity provided no significant buildings are involved. The large part of the property is in the Outstanding Landscape Area (High Country). Under the Proposed District Plan landscape provisions forestry and the erection of structures require resource consent but there are no restrictions on pastoral intensification, tracking or clearance of vegetation.

#### 3.3 DOC CONSERVATION MANAGEMENT STRATEGY (CMS)

The Otago Conservancy CMS is in draft form awaiting final approval. The CMS identifies 41 Special Places in Otago. These locations are considered by DOC to be important for conservation. The Rock and Pillar Range is one of these special places. The Wandle is one of more than 20

toral leases on the range. Relevant sections of the Special Place, Rock and Pillars is extracted as follows :

### "Description

The Rock and Pillar Range block range rises to 1450 metres overlooking the broad relatively flat valley of Strath Taieri. Composed of Otago schist it has many imposing tors along its summit. Fellfield with scattered low herbs and cushion plants occupy the highest and most exposed crests where patterned ground is a feature while seepages with stepped tarns surrounded by snow bank plant species are found in sheltered hollows below the summit. An alpine shrubland, diverse and thick in places, provides an upper border to extensive snow tussockland areas that clothe the range. Numerous torrents cascade off the range through shrublined gullies. Wetlands are common at all altitudes.

### Values

The crest of the Rock and Pillar Range of which the Rock and Pillar Scenic Reserve is a small part, is important as an ecosystem composed of native biota and natural processes. Most abundant plant species on the crest are *Celmisia viscosa*, *Poa colensoi* and *Aciphylla hectori*, while on the flanks of the range, *Chionochloa rigida* grasslands are intact in many places. Although fire and grazing have modified the abundance and structure of these communities, they are still essentially native. Native species diversity is high for both plants and animals, containing both species characteristic of Central Otago block mountains and several endemics.

The Rock and Pillar Range, along with the neighbouring Lammermoor to the south, is recognised as having amongst the most intact, unmodified belt of snow tussock grassland of any of Otago's block mountains.

When viewed from a distance, the range is an imposing feature with little in the way of farm tracking to mar its eastern and western aspects. On its slopes or crest, the viewer stands in a gently sloping or undulating sea of tussock-herbfield-cushionfield studded with castellated tors.

A feature of the range is the large bodied insects such as the weta *Hemideina maori*, moths *Aoraia orientalis* and *A. rufivena* and beetle *Megadromus bullatus*. Also important is the relatively high diversity and localised nature of the high-alpine aquatic insect fauna of seepages and torrents. Many stoneflies and caddis species have their type localities on the range and are typically diurnal and flightless.

The dense subalpine shrublands on the range are the most extensive and diverse of any Otago block mountain. They contain bog pine, celery pine, snow totara, in addition to many *Dracophyllum*, *Hebe* and *Coprosma* species. Lower down (400-900 metres) large areas of native shrubland exist also with *Olearia nummulariifolia*, *Hebe rakatensis* and *Helichrysum aggregatum* of note, confined however to the deepest gullies. Near the northern end of the range a remnant of Halls totara forest (30-40 trees) is a notable feature. The shrubland near the top of the eastern face forms a continuous belt probably indicating the treeline of pre-human times.

The liane *Fuchsia perscandens*, some ferns and mountain flax are local within broadleaf dominated gullies.

Natural and historic values are high along the Rock and Pillars as are scientific, landscape and recreational values. While Sutton Salt Lake is in a rural setting, the upper slopes and summit peneplain of the Rock and Pillar Range are a back country drive-in setting for recreation. The highest part of the range is snow-covered in winter and takes on more of the characteristics of a remote experience area. Existing recreation includes cross-country

skiing, tramping, nature tourism and 4WDing all utilising an extensive network of tracks, and two well-maintained huts, but without secure access.

The Rock and Pillars contain early surveying structures of historic interest.

Patearoa is the traditional name for the Rock and Pillar Range. On it was gathered the tikumu (*Celmisia* sp.) used by weavers in garment making. Tikumu was traditionally known to have been gathered at Paruparu a Te Kaunia (Stonehenge). The resin of the taramea (*Aciphylla* sp.) was also sought as a fragrance used by women.

#### **Management Issues - Rock and Pillar Range :**

- Negotiation of protection and secure access.
- Fence maintenance and incidental grazing.
- Fire control and fire risk management.
- Research facilities and debris from former projects.
- Access track maintenance.
- Resource information, particularly relating to freshwater fisheries and archaeological sites is still required.
- Commercial tourism.

#### **Objectives**

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 reserve along the summit and to take in altitudinal sequences and secure access where opportunities arise.

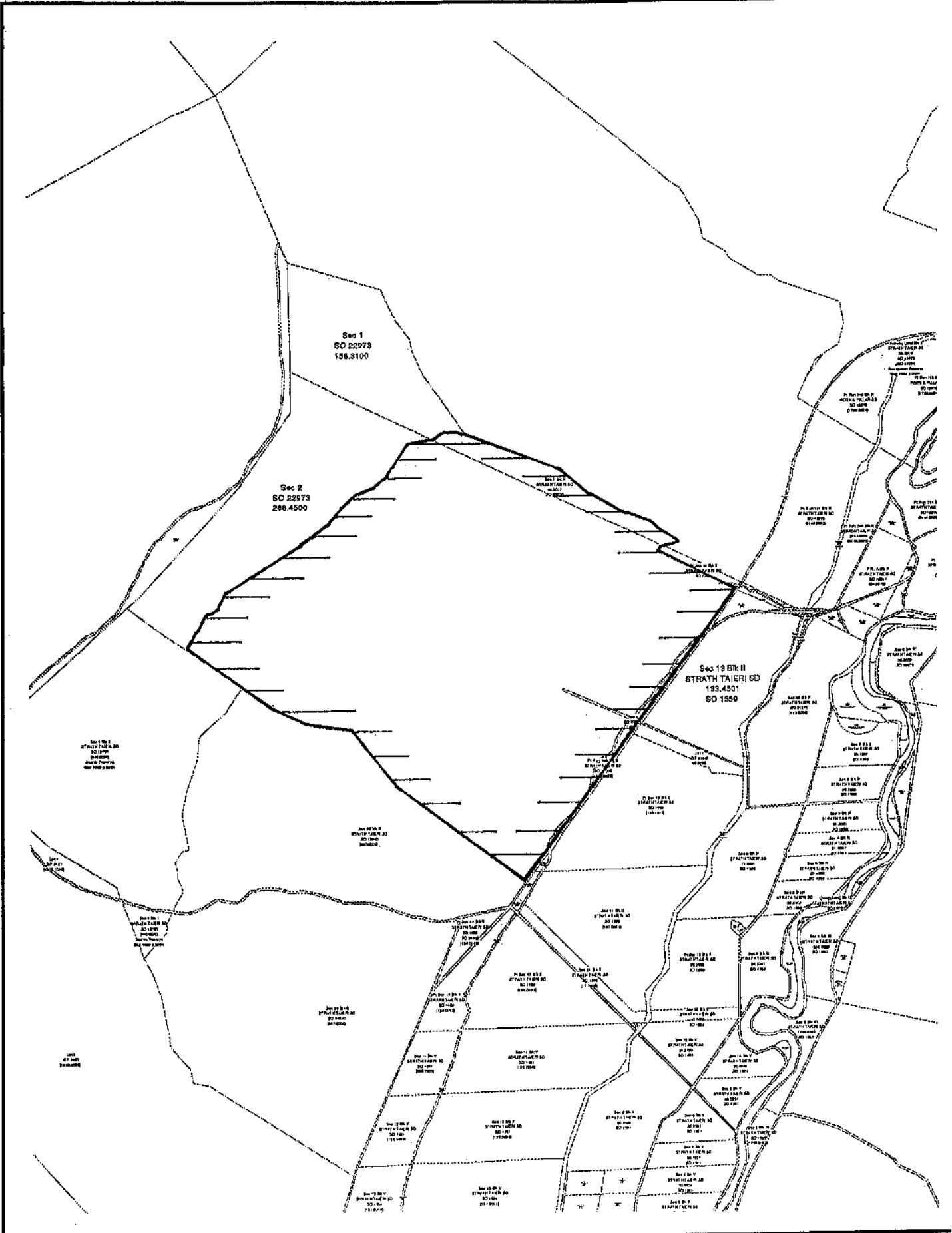
#### **Implementation - Rock and Pillar:**

- (a) 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), 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.
- (b) Research will be encouraged where it provides conservation benefits. All associated structures will be removed at project end.
- (c) Fire risks will be minimised using a range of methods including fire breaks where appropriate, education, liaison and co-operation with neighbours.
- (d) The streams will be surveyed for freshwater fisheries resources as a low priority.
- (e) Legal access to land administered by the department will be negotiated and vehicular access and parking secured at key access points.
- (f) To advocate for the protection of significant natural and historic resources through the Resource Management Act and other relevant legislation.
- (g) Recreation and tourism concessions may be allowed where there is no detrimental affect on natural, cultural and historic values including remote experience recreation, or where concession conditions can minimise such effects.

- (h) Kai Tahu involvement in management and sustainable customary use of resources will be facilitated.

**Priorities**

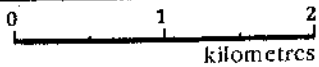
Negotiation, principally through pastoral lease tenure review, of an extended protected area along the crest of the Rock and Pillar Range will be a priority in this Special Place.



**Map 1 - Cadastral**

**The Wandle  
Pastoral Lease**

File Ref : P 253 Map Ref : H 43 & H 42



Department of Conservation  
*Te Papa Atawhai*

Proposed Conservation land  
ex Taiari Lake Tenure Review

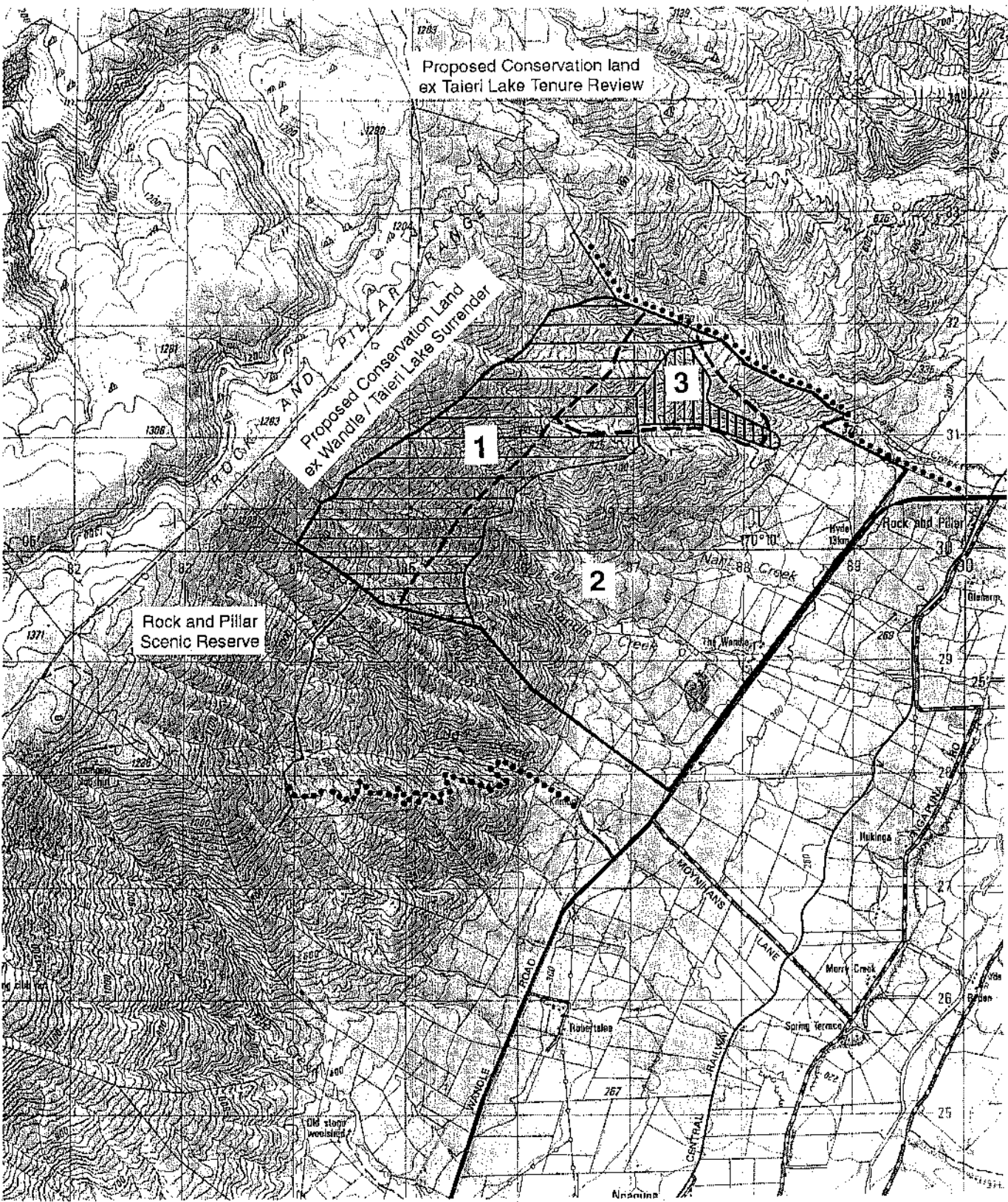
Proposed Conservation Land  
ex Wandle / Taiari Lake Surrender

Rock and Pillar  
Scenic Reserve

1

2

3



-  Boundary
-  Landscape Units
-  Shrub / Tussockland
-  Shrubland / Low Treeland
-  Existing Public Access

Map 2 - Conservation Values

# The Wandle Pastoral Lease

File Ref: P 253 Map Ref: H-43 & H-42

