

BURGAN RUN PASTORAL LEASE CONSERVATION RESOURCES REPORT

PART I

INTRODUCTION

The lessee of Burgan Run Pastoral Lease has applied to the Commissioner of Crown Lands for a review of tenure. The property was inspected in November 1996 and January 1997 by DOC staff and their assessments have been incorporated into this conservation resources report.

Burgan Run is a large (5472 ha) pastoral lease located at the southern end of the Rock and Pillar Range. The property extends from near State Highway 87 south of Sutton, across the range towards the Loganburn Reservoir, west of the Old Dunstan Road. The property is run in conjunction with Kelvin Grove pastoral lease which has a homestead approximately 7 km from Middlemarch.

Burgan Run is situated in the Rock and Pillar Ecological District. The property has been subject to a previous assessment of its conservation values. In 1982/83, an assessment was undertaken by the Department of Lands and Survey at the request of the Land Settlement Board. The Board had been invited 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). The Rock and Pillar Range assessment identified a potential reserve around the shoreline margins of the Loganburn Reservoir. This land has since been surrendered from the lease and is currently held by the Ministry of Agriculture prior to transfer to DOC for reserve purposes.

CONSERVATION RESOURCE DESCRIPTION AND ASSESSMENT OF SIGNIFICANCE

1 LANDSCAPE ASSESSMENT

As adopted for other assessments of the high country, the Burgan 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 land use patterns.

Besides describing the physical attributes and important landscape values each unit has been placed into a category with a suggestion being made on the orientation on future management of that particular unit.

Landscape Unit 1

This landscape unit is dominated by the extensive rolling plateau that is slightly tilted towards the Loganburn Reservoir. The Burgan Stream is a distinctive natural feature with its main axis running parallel with the plateau's crest, with many of the stream's smaller tributaries being deeply indented into the land's surface. The origins of many of these tributaries are bog lands and wet flushes.

The tussock cover at the southern end of this unit, being lower in altitude and drier, is less vigorous and quite sparse in places. The bare ground on the drier slopes would appear to be very prone to hawkweed and other more vigorous exotic grass species, eg browntop, while at the northern end which rises to over 1000m the tussock cover is much more intact with a healthy vigour. At this higher altitude this cohesive tussock cover extends down to the Dunstan road.

The Rock and Pillar's distinctive tors effectively stop on this property, however there is still a scattering of rocky outcrops along the scarp face and the edge of an intermediate plateau that overlooks the Strath Taieri.

In the wider context and similar to the other adjoining properties this unit forms an important physical and visual setting to the Loganburn Reservoir. The foreground also provides the historic Dunstan road with an immediate natural setting. There are now very few examples in Otago where the public have the opportunity to view expansive tussock lands at such a close proximity.

This landscape unit would fall within the natural landscape category, with particular emphasis being placed on the protection of the integrity of the historic road (regionally significant heritage trail).

Landscape Unit 2

This unit on the eastern side slopes of the range forms part of the coherent and highly visible backdrop to the Strath Taieri.

It is similar in physical character to the side slopes on adjacent properties. The overall impression is of good even tussock cover with no hard edged changes in land use. This uniformity extends down to about the 700 metres contour. The landscape unit would fall within the managed natural landscape category with emphasis being placed on the protection of the uniform character of the tussocklands.

Landscape Unit 3

The low country of the Burgan, although contains some outstanding rocky outcrops (fretted for landscape), the natural vegetative cover has generally been converted into exotic grasses. There are still some modified native shrublands located in the side tributaries of the Sutton Creek; however their conservation value has been considerably reduced due to the fact that there is no linkage or altitudinal sequences remaining. As the natural features are naturally robust, and the fragmentation of the native cover, the conservation values in this unit would appear to be very limited.

Significance of the Landscape

The Burgan Run portion of the extensive intact tussockland on the summit plateau is ranked as an outstanding natural landscape. It forms part of the physical and visual setting of the Loganburn Reservoir and has easy public access.

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.

2 GEOLOGY AND LANDFORMS

Burgan Run has approximately equal proportions of land on the floor of the Strath Taieri basin, the southeast flanks of the Rock and Pillar Range, and the southern summit of the range. For this reason the property spans a wide altitudinal and topographical sequence from 300m on the basin floor to 1126m on the summit. Lowland to low alpine bioclimatic zones are covered in this sequence. Basement geology and lithology of the Rock and Pillar Range consists of foliated quartzofeldspathic schist and lesser chlorite schist of the Haast Schist Group (New Zealand Geological Survey 1963). The lowlands are strewn with rock outcrops. Sequences of parallel ridges of near-vertical rock stacks of erosion resistant schist run from the foot of the Rock and Pillar Range to the eastern boundary of the property. These are interspersed with other parallel ridges of near horizontal rock stacks. These features are of geomorphological merit and would only disappear from view with conversion to plantation forestry.

Sutton Stream is flanked by steep bluffs in a gorge section near the south-western extremity of the property, although the remainder downstream is flanked by steep hillslopes. The two major tributaries of Sutton Stream on the downlands also have small bluff systems.

The flanks of the Rock and Pillar Range are very steep in the south-western sector, and in one sector cliffs, bluffs, and bouldery talus are prominent. The entire cliff and bluff system is approximately 150m high and not represented elsewhere on the eastern side of the Rock and Pillar Range. A tributary of Sutton Stream flows through this steep section as a series of cataracts. Tors and rock debris also feature on the range flanks, and mainly on the upper convex slope. The remainder of the flanks are less steep, with solifluction lobes throughout.

The summit is planar and undulating with impressive tors confined to the convex upper slopes along the eastern margins of the summit. The summit plateau has an extensive network of shallow-incised streams mostly filled with moss and sedge vegetation producing gully seepages and further down boggy channels. Some are flushed, some are stagnant and the plant assemblages change accordingly. Altitude varies from 260m to 1126m asl.

Soils

Soils of the summit plateau vary in thickness depending on topographical exposure, are seasonally waterlogged, and show gleyed characteristics. They will be comparatively infertile, anaerobic and poorly drained. Soils of the valley slopes are moist, deeper, loess and schist derived, and comparatively fertile.

Significance of the Landforms and Geology

The summit plateau forms part of a more extensive peneplain which is a distinctive Otago landform feature.

The south-western cliff and bluff topography and Upper Sutton Stream cataracts are important conservation features. The convex upper slopes of the range with their ring of impressive tors are a striking landform feature.

3 CLIMATE

The Rock and Pillar Range is subject to a coastal weather influence especially from the southerly quarter. Snow may lie on the flanks of the range during winter and can persist for several weeks at a time, with considerable redistribution by wind into drifts in depressions and leeward gullies.

Rainfall varies from 550 mm at low altitude to 1000 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.

4 VEGETATION

The Rock and Pillar Ecological District has not been subject to a PNAP survey. However, many of the leases, especially on the eastern side of the range have been assessed for tenure review and with the knowledge gained it is possible to make comparative observations of conservation values relative to other properties.

FLORA AND VEGETATION PATTERNS

Downlands

The downlands of the property have improved pasture on the interfluves, with conversion of previous narrow-leaved snow tussock to improved pasture complete where rock outcrops allows. Elsewhere, remnant narrow-leaved snow tussock and silver tussock with scattered matagouri remain. Remnants of matagouri and *Coprosma propinqua* dominant shrubland occur in the headward gullies of tributaries of Sutton Stream. Several tarns (possibly salty) have lost most of their natural values and are infested with introduced *Glyceria* grass, although *Carex buchananii*, *Meliccytus alpinus*, and *Coprosma intertexta* are scattered around the littoral zone. Although the downlands have striking rock-strewn microtopography, the system does not deviate sufficiently from Sutton Salt Lake Reserve to warrant conservation attention. Likewise, the vegetation is too modified, lacks resilience and is insufficiently distinctive to warrant attention.

Colluvial Slopes of Rock and Pillar Range

The steep south-western cliff, bluff, and colluvial slope section supports surprisingly good indigenous vegetation on seepages, around cataracts, and down bouldery and rubbly talus slopes. Shrublands are widespread, with *Coprosma rugosa*, *C. propinqua*, *C. rigida*, *Phormium cookianum*, *Dracophyllum uniflorum*, *Olearia nummulariifolia*, *O. bullata*, *Carmichaelia petriei*, *Fuchsia excorticata*, *Griselinia littoralis*, *Corokia cotoneaster*, *Rubus schmidelioides* and *Hebe salicifolia* prominent. Groves of tall *Olearia lineata* (<20 cm dbh and 5.5m high) occur down the hillslope and along terraces above Sutton Stream. Bluffs flanking the cataracts have distinctive rupestral shrublands and herbfields of *Myrsine nummularia*, *Coprosma depressa*, *Aciphylla scott-thomsonii*, *Astelia nervosa*, *Dolichoglottis* sp., *Senecio rufigliandulosa*, *Epilobium pubens*, and *Helicrysum* spp.

Also uncovered for the first time on the Rock and Pillar Range was a rare, undescribed, species of *Myosotis*, previously recorded from the Lammemoor Range and Sutton Salt Lake. The shrubland vegetation diverges in several elements from shrublands further north on the Rock and Pillar Range. The shrublands dominate much of the tributary catchment and are more or less contiguous with good scrub and low forest (*G. littoralis*) on the bluffs and primary terraces surrounding Sutton Stream. In an open gully south-east of Trig Y, broadleaf, *Corokia* and Halls Totara occur. The latter is uncommon on the Rock and Pillar Range and this remnant is at the highest recorded altitude on the range (700m). Elsewhere on the flanks of the Rock and Pillar Range, narrow-leaved snow tussock is mostly in good condition, but patches of mouse-eared hawkweed and browntop have spread onto stock camps and warmer knolls where thin soils occur. Above the Sutton Stream / Burgan Stream confluence, very good snow tussock extends

down to 600m. Elsewhere on the eastern faces the good quality snow tussock extends down to the upper limit of oversown country at about 750m

Summit Landscape

The geomorphology and climate has resulted in patterns and communities similar to those of Stonehurst and Kelvin Grove. Extensive landscapes of comparatively-intact narrow leaved snow tussock with or without *Cassinia fulvida*, *Dracophyllum uniflorum*, *Hebe propinqua*, mountain flax, *Olearia bullata*, and *Hebe odora* are evident. These woody species link the present vegetation to the past, when, before frequent burning over the last 800 years the steady state vegetation was dominated by these woody species above the regional treeline.

The majority of this country above 800m is extensive narrow-leaved snow tussock (*Chionochloa rigida*) grassland. Although the area is extensive, the tussock grassland does not have the stature and vigour of some of the adjoining properties. The ridges and sunny slopes have very open, small stature *Chionochloa rigida* along with blue tussock, *Poa colensoi* and *Festuca novae-zelandiae*. The herb diversity is relatively high, along with the presence of hawkweed, *Hieracium pilosella*. In some of the areas the *Hieracium* comprises 50% of the ground cover. The inter-tussock species are predominantly *Gaultheria macrostigma*, *G. crassa*, *Brachyglottis* sp. (b), *Anisotome aromatica* and *Drapetes dieffenbachii*. *Aciphylla aurea* is relatively common throughout much of the back block of the Burgan.

The upper small terrace margin of the Burgan Stream contain remnants of red tussock *Chionochloa rubra* spp. *cuprea* which is also found on the slopes above the Burgan Stream in the more fertile, moister hollows.

Significance of the Vegetation

The Burgan contains extensive areas of native vegetation of high value due to the wide ecological diversity present. The extensive intact plateau tussocklands are complemented with diverse shrublands, scrub, small pockets of low forest on bluffs, colluvial hillslope tussocklands and riverine gorges.

5 FAUNA

a Invertebrate Fauna

Much of this pastoral lease lies within the Great Moss Swamp area at the southern end of the Rock and Pillar Range in a "hybrid zone" with the Lammermoor Range to the south. Several scientific papers have highlighted the biographic importance of this area. Barratt and Patrick (1992) described the area as a biogeographic crossroads with both a high species diversity in various insect genera and a distributional limit for many taxa from the north, south, east and west. Patrick *et al* (1994) and Patrick (1992) discussed two moth genera, *Orocrambus* and *Notoreas* that are particularly diverse in this area and described new species. Barratt and Kuschel (1996) have

discussed the significance of the area for the broad-nosed weevil genus *Irenimus* of which seven species are found in this area. They describe four as new species. Additionally the stoner genus (larvae in freshwater) *Zelandobius* has its highest diversity in this area. The genus ranges over most of New Zealand.

Patrick (1994) highlighted the presence in this area of an autumn-early winter emerging moth fauna that is best represented nationally in this location. The familiar *Geometridae*, *Tortricidae* and *Hepialidae* are the most speciose.

Conclusions

It is clear the grasslands, wetlands, tors, shrublands and freshwaters of the Great Moss Swamp are particularly rich, in a New Zealand sense, for native invertebrates with widespread, Otago wide and a distinctive local element represented. This assemblage in total is nationally important.

The Burgan property contains strong elements of many of the key features of the Great Moss Swamp area. These are:

- (i) *Chionochloa rigida* grasslands with an extensive and dense admixture of *Cassinia fulvida* shrubland. Inter-tussock herbfield is generally rich with open heathland areas of particularly high diversity.
- (ii) Riparian grassland and shrubland of *Hebe odora*, mountain flax, etc.
- (iii) A range of freshwater systems from running streams, tarns, wetlands, particularly moss-bogs and seepages.
- (iv) Summit crest low shrubland of *Leonobete propinqua* associated with open areas of alpine herbfield particularly of *Celmisia prorepens*. The large mountain weta *Hemideima maori* is found here.
- (v) Tors both on the plateau crest and tumbling down the mid-slopes to the base. These tor systems have acted as important refugia for native biota, as well as adding a distinctive landscape element.

In addition the Burgan has these features both in abundance and excellent quality:

The *L. propinqua* shrubland is impressive and together with other diminutive shrubs are rich in a wide range of native insects including bugs, flies, moths and beetles. Patches of the shrub *Olearia bullata* frequenting damp areas on the plateau are similarly rich in native insects including moths,

bugs and wasps. All of these groups have species particular to this host and not another shrub species.

b Aquatic Fauna

Records from the Department of Zoology, University of Otago indicate that Burgan Stream has no fish species. Otago Fish and Game Council records indicate that Sutton Stream contains brown trout.

The Sutton Stream tributaries in the lower altitude areas of Burgan were surveyed. Brown trout occurred in both streams and no native species were encountered.

The Burgan property appears not to have any threatened freshwater fish and conservation values are low in that regard. The total absence of fish from Burgan Stream does raise the conservation value of this stream. Aquatic invertebrate faunas are richer and more abundant in the absence of fish and Burgan Stream will retain a significant invertebrate fauna.

c Vertebrate Fauna

(i) Reptiles

There are four lizard species known from the Burgan Stream area - *Oligosoma nigriplantare polychroma* (striped skink), *O. inconspicuum* (specked skink), *O. maccanni* (spotted skink) and *Hoplodactylus maculatus* (common gecko). The latter is of interest because of its large size compared to other Otago populations.

The three skinks species are common and widespread but the Burgan area is notable as it is one of only three areas where the three species are found sympatrically and one of only two areas where all three occur in large numbers. The Burgan area may be the northernmost extent of *O. inconspicuum*.

Burning, grazing and the growth of introduced plants such as pasture grass species would all be threats to the stability of the skink populations. The area is also important because it is the site where the most detailed study of New Zealand skinks in tussock grassland was carried out.

b Birds

Bird species include black-backed gull, pipit, skylark, Australasian harrier and the nationally threatened New Zealand falcon. The latter is the only species of note.

Significance of the Fauna

Invertebrate faunal values are considered to be of national biographic importance due to species richness and the distributional overlap of many species. Several species are new to science. The area is significant for its autumn-early winter emerging moth fauna.

Burgan Stream is valued for the absence of any fish species and its significant invertebrate fauna.

The lizard study site centred on Burgan Stream is of interest for lizard conservation and management applicable elsewhere in New Zealand grasslands. The presence of New Zealand falcon, a threatened species is important. It is a second priority species for conservation.

6 ARCHAEOLOGICAL AND HISTORIC VALUES

There is one recorded archaeological site on the pastoral lease. The New Zealand Archaeological Association site record S 154/2 describes a site where a bowl was found in a cleft in a rock face. The site is fully protected under the Historic Places Act.

The Strath Taieri and Great Moss Swamp were used by Maori for food gathering expeditions. Evidence suggests the Maori occupation of this site is post 16th century. The most important sites in the district are rock clefts and shelters from which an impressive array of textiles, fibres and wooden objects have been retrieved.

The Maori name for the Rock and Pillar Range is Patearoa.

The Old Dunstan Road alongside the western boundary of the property became established as a result of the 1862 Dunstan gold rush, but its original formation along the length of the lease boundary has been upgraded over time.

This high, direct and desolate route to Central Otago was used by thousands of miners in preference to the circuitous Pigroot and Clutha Valley routes. For many years it was also the quickest route for escorted gold coaches carrying bullion and criminals to Dunedin.

Pastoral Farming History

The southern Rock and Pillar Range was initially divided into two pastoral leases, Run 254 (originally called Logan Burn and then Rocklands) which was south of the Sutton Stream, and Run 213 which comprised the area between Rocklands and Taieri Lake Stations and was known as Strath Taieri or the Rock and Pillar Run.

Run 213 was initially taken up in the late 1850s by Harris and Innes, pastoralists from South Canterbury, but it is unclear whether they ever stocked it. Campbell Thompson was the first to successfully stock it. Around 1866 the original run was subdivided into two separate runs, 213A (which became Garthmyl Station) and 213B (Gladbrook Station). Thompson put all his sheep (10,200) on 213A and the new lessees of 213B, Alex Shepherd and William Gordon put 13,000 on Gladbrook. Gordon became the sole lessee but sold the lease to William Murray and John Roberts (of the stock and station firm Murray Roberts) in 1873. The name Gladbrook became associated with the run at this time.

Gladbrook was the foremost run in the area and was responsible for introducing many innovations including the first exotic tree plantations, first steam driven threshing mill, the first large scale rabbit poisoning (rabbits reached the area in the early 1870s) and also established important Angus and Clydesdale studs (Thompson 1977:32-42)

The Strath Taieri is not noted as a gold producing area apart from the northern zone where significant gold fields existed at Hyde and the Filly Burn. But gold was obtained from the Taieri and some of its tributaries but never in amounts to produce a "rush". In 1887 several parties of Chinese worked the bed of Deep Stream to the foot of the ranges (ibid.:123). The maps of the Reverend Don, the Presbyterian missionary to the Chinese miners, show six Chinese were working the Sutton Stream in the early 1890s.

7 EXISTING LAND STATUS

a Legal Roads

The Old Dunstan Road (formed) bisects the western part of the property. Gladbrook Road extends southwards from its formed alignment to become a farm access track which cuts through the north-eastern corner of the property. An unformed legal road branches off Gladbrook Road and travels eastwards to join with State Highway 87. Kidds Road extends from its formed alignment, traversing the northern and central parts of the property as a farm track before entering Rocklands Station (unformed) and eventually linking up with the formed Old Dunstan Road.

An unformed legal road extends off State Highway 87 to run along the south-eastern boundary of the property.

b Marginal Strips

There are no existing marginal strips along water courses within the property. On disposal, a marginal strip would need to be laid off on the Burgan Run side of Sutton Stream as is being done currently on the Rocklands Station side of the stream as a consequence of its tenure review.

c District Plan

The property is located within the Dunedin City and is covered by the local authority plans as follows:

Silverpeaks County 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.

Dunedin City Proposed District Plan

The relevant zoning is rural which provides for farming and forestry as predominant activities. Recreation is a controlled activity provided no significant buildings are involved. There is no recognition of natural landscape values except for a restriction on the removal of native bush or native vegetation in riparian zones.

d 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. Burgan Run is one of more than 20 pastoral leases on the range. Relevant sections of the special place Rock and Pillar 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 bectori*, 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 rakaiensis* 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. 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 (*Actiphyllo* 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 use of customary 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

RECREATION / ACCESS

a Access

This property stretches over 13 kilometres from the Old Dunstan Road in the west to Kidds Road in the east. These two roads have the potential to offer clear access points. It is likely that vehicle access (four-wheel drive only) would be possible from Kidds Road to the crest of the range via a farm track which eventually branches into a number of tracks near the top. It is also possible to reach the top of the range by taking a four-wheel drive (4WD) track through the centre of the property entering near trig A (902m) on the Old Dunstan Road.

b Uses

There are extensive opportunities for walking and mountain biking with a number of formed tracks suitable for both purposes. There is also potential for 4WD use on these tracks although, due to the vulnerable nature of the surrounding vegetation, it would be desirable to exclude 4WD vehicles except for emergency or maintenance purposes. Horse trekking on some tracks is an existing use. Pig hunting is an occasional pastime.

A hut is located approximately 1.5 km from the Old Dunstan Road along a 4WD track. In terms of recreational use this would be suitable for short stays. It is in good condition, however there is a reasonable amount of building debris and another old hut in the vicinity in a derelict state

Significance for Recreation

The summit plateau extending across to the Old Dunstan Road has potential for summer recreation activities such as walking/tramping and mountain biking, although most of these activities are perhaps more suited to higher parts of the Rock and Pillar Range. Vehicle use should be confined to formed tracks only.

9 MANAGEMENT CONSIDERATION

a Wild Animals

A small amount of pig rooting was observed in the creek beside the hut as well as an abundance on the eastern facing slopes. From the evidence seen, the property harbours a small and mobile population which moves between neighbouring properties. Periodic inspections should be sufficient to detect any changes in population and damage to vegetation, in which case control may be required.

b Animal Pests

A reasonable abundance of hare sign was observed throughout the property. Rabbits do not appear to be present at mid to high altitudes.

c Plant Pests

The property is generally free of woody species the exception being a single broom bush noted during the inspection. *Hieracium pilosella* and sweet vernal were significant in places but not considered a conservation management problem.

d Fencing

Generally fences comprised six wires and one barbed wire with flat standards. The fences appear to be fairly old but in adequate condition to contain stock in most cases. The boundary of the property appears to be entirely fenced along the western and north/north-eastern sides. The Sutton Stream (southern boundary) was not inspected. A number of internal fences exist in the higher altitude western half of the property. These are similar to the boundary fence in terms of construction, age and condition, the exception being the fence alongside the start of the FWD track which is a much newer fence with posts and lightning droppers. Fences on the lower, eastern half of the property were also new, with the addition of netting.

e Fire

The property experiences droughty periods in summer with consequent periodic high fire risk especially in tall tussocklands. Burning of tall tussocklands has been practised for pastoral management. Dunedin City Council is the rural fire authority except for a small eastern part of the property which falls within the 1 km fire safety margin around the Sutton Salt Lake Scenic Reserve. DOC is the fire authority within this safety margin. DOC is also the rural fire authority for the 1 km fire safety margin around the land taken for irrigation purposes surrounding the Loganburn Reservoir. This land is crown land which qualifies it for the status of "state area" under the Forest and Rural Fires Act 1977.

PART III

CONSULTATION

An early warning meeting occurred on 23 May 1996 with non governmental organisations (NGOs) representing public conservation/recreation interests.

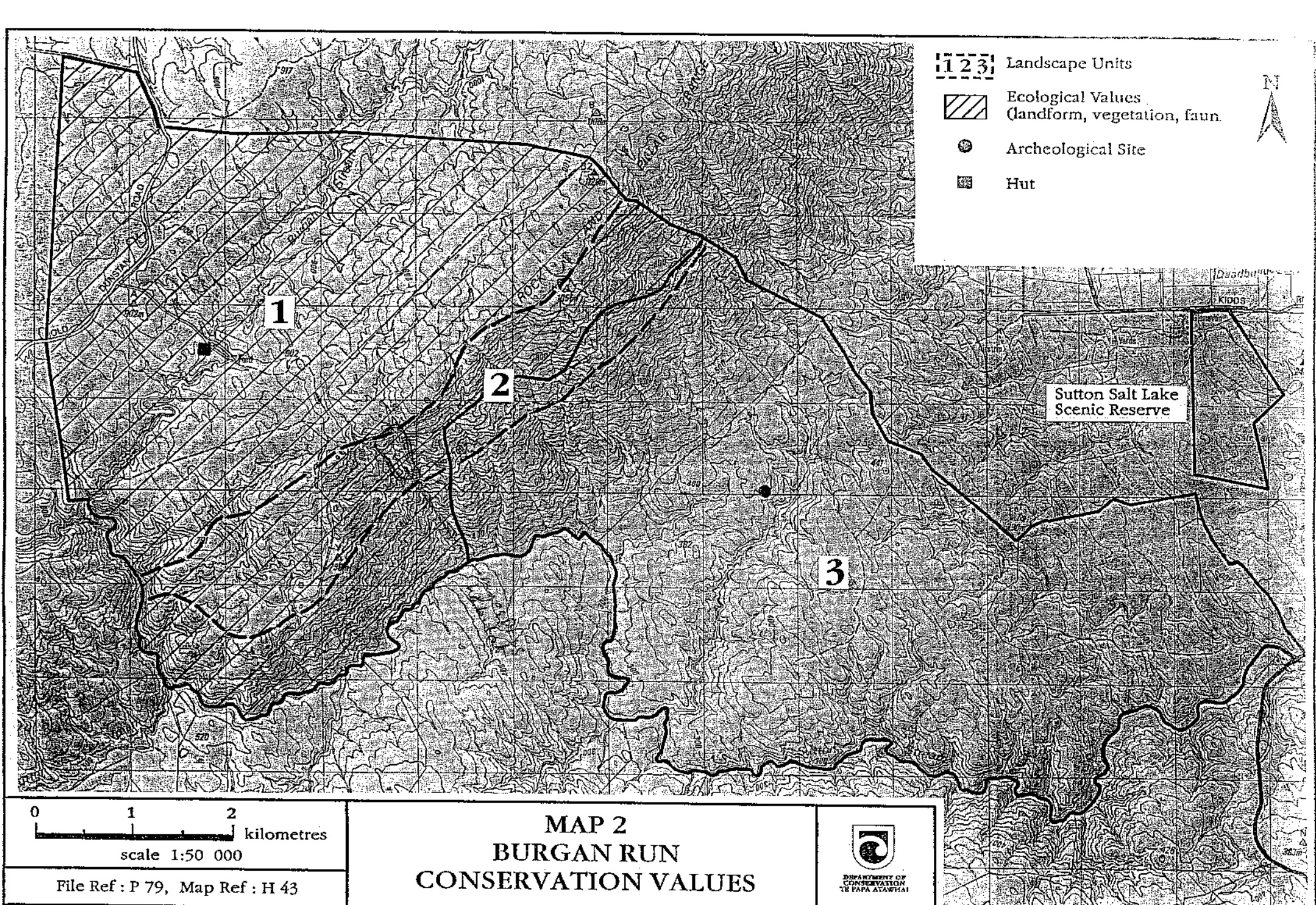
The following comments relevant to Burgan Run were noted:




- The summit plateau has high conservation interest with some recreation potential. Current recreation use is low.
- Any conservation land boundaries should be consistent with those identified on pastoral leases to the north along the range which have been assessed for tenure review
- The fence line at 700-800 metres across the eastern faces is seen as a likely boundary between conservation land and freehold land.
- Potential noted for horse trekking and mountain biking on the downlands.

In addition, written comments have also been received from Mike Floate, on behalf of the Federated Mountain Clubs as below:

- Land above 1000 - 1100m to go to DOC
- All LUC Class VIII and most Class VII land to go to DOC
- DOC/Freehold boundary to be consistent (landscape) with neighbouring/related runs (eg Brookdale)
- Public access (escape Route at southern end of Rock and Pillar Range) via 4WD track from Trig B2 (Info map 260 H43 : 758.136) and ford over Burgan Stream to the Old Dunstan Road
- Use of hut(s) near the Burgan Stream ford (Info map 260 H43 : 718.117)
- All water courses greater than 3m to have marginal strips laid off (Burgan Stream, Sutton Stream? and/or access for fishing in these waters

Trevor Howse, representing Ngai Tahu, has inspected the property and will report direct to the Commissioner of Crown Lands.



- 1 2 3** Landscape Units
-  Ecological Values
(landform, vegetation, faun.)
-  Archeological Site
-  Hut

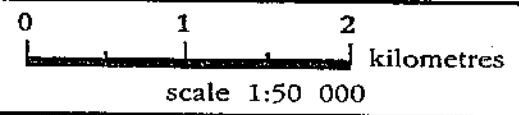


1

2

3

Sutton Salt Lake
Scenic Reserve



**MAP 2
BURGAN RUN
CONSERVATION VALUES**



File Ref : P 79, Map Ref : H 43