

Crown Pastoral Land Tenure Review

Lease name :Tenahaun

Lease number :PC 020

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.

Copied October 2002

DEPARTMENT OF CONSERVATION RESOURCE REPORT TO KNIGHT
FRANK LTD ON TENURE REVIEW OF TENEHAUN STATION PASTORAL
LEASE.

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Part 1: Introduction

Tenehaun pastoral lease is 2835 hectares and is located in the foothills west of Mt Somers in mid Canterbury. The homestead is located at the end of Hinds Gorge Road.

Tenehaun Station comprises the lower, southern half of the Moorhouse Range and lies adjacent to the Rangitata River and Rangitata Gorge.

Tenehaun is part of the Hakatere Ecological District in the Heron Ecological Region. This region was surveyed as part of the Protected Natural Areas Programme (PNAP) in 1984/85. This survey identified part of one area recommended for protection. This area is known as Priority Natural Area 15, Moorhouse Range.

PART 2: CONSERVATION RESOURCE DESCRIPTION

2.1 Landscape

2.1.1 Landscape Context

Tenehaun is part of the south west corner of a complex of five relatively low mountain ranges separating the mid-Canterbury Plains from the Heron and Clearwater basins. Mt Pukanui at the southern end of the Moorhouse Range is a feature of the property above the Rangitata Gorge.

In this location, Tenehaun is part of two broader landscapes. The west side of the Moorhouse Range and adjacent valley floor are part of the upper Rangitata Valley landscape. This landscape has been identified as having outstanding natural landscape value in a Canterbury Regional Study.

Due to "its immense scale and clarity of land forms...sense of wilderness and space is remarkable and the area has a particular place in high country literature."

The east and south aspects of the Moorhouse Range on Tenehaun are part of the "front range backdrop to the mid-Canterbury plains.

The south-east "front ranges" contrast dramatically with the highly modified Canterbury Plains. The deep rugged rocky Rangitata Gorge with its rich cover of shrubland and forest species is in direct contrast to the normally very open, flat braided Canterbury riverbeds.



2.1.2 Landscape Descriptions

Tenehaun can be divided into three broad landscape character types - discrete areas with unique and uniform biophysical, cultural and aesthetic attributes.

i) Rangitata Valley

This comprises the West Moorhouse Range and Rangitata Valley floor. The highest point is Mt Tripp (1378masl) in the north with Mt Pukanui (11145m) in the south. The Moorhouse Range is a steep glacially scoured greywacke range with rocky outcrops. Variable snow tussock covers the tops with short tussock scrub, and exotic grasses on the lower slopes. The valley floor comprises a complex of glacial features, moraine, outwash plain and glacial lake deposits, along with alluvial land forms. There are several swamps and tarns on the terraces. The majority of this area has been modified, although visually it retains a very natural appearance, especially when compared to nearby valley floor areas, which have been extensively developed.

ii) Rangitata Gorge

The true left side of the gorge on Tenehaun is steep and rocky with small minor flat areas. An old landslide is a feature near the mouth of the gorge. Part of the Canterbury Plains extends a short way into the gorge high above the river. In the gorge proper, dense native shrubland survives. Sunnier aspects on lower slopes and flat areas are relatively clear of shrubs and are in pasture grasses. This area has a highly natural appearance.

iii) South and East Moorhouse Range

This area is part of the "front range" landscape. These "front hills" are not as rugged as other parts of the Moorhouse Range and have a mix of vegetation types. The lower slopes are modified pasture grasses. Remnant forest/shrublands remain in gullies. While the higher slopes grade into snow tussock and *Dracophyllum* towards the tops.

2.1.3 Visual Values

Most of Tenehaun is visible from public roads. The front range is a backdrop to the Canterbury Plains. Mt Pukanui is visible from SH72 as a distinctive prominent skyline peak. This mountain, along with the Harper Range frames the view up the Rangitata, of the Southern Alps. The Rangitata Gorge is visually spectacular with its steep rocky features, dense shrublands and fast flowing rapids. The view from the Rangitata Gorge Road of the large alluvial fan at the entrance to Pudding Hill Valley is impressive.

Much of the Tenehaun retains a natural appearance. Fence lines are not obvious, 4WD tracks are few, and other human modifications are minimal.

2.2 Landforms and Geology

The Moorhouse Range is the main feature of the property, extending some six kilometres in a north-west/south-east line, with its highest point at 1378m (Mt Tripp). This range is

a moderately steep, debris mantled mountain of greywacke of the Balmacaan Formation, a rock type restricted to this locality. A fault line runs north-west/south-east through the "front ranges" and is manifested as obvious saddles midway along the ridges coming off the range.

The lower western and valley floor slopes have been shaped by Pleistocene glaciation. Five separate advances can be determined in Tenehaun. The earliest advances have left small isolated pockets of till high on the slopes of the Moorhouse Range. The advance has left small outwash terraces alongside the base of the range. The fourth advance has left much larger moraine and outwash surfaces. A large rectangular (Nabob) swamp has formed in a depression between these two ice movements. The most recent glacial advance has left a number of small kettle holes, terminal moraines, and outwash surfaces.

Other geomorphological features of note are the broad alluvium and fan deposits shaped by the numerous streams in the area and the Moorhouse Stream fan with its small double peaked hard rock hill is one of the most obvious features of the property.

2.3 VEGETATION

The vegetation pattern of Tenehaun is relatively simple, the property being largely based on the south-east end of the Moorhouse Range. The major communities are described in some detail below, followed by geographical summary.

2.3.1 Tall Tussocklands

These are all upper montaine to subalpine and found on the Moorhouse Range, except for a very small alpine zone around Mt Tripp.

Slim-leaved Snow Tussock (*Chionochloa macra*)

This community is restricted to an apron around Mt Tripp, the highest point on the Moorhouse Range. It is often co-dominant with narrow-leaved snow tussock (*C. rigida*), especially where the aspect is sunnier. On exposed knolls and spurs *C. macra* is rather remnant in nature, having been depleted by past burning and grazing; in those areas, the dominant plants have a low-growing life form and include *Dracophyllum pronum*, *Celmisia angustifolia*, mosses, lichens, *Kelleria dieffenbachii*, *Poa colensoi*, *Chionochebe pulvinaris*, *Phyllachne colensoi*, *Colobanthus acicularis* and *Leucopogon fraseri*.

On the shadiest aspects, *C. macra* occurs without *C. rigida* and has a cover from 50-80%. Naturalness in those areas was rated as high, tussocks being more than 1m high at times and few exotic plants being present.

In other *C. macra* communities, where *C. rigida* is co-dominant, total tussock cover is around 25-30% and naturalness is medium-high given the presence of more exotic plants. Other prominent plants include *Celmisia spectabilis*, *Poa colensoi*, *Dracophyllum uniflorum*, *Aciphylla aurea*, *Festuca novae-zelandiae*, *Leptinella pectinata*, subsp. *pectinata*, mosses, lichens, *Anisotome flexuosa*, *Luzula rufa*, *Rytidosperma setifolia*, *Brachycome sinclairii*, *Trietsetum antarcticum*, *Elymus rectisetus* and *Hymenophyllum villosum*.

Narrow-Leaved Snow Tussock (*Chionochloa rigida*)

This is the most extensive community on the Moorhouse Range and the property as a whole. It extends over all slopes, although on sunny slopes where it tends to be depleted it can be locally absent. On lower slopes, it tends to have been replaced by short tussock grassland, particularly where OSTD has occurred.

The cover of *C. rigida* is generally between 20-40% while some of the southern and eastern sides of the range are relatively dense. Other prominent plants include *Celmisia spectabilis*, *Hieracium pilosella* (locally up to 25-30%), *Poa colensoi*, lichens, mosses, *Aciphylla aurea*, *Festuca novae-zelandiae*, *Anthoxanthum odoratum*, *Agrostis capillaris*, *Leucopogon fraseri*, *L. colensoi*, *Dracophyllum longifolium*, *D. uniflorum*, *Deyeuxia avenoides*, *Luzula rufa*, *Hypochoeris radicata*, *Hieracium praealtum*, *Euphrasia zelandica*, *Anisotome aromatica* and *Raoulia subsericea*.

Other shady, wetter slopes and gullies where the community has been induced from forest and shrubland, Mountain flax (*Phormium cookianum*) and ferns (*Polystichum vestitum*, *Blechnum* "mountain" *Hypolepis millifolium* and *Blechnum penna-marina*) are extensive, along with scattered *Coprosma* and matagouri.

Part of RAP (Hakatere 15) from the Heron PNAP Survey extends from Brown Saddle down the western side of the Moorhouse Range. It was identified as an altitudinal sequence from *Chionochloa rigida* to Fescue tussock at lower levels.

2.3.2 Short Tussocklands

These communities characterise lower slopes and flats/terraces around the Moorhouse Range and Rangitata Valley. *Festuca novae-zelandiae* is most common, but *Poa cita* is also present, particularly on OSTD south-east slopes of the Moorhouse Range. OSTD has also been undertaken in the Rangitata Valley on the glacial landforms at the north-west end of the Rangitata Gorge and on adjacent lower mountain slopes. In these localities, exotic grasses are very common, particular browntop, sweet vernal, Yorkshire fog and cocksfoot.

Where OSTD has not occurred, *Hieracium pilosella* is often dominant with a cover of up to 50 per cent. Native plant diversity is typically low and prominent species include browntop, sweet vernal, blue tussock, *Leucopogon fraseri*, *L. muscosa*, *Hieracium praealtum* and *Pimelia oreophila*.

2.3.3 Wetlands

The two largest wetlands on the property are found on the glaciated surfaces of the Rangitata Valley. The largest is Nabob Swamp, located between two outwash terraces immediately west of the Moorhouse Range. It is largely fed by seepages and drains into Nabob Stream. It is approximately 150 x 500m, and is dominated by a mosaic of *Carex secta* and *Schoenus pauciflorus*. Other species include *Carex coriacea*, *C. geminata*, *C. sinclairii*, *Juncus articulatus*, *J. effusus*, *Hierochloe redolens*, toe toe, *Cortaderia richardii*, *Lemna* sp, and *Potamogeton cheesmanii*. *Coprosma propinqua* is scattered around the

perimeter and occasionally within the swamp itself. Naturalness is moderate/high with exotic plants only being a minor component, e.g. browntop, sweet vernal, Yorkshire fog and *Mimulus guttatus*.

A similar ecosystem is located further west on the valley floor, based around a small stream meandering through moraine hillocks. It is approximately 1000 x 150m wide, though the wetland is virtually absent in the most narrow section near the middle. It too is a mosaic of *Carex secta*, mixed *Carex* spp and *Schoenus pauciflorus* communities. There is some toe toe at the eastern end. This wetland is more accessible to sheep and not as wet - consequently it is a little more modified, naturalness being moderate - medium high. In places there is a riparian shrub zone of matagouri and *Coprosma propinqua*.

Nearby, to the south, there are three or four kettleholes among moraine hummocks. Three were visited and were found to be highly modified. OSTD and heavy grazing has resulted in an introduced grass turf zone around them, and their waters appear highly eutrophic. The most eastern one had a few relict patches of *Carex secta*, *Carex coriacea* and *Schoenus* but all were heavily grazed.

The only other wetlands of any size are located on terrace tops near the eastern end of the Rangitata Gorge, being fed by streams and seepages from the mountain slopes above. They are heavily grazed and the adjacent grasslands are highly developed.

2.3.4 Shrublands

Shrublands of several types are extensive across the property. In earlier times, forest would have been more extensive but pre European and European burning has altered this pattern.

The Rangitata Gorge contains the most extensive shrublands on the property. At its north-west end, the shrublands are more modified compared to the central and east end of the Gorge. The community is typically composed of matagouri, *Coprosma propinqua*, *Olearia virgata*, *Aristotelia fruticosa*, *Hoheria byallii*, *Olearia avicinniaefolia* and *Rubus squarrosus*. The introduced grasses, browntop, sweet vernal, Yorkshire fog and cocksfoot are common. The mountain slopes above Nabob Stream and around to the first major catchment in the gorge have been OSTD.

Further into the Gorge, the shrubland is more diverse and continuous. Additional typical species include *Griselinia littoralis*, kowhai, *Pittosporum tenuifolium*, Lancewood, *Hebe* spp, *Corokia cotoneaster*, cabbage trees and *Cassinia*. Open grassy patches support Maori onion, tutu, scotch thistle, shield fern, *Fuchsia perscandens* and *Myrsine divaricata* at times. Sycamore seedlings were noted below the track.

On the true left of the Rangitata River immediately below the Gorge, a larger terrace riser supports a continuous shrub community similar to those described above, and *Coprosma intertexta* was also recorded.

Shrublands are characteristic of most stream gullies. A typical example was visited on the west side of the Moorhouse Range above the Rangitata Valley. The community was

comprised of *Coprosma* spp, matagouri, *Aristotelia fruticosa*, *Hoberia byallii*, *Hebe* spp, *Olearia avicenniaefolia* and the fern *Polystichum vestitum*. Sweet brier was scattered through this community.

On the south-west facing footslopes nearby, patches of shrubland are commonly associated with talus outcrops. Dominant species include matagouri, *Corposma* spp, *Aristotelia fruticosa*, *Melicytus alpina*, *Corokia cotoneaster*, and the scramblers *rubus schmidelioides* and *Parsonsia capsularis*. The ground tier is dominated by exotic grasses *Hieracium pilosella*, lichens and the fern *Blechnum penna-marina*. Naturalness was moderate. A similar community was assessed during the PNAP Survey (site 1510) and received the same rating.

In the Rangitata Valley there is a dense area of grey shrubland on morainic landforms overlooking the Rangitata River. It is largely composed of matagouri, is not very diverse and has been induced to a considerable degree by OSTD.

Dracophyllum shrublands are scattered across the upper slopes and tops of the Moorhouse Range, being most extensive on shady aspects. Mountain flax and ferns are also extensive at the wetter, south-east end of the Rangitata Gorge, on shady, bluffed slopes.

On the eastern side of the Moorhouse Range, shrublands are associated with stream gullies and their associated gorges. Typical shrubs include *Coprosma* spp, kowhai, broadleaf, matagouri, *Olearia avicenniaefolia*, *Fuchsia excorticata*, *F. procumbens*, *Olearia arborescens*, *O. virgata*, *Hebe salicifolia*, *Pseudopanax colensoi*, Tutu, *Plagianthus regius*, *Pittosporum anomolus*, *Melicope simplex* and weeping mapou. A variety of ferns are present. What is most notable about one of these catchments is the presence of the threatened Canterbury Pink Broom (*Notospartium torulosum*). Approximately one dozen plants were associated with a small stream gorge.

2.3.5 Forest

Forest was undoubtedly more widespread in the past, indicators of its former distribution being the shrublands found in many gullies and on some south-facing slopes.

While scattered trees are found in a number of shrublands, there are two main forest remnants. The largest is found in the most eastern catchment of the Rangitata Gorge, just before the plains are reached. The catchment here is very steep and rugged and is heavily bluffed. Mixed broadleaf forest is associated with the stream gorge and associated lower slopes. Prominent trees include kowhai, broadleaf, lancewood, *Pittosporum tenuifolium*, *Fuchsia*, five finger, wineberry, and shrubs such as weeping mapou, *Coprosma linariifolia* and *Melicope simplex*. The diversity of ferns is a characteristic of the ground tier. forest regeneration is extensive except on easier slopes where stock access is easier. *Astelia nervosa* also occurs in less accessible parts. Naturalness in this community is medium-high.

The catchment of "Chapmans Stream" contains a similar forest community which is not as mature, but has a more closed canopy compared to remnant shrublands in adjacent

catchments. Regenerating lancewood is common and some broadleaf trees are quite large. Putaputaweta and cabbage trees were also present.

Geographical Summary

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Moorhouse Range

- Limited slim-leaved snow tussock, generally in good condition
- two catchments containing second growth forest
- remnant shrublands in many gullies, one with threatened Canterbury Pink Broom
- scattered *Dracophyllum* on upper slopes
- "grey shrublands" on lower slopes and talus, some OSTD
- short tussock grasslands on lower slopes, some OSTD

Rangitata Valley

- most extensive mixed shrublands on property, semi-continuous
- shrublands extend downstream beyond gorge on terrace riser.

Homestead Plains/Terraces

- highly modified grasslands, matagouri, shrublands and small wetlands.

2.4 Fauna

Tenehaun has a typical array of bird species that are normally found in open country. These are New Zealand pipit, skylark, yellowhammer, Australasian harrier and the New Zealand falcon. The shrublands support typical shrubland birds such as tomtit, greywarbler and silvereye. The wetlands host a range of wetland bird species, such as grey duck, New Zealand shoveler and black shag. There has been no record of any significant bird species despite the nearby Ashburton Lakes which host a number of rare and threatened bird species.

The common skink and gecko are present throughout Tenehaun. The nearby North Branch of the Hinds River hosts a variety of fish and it is presumed that the South Branch of the Hinds River and the numerous side streams also host some of these fish species which are upland bully, long-finned eel, common galaxids and brown trout. The nearby Rangitata River also contains salmon.

2.5 Historic

Tenehaun was once part of the Shepherds Bush which was taken up in 1854 by B and T Moorhouse. Tenehaun Station was born in 1889 when Shepherds Bush, along with other Canterbury runs were put up for auction. The original 16 room homestead was built in the 1860s but was washed away by the fury of the Rangitata in 1988. There are no known historical values on Tenehaun.

2.6 Existing Land Status

Tenehaun is bounded by Inverary pastoral lease in the east and University Endowment land (Mt Possession) in the north with the Rangitata River forming its western boundary. The land to the south is all freehold.

There are no marginal strips on any of the streams on the property. The Rangitata River has no marginal strip on its left bank.

An unformed legal road traverses along the tops of the Moorhouse Range south, to beyond Mt Pukanui. This unformed legal road links up with Browns Saddle and drops onto the Moorhouse flats where it runs down the valley to just north of the Rangitata Gorge. Two branches also run north along the Moorhouse Stream and north next to the Rangitoto River. None of these unformed legal roads follow existing formed farm tracks. Legal road provide legal access to the property's southern boundary and homestead area via the Hinds Gorge road.

Tenehaun fell under the umbrella of the Ashburton District Scheme and the whole property was zoned Rural B. This allows for intensive farming and forestry. Under local government restructuring, it is now under the Ashburton District Plan, which identifies the property as being Rural C (high country) which allows for extensive farming as well as providing for recreation and tourism opportunities.

2.7 Recreation/Access

The Hinds Gorge road provides legal access only to the property boundary. From this point, permission is required to use the farm tracks. The main access point is the farm track up through the Rangitata Gorge. This track links up with the Moorhouse fan and also climbs onto the Moorhouse Range via Brown Saddle.

Existing recreational use is relatively low. The Rangitata Gorge is used by kayakers and rafting companies, while fishermen enjoy stretches of the Rangitata River.

Potential exists for horse trekking, tramping along the Moorhouse Range and mountainbike riding, with the latter having potential to link in with through routes over Brown Saddle and up the Pudding Valley to the Ashburton Lakes.

2.8 Existing Management

Animal pests are generally not considered to be a problem on the property. Wilding Pines were observed on the Moorhouse Range and are known to occur on the nearby Peter Range. Scattered gorse is present in the most north-east catchment adjacent to Inverary and in the two catchments south of here, small areas of introduced broom occur. Gorse and broom are also found on a terrace at the mouth of the Rangitata Gorge. Himalayan honeysuckle was noted in the pink broom catchment. Sycamore was recorded below the farm track in the Rangitata Gorge.

PART III CONSULTATION

An informal NGO meeting was held on 26 September 1996 to discuss any issues relevant to the property. Issues were:

- Access to Moorhouse Range and Rangitata River
- Access through the Gorge
- Protection of the shrublands and tussock grasslands.

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Values

Tenehauu

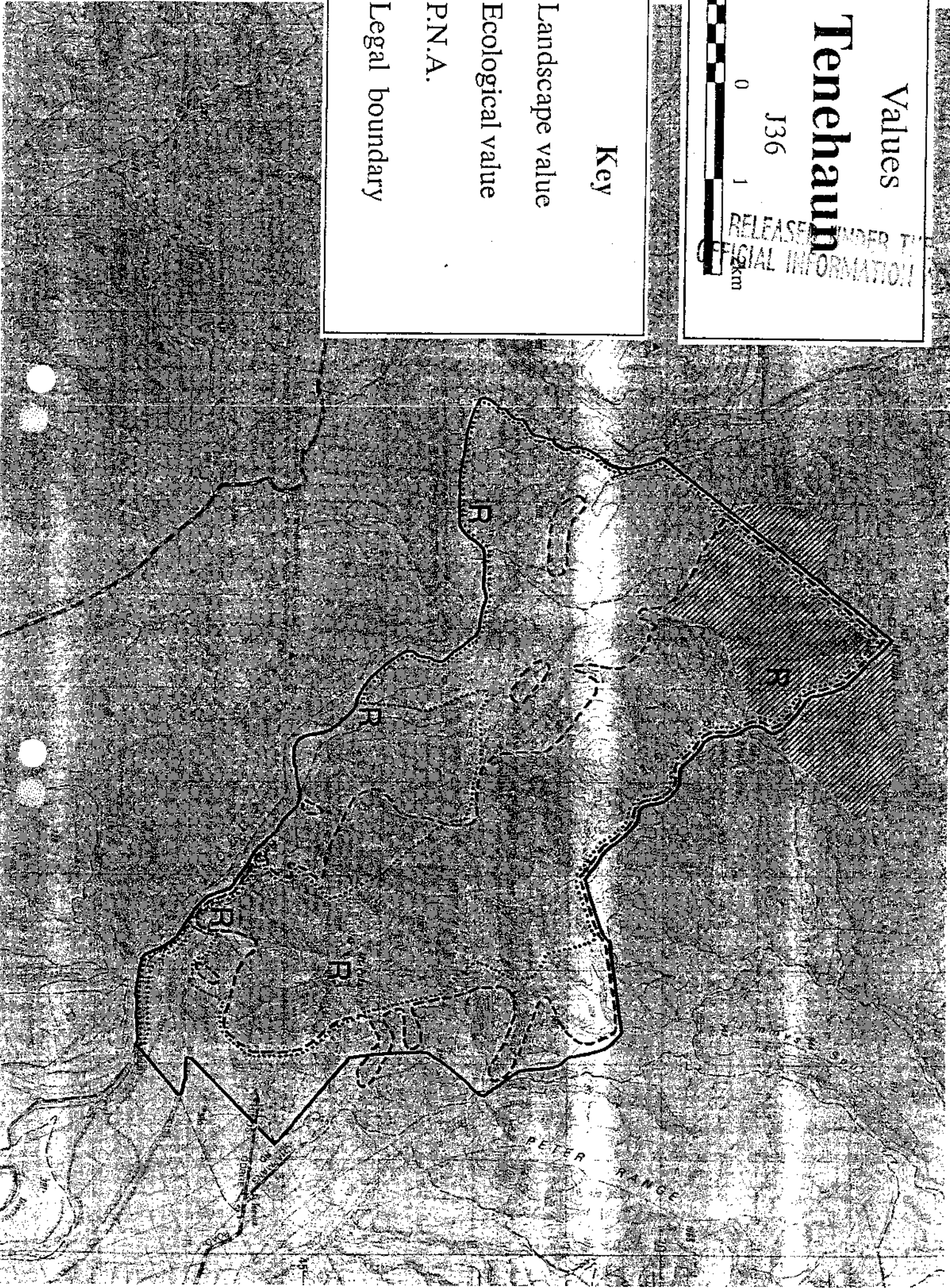
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Key

- Landscape value
- - - Ecological value
- ▨ P.N.A.
- Legal boundary



Topo/Cadastral
Tenehauin
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Key

— Legal boundary

