Toitu te whenua
Land Information
New Zealand

Crown Pastoral Land Tenure Review

Lease name : TWIN PEAKS

Lease number : PO 204

Due Diligence Report (including Status Report) - Part 2

This report and attachments results from a pre-Tenure Review assessment of the pastoral lease for the purpose of confirming land available for Tenure Review and any issues, rights or obligations attaching to it. The information is gathered from files and other sources available to the LINZ contractor.
Part of the information relates to research on the status of the land, resulting in a Status Report that is signed off by a LINZ approving officer. The remainder of the information is not analysed for relevancy or possible action until required, and LINZ does not guarantee its accuracy or completeness as presented.

July 09

PROPERTY NAME:	TWIN PEAKS No 137
IN THE MATTER OF:	The Soil Conservation and Rivers Control Act 1941.
AND IN THE MATTER OF:	A Land Improvement Agreement
BETWEEN:	Hamish Leslie Brown
AND:	The Waitaki Catchment Commission

H.L.B.

LAND IMPROVEMENT AGREEMENT

This AGREEMENT is made the fifteenth day of October 19 85 between the WAITAKI CATCHMENT COMMISSION (hereinafter called "the Commission" being the catchment authority for the area duly constituted under the Soil Conservation and Rivers Control Act 1941 of the one part AND

HAMISH LESLIE BROWN

(hereinafter called "the ~~Owner~~/Occupier" - delete whichever does not apply) of the other part.

WHEREAS the ~~Owner~~/Occupier is registered as proprietor of the estate or interest described in the first schedule hereto (hereinafter called "the first schedule") subject however to such encumbrances, liens and interests as are notified by memoranda underwritten or set out in the first schedule in the land described in the first schedule AND WHEREAS pursuant to sub sections (2A) and (3) of Section 30 of the Soil Conservation and Rivers Control Act 1941 the Commission is authorised to make payment as grantor to the owner or occupier for the purposes specified in this agreement.

NOW THIS AGREEMENT WITNESSETH that it is hereby agreed and declared by and between the parties hereto as follows:

1. IN consideration of the payment of a grant at the rates set out in the second schedule hereto paid or credited to him by the Commission the owner or occupier within or throughout (as the case may be) the periods specified in the second schedule hereto (hereinafter called "the second schedule") will carry out to the satisfaction of the Commission the works and requirements set out in the second schedule.

2. UPON completion of the said works or upon compliance with the said requirements to the satisfaction of the Commission within the period specified in Part I of the second schedule the Commission shall pay or credit to the owner/occupier a grant at the rates set forth in Part IV of the second schedule.

3. THE ~~owner~~/occupier throughout the currency of this agreement shall permit the Commission by its officers, servants and agents at all reasonable times to enter upon the said land for the purpose of inspecting the same and to ascertain whether the owner or occupier has complied with his obligations hereunder.

4. IF the ~~owner~~/occupier fails to carry out to the satisfaction of the Commission the works and requirements set out in the second schedule or shall otherwise default in complying with his obligations under this agreement the Commission by notice in writing delivered to or posted by registered post to the owner/occupier specifying the default may either at the sole option of the Commission require him to repay to the Commission all grants paid or credited to him hereunder, in accordance with the provisions set out in sub section (2A) and (3) of section 30 of the Soil Conservation and Rivers Control Act 1941 or within one calendar month after receipt of such notice to remedy such defaults in such manners as the Commission may herein require; and if following receipt of such notice the owner/occupier fails within one calendar month thereafter to comply with the requirements thereof it shall be lawful for the Commission by its servants, agents or contractors to enter upon the land and carry out all works necessary to secure compliance with the requirements of such notice and recover from the owner or occupier the cost of so doing by action at law or otherwise.

5. ALL the provisions of Section 30A of the Soil Conservation and Rivers Control Act 1941 shall apply to this agreement and in particular the owner/occupier

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cknowledges that he is aware that the agreement shall run at law with the land against the title to which it is registered so as to confer and impose on present and future owners or occupiers of the said land an obligation to observe and perform the agreement during their occupancy of the said land.

6. THIS agreement shall enure for a period of thirty-three (33) years from the date of execution hereof or for such shorter period as may be hereinafter agreed between the parties.

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FIRST SCHEDULE

PROPERTY NAME	TWIN PEAKS
PROPERTY OWNER/S	Hamish Leslie Brown
LEGAL DESCRIPTION	PASTORAL LEASE RUN No 2019 HAWK DUN AND AHURIRI SD's PART SECTION 9, BLOCK 7. TOTAL AREA 3532.9057 ha

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SECOND SCHEDULE

PART I RATES OF GRANT

The works as set out in Part IV of this schedule and described on the plan attached will be carried through to completion over a period of

THREE ..... (words)

3 ..... (numerals)

years and the requirements under this agreement will be complied with, subject to such amendments as may be mutually agreed upon in writing by the owner or occupier and the catchment authority.

PART II CONDITIONS

WORKS AND REQUIREMENTS	PERIOD DURING WHICH WORKS AND REQUIREMENTS APPLY	CONDITIONS
Stocking	For thirty-three years	No stock to be grazed in areas fenced out for conservation planting and/or retirement except for such emergency grazing as may be approved from time to time by the Department of Lands and Survey and the Waitaki Catchment Commission. Grazing in paddock 24 (Programme Map) where the oversowing is proposed is to be limited to the period of January to mid May for an equivalent of 127 su's. See Appendix 3 to see how this figure was realised. Grazing behind erosion control fence 1, 2 and 3 in paddocks 26 and 27 (Programme Map) is to be limited to the period of January to mid May for an equivalent of 267 su's. See Appendix 3 to see how this figure was realised.
Fencing	For thirty-three years	To be maintained in stockproof condition.
Stability Tree Planting and Windbreaks	For thirty-three years	To apply such silvicultural practices as required by Part II (a) and to ensure that the trees are kept in good condition. Mature trees may be utilised with the approval of the Commission, but shall be replaced as required by the Commission with such costs to be a first charge against the revenue received by the owner from such sales of wood.
Crossings	For thirty-three years or until relocated with the consent of the Commission	To be maintained so as not to obstruct normal and flood flows or to allow stock access to areas retired from grazing. This agreement does not include bridges or bridge abutments which are at all times the responsibility of the owner.
Structures		To be maintained as deemed necessary by the Commission.
Firebreak Access Tracks		"
Oversowing and Topdressing		"
Other		"

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PART II (a)

STABILITY TREE PLANTING AND WINDBREAK STANDARD REQUIREMENTS

(i) provide for blanking during establishment.

(ii) not "top" or allow to be "topped" any trees without the written consent of the Commission, however, lateral trimming of branches may be undertaken from time to time.

(iii) not cut down, or allow to be cut down any trees forming part of these works without the prior consent of the Commission.

(iv) maintain all fences of a windbreak to a standard that will ensure no stock enter the windbreak.

(v) remain the owner of the trees as well as any benefits accruing from the replacement of trees.

(vi) replace trees as required or on maturity.

(vii) where possible any programme of soil cultivation incorporates techniques known to minimise the risk of wind erosion.

PART III

MAINTENANCE

Maintenance is defined as the normal activities required to maintain works as set out in Part IV of this agreement.

The owner shall keep and maintain in good condition to the specification of the Waitaki Catchment Commission the works and areas affected by this agreement for the period of the agreement.

Should maintenance works attract grant rates then grant monies will be payable for maintenance works at rates which are applicable at the time of the works being carried out.

Where the agreement provides for retirement fencing by way of full grant for the cost of the fencing or where existing fencing is designated as retirement fencing in Part IV hereto then such fencing shall be eligible for subsidy for the normal maintenance requirements of such fencing and the Commission shall be responsible for the regular inspection of such retirement fencing and such inspections are to be carried out in the presence of the owner/owners and the Commission.

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PART IV

Soil and Water Conservation Plan No. 137

H. Brown, "Twin Peaks", Omarama

1.0 General Description

1.01 Introduction

This property has recently been purchased from W.W.H. Munro by H.L. Brown.

Previously the farm had been run on an extensive basis with large hill blocks and a few small paddocks nearer the house on fans and terraces for feed.

To resolve the soil and water conservation issues for this property intensified development is required on the fan and terraces and on the lower hills to ease pressure on the steeper, ecologically more vulnerable, higher altitude areas. Accordingly, the Waitaki Catchment Commission supports the enthusiasm of the new owner to develop, with its assistance, the property "Twin Peaks".

1.02 Location - Access

The homestead is located four kilometres south of Highway No. 8 adjacent to the Ministry of Agriculture and Fisheries Tara Hills Research Station, twelve kilometres west of Omarama. Access is via a metalled road from State Highway 8 or by a partially tar sealed road via Tara Hills from Omarama.

1.03 Legal Description

The property is:

Pastoral Lease Run No. 201 G in the Ahuriri and Hawkdun S.D.'s as part of Section 9, Block 7. Total area is 8,730.00 acres or 3532.9057 hectares. The property is owned by:

HAMISH LESLIE BROWN

Stock limits are presently set at 4000 sheep, of which 2000 may be ewes, and 85 cattle of which 60 may be breeding cows. These limits were set in July 1982.

2.0 Background Information

2.01 Climate

Sharp relief from 750m to 1400m and the westerly location of the property results in over 50% of the property receiving 1000mm or more annual rainfall. The risk of snow is fairly high over approximately 10% of the property. Frosts are common and soil temperatures are low for much of the year.

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Rainfall varies on the fans and terraces from 550 to 900mm. High temperatures and strong hot fohn winds from the west and nor-west cause periodic summer droughts. Unfortunately this is the most productive part of the farm with the greatest opportunity for intensified development.

2.02 Geology

The property is divided into three district geologic zones. The steep, broken Wether range is formed from low to medium grade schist and semischist. The lower front hills are formed from Torlesse greywackes and argillites. Superficial deposits are generally thick over these greywacke areas. On the steeper and higher schists these deposits are thinner and patchy. The fans and terraces are formed from Pliocene to recent alluvial gravels. This zone varies considerably in the proportions of gravels at or near the surface.

Major north-south faulting has shaped the Wether range. Minor tension faults have modified this major pattern. The uplift associated with this tectonism has resulted in oversteepened slopes prone to serious erosion. Shatter zones within the rock form localized severe erosion sites. Regolith on these oversteepened slopes is very unstable.

2.03 Land Inventory

The land inventory data is according to the Waitaki Catchment Commission land inventory data collection system.

Twin Peaks

Land Inventory

Soils	Depletion (ha)							
	0	1	2	3	4	5	Total	%
on Steeplands							1765	50
Kr Kaikoura	-	22	215	132	64	123	556	
Bm Benmore	-	-	79	279	90	-	448	
Tg Tengawai	-	260	124	37	-	-	421	
Or Omarama	-	8	112	220	-	-	340	
on Hills							630	18
IKrH Kaikoura Hill, cirque floor variant	-	-	33	-	-	-	33	
RtH Puketeraki Hill	-	2	15	-	73	217	307	
KlH Kirkliston Hill	-	3	59	-	-	-	62	
TgH Tengawai Hill	-	128	-	-	-	1	129	
NyH Meyer Hill	-	5	94	-	-	-	99	

on Rolling Lands & Fans								636	18
IKr	Kaikoura, cirque floor variant	-	-	17	-	-	-	17	
Rt	Puketeraki	-	3	14	-	-	54	71	
Kl	Kirkliston	-	-	38	-	-	-	38	
Ny	Meyer	-	-	45	-	-	-	45	
Hk2	Holbrook shallow	-	-	31	72	-	-	103	
Hk3	Holbrook stony	-	-	31	73	-	-	104	
Dy1	Dalgety deep	-	-	9	-	-	-	9	
Dy3	Dalgety stony	-	23	29	-	-	-	52	
Gk1	Glenrock deep	-	38	-	-	-	-	38	
Gk3	Glenrock stony	-	-	159	-	-	-	159	
on Terraces & Floodplains								504	14
Mk2	Mackenzie shallow	-	-	32	-	-	-	32	
Mk3	Mackenzie stony	-	-	32	-	-	-	32	
Cx1	Cox deep	62	33	-	-	-	-	95	
Ed1	Edwards deep	-	80	-	-	-	-	80	
Ed2	Edwards shallow	-	15	68	-	-	-	83	
Ed3	Edwards stony	-	-	26	-	-	-	26	
Sw2	Sawdon shallow	-	24	-	-	-	-	24	
Sw3	Sawdon stony	-	5	67	6	-	-	78	
Db	Dobson	17	-	-	-	-	-	17	
Bd3	Bendrose stony	-	-	37	-	-	-	37	
TOTAL		79	649	1366	819	227	395	3535ha	
%		2	18	40	23	6	11		100%

2.04 Soils

Steepland soils occupy 50% of the property. The wetter and steeper areas are high country Yellow Brown Earths, i.e. Kaikoura and Benmore soils which reflect the shady and sunny aspects respectively. The lower and drier areas are Yellow Grey Earths, i.e. Omarama and Tengawai soils which also reflect aspect differences as noted previously.

Hill soils cover 18% of the property. Those above 900m are upland Yellow Brown Earths, i.e. Kaikoura Hill, cirque variant, Puketeraki hill and Kirkliston hill soils. Below 900m one finds upland Yellow Grey Earths, i.e. Tengawai and Meyer hill soils. These soils reflect the moist/dry aspect differences as outlined previously.

Rolling land and fan soils cover 18% of the property. A fifth of these are above 3000 feet and are named as noted under the hill soils. Meyer Yellow Grey Earths occur on the exposed, dry steeper rolling lands. On the fans the soils are a mixture of generally deep and stony variants. Unfortunately 78% of the soils are stony or shallow and therefore of limited versatility for development.

The floodplain and terrace soils are a mixture reflecting their geomorphic origin. Swamp/wetland soils, i.e. Cox and Dobson, are found in depressions throughout the area. The other soils reflect the age of terrace and floodplain development with moderately well developed MacKenzie Yellow Brown Earths on the terraces. Sawdon old, moderately well developed floodplain soils; Edwards intermediate, less well developed Yellow Grey Earth soils and Bendrose young, immature, Recent floodplain soils.

Fertility reflects, (i) the age of the soils, (ii) the amount of rainfall and (iii) the altitude. These soils at high altitude with high rainfall are well leached and have very low to low fertility status. Hill soils at less than 900m with lower rainfalls have medium fertility and those of the fans, rolling lands, terraces and floodplains have medium fertility with certain soils exhibiting high natural fertility, i.e. Edward, Sawdon and Dobson soils.

All soils with perhaps the exception of the Cox and Dobson soils are prone to erosion if exposed through the loss of vegetative cover. Intense freeze/thaw action prepares the soil for subsequent severe sheet and wind erosion. This is occurring or has the potential to occur throughout the farm.

2.05 Relief

The following is a summary of the major landform types

Landform	Area (ha)	%
Steeplands	1765	50
Hills	630	18
Rolling Lands and Fans	636	18
Terraces and Floodplains	504	14

The Wether range at the rear of the property is generally about 1600m, rising to 1800m at various points. The foothills are approximately 750m and the terraces/floodplain area at the homestead at 500m.

2.06 Vegetation

Above 900m snow tussock is the major vegetation association with some blue tussock (Poa colensoi). Below 900m on the hill faces silver tussock (Poa caespetosa) and hard tussock (Festuca novaezelandii) form the major association. Part of this area has been oversown and topdressed with white, alsike and red clovers, (Trifolium repens; T. hybridum; T. pratense) and ryegrass (Lolium perenne et spp.).

On the terraces and valley floor there are two main associations:

i. On poor gravelly soils native grasses predominate; browntop (Agrostis tenuis) and sweet vernal (Anthoxanthum odoratum).

ii. On better soils direct drilling has been done; white, alsike and red clovers (T. repens, T. hybridum and T. pratense) and ryegrass (Lolium perenne et spp.). Matagouri and sweet briar form dense stands in some small gullies.

2.07 Erosion

Sheet and wind erosion are recorded throughout the region. Severe depletion is recorded on the High Country Yellow Brown Earth Kaikoura set of soils which are prone to severe sheet and wind erosion when exposed to frost heave. This includes the less steep, exposed, ridge crests. The foothills, fans, terraces and floodplains record moderate or slight depletion. Over most of these areas, however, the potential for severe erosion exists and will occur if the vegetative cover is depleted.

Past fires and heavy grazing pressures have been the cause for much of the severe depletion on the sunny faces at altitude in the Wether range.

Summary of Depletion Ratings

Severity	Area (ha)	%		
nil	79	2		
slight	649	18		
moderate	1366	40		
severe	819	23	)	
extreme	227	6	)	40%!
complete	395	11	)	

2.8 Land Use Capability

The Land Use Capability Units are according to the Waitaki Catchment Commission Land Use Capability assessment system (Appendix 1).

	Hectares	Class	Grazing Capability (s.u./year) Unimproved	Improved	Irrigated
Moderate limitations to arable use					
	136	IIIe9	408	680	2040
	96	IIIw2	192	1152	-
7%	232		600	1832	2040
Severe limitations to arable use					
	94	IVe10	94	329	1128
	24	IVs4	24	144	-
3%	118		118	473	1128

Moderate limitations to pastoral use

	400	VIe13	400	1200	-
	116	VIe14	116	290	-
	45	VIe16	27	158	360
	5	VIe17	5	15	-
	94	VIe18	47	235	-
	136	VIe21	54	340	-
	204	VIe22	82	204	-
	208	VIe23	52	260	2080
	3	VIe25	18	12	-
	17	VIw1	17	51	-
	283	VIs3	142	708	2264
	114	VIs4	68	228	-
46%	1625		1028	3701	4704

Severe limitations to pastoral use

	33	VIIe3	13	33	-
	55	VIIe8	16	41	-
	83	VIIe9	17	33	-
	79	VIIe10	32	32	-
	238	VIIe12	48	71	-
	92	VIIe13	12	12	-
	48	VIIe14	6	12	-
21%	728		144	234	

Land unsuited to pastoral use

	41	VIIIe2	-	-	-
	350	VIIIe3	-	-	-
	123	VIIIe7	-	-	-
	318	VIIIs3	-	-	-
23%	832				
TOTAL	3535		1890	6240	7872

A description of the Waitaki Catchment Commission land use capability units can be found in Appendix 1, and are illustrated on the Land Use Capability Map.

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2.9 Hydrology

Manuka Creek forms the western boundary of "Twin Peaks", and the Omarama Stream passes by the homestead. Presently the property has water rights for

(i) stock water and domestic from Manuka Creek at 56 l/s

(ii) a diversion in Omarama Stream for spray irrigation

- discharge at a maximum rate of 50 l/s
- divert at a maximum rate of 110 l/s when discharge for the Omarama Stream is greater than 270 l/s
- for spray irrigation 36 hectares. 502 ml/yr at a maximum rate of 110 l/s when the Omarama Stream discharge is greater than 270 l/s. This water right has not been taken up as yet.

Both these water courses are fully committed and permission for further abstractions is unlikely, especially if the National Conservation Order, presently under consideration, for the Ahuriri River is granted; limiting abstraction along its length and its tributaries to protect other purposes/uses of this water resource.

2.10 Subdivision

Twin Peaks currently has 16 small paddocks on the better terrace/floodplain soils which have a moderate to high natural fertility; 6 medium sized paddocks on the poorer terrace/floodplain soils; 1 large paddock on the front hill country and 1 large paddock on very poor floodplain soils and two large blocks on the steep and high Wether range. Further subdivision is required and will be dictated by topography, vegetation and grazing capability.

Another medium sized paddock will be created on the floodplain/terrace soils by separating good from poor Edwards soils, i.e. 15 into 15a and 15b. 4 further medium to large paddocks will be created on the lower and less steep front foothills, leaving 2, still large, though smaller than present, blocks, on the Wether range itself.

2.11 Access

The better and more intensively developed land is well serviced by tracks. The front hill country has reasonable access. However, access to the steep, broken Wether range country is difficult.

2.12 Weeds and Pests

Hieracium and matagouri are not, presently, a major problem. The programme of pasture improvement and a better grazing management system will ensure that they do not become a problem. Presently, rabbit numbers are low and not a serious problem.

2.13 Stock Production and Grazing Plan

Present livestock numbers are:

Number	Sheep, 1/2 bred	s.u.'s	Number	Cattle	s.u.'s
1850	breeding ewes	1850	30	breeding cows	120
1100	wethers	770			
950	hoggets	570			
60	ram killers	42			
3960		3232	30		120

Total stock units = 3352

The unimproved carrying capacity is (estimate only) 1890.

The improved carrying capacity with fertilizers is 6240 and the improved carrying capacity with irrigation and fertilizers is 7872. It is apparent that the carrying capacity of this farm could, with proper development and management double its production capacity, over and above any requirements to protect soil and water values.

Sheep		Cattle	
Lambing	95-100%	Calving	95-100%

Wool weights(kg) 4.2 merino wethers
3.4 half bred ewes
3.0 hoggets

Total weight = 16,000 kg

Fodder: hay = 7000 conventional bales from lucerne
1000 sold and 4000 fed out

Crops: 48 acres of malting barley. Kept 10 ton to feed hoggets.

The present grazing pattern is:

Ewes are tupped in two medium sized paddocks on the floodplain/terraces which have been direct drilled. They are then rotated among a number of small paddocks also on the floodplain/terrace part of the farm, with one month on the hill block prior to shearing. They are put out on the front hill country until weaning. They are wintered on the oversown and topdressed fans at the base of the hill country. Lambing occurs on the front hill country (1350 ewes) and in the terrace/floodplain paddocks (500 two-tooths and six-year olds). The lambs run in these blocks from October to February.

Hoggets are run together on fans, adjacent to Manuka Creek and at the base of the hilly country, over the winter until the following October. In November the two-tooth wethers are put onto the front hills adjacent to Manuka Creek and the two-tooth ewes onto the front hills adjacent to Clifton Downs property.

Wethers are put out onto the back, high hills until the following April/May and are autumned in the mid hill zone adjacent to Dunston Peaks property. They are wintered on the front hill country and on the oversown and topdressed fans at the base of the hill block.

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ews are grazed in those paddocks which contain wet floodplain soils and provide lush all year round pasture. These paddocks are adjacent to Clifton Downs.

3. SOIL AND WATER CONSERVATION WORKS

3.1 Land Management Issues

3.01 Hill/Mountain Zone

The main issues for the hill/mountain zone of the property are shown on the Hill/Mountain Management Issue Map.

(i) Barren Lands

These are the rocky bluffs and screes which have no actual or potential value for pastoral production.

(ii) Watershed Protection Lands

These are the areas noted as VIIIe2. They are non-eroding, vegetated areas above 1500m in good condition. They are thus important water storage areas. The production of dry matter is very low and insufficient to provide the basis for sustained and wise pastoral land use. However, any increase in vegetative cover can only enhance the water and soil regulating function of these areas. This increase can only occur with the exclusion of grazing animals.

(iii) Critically Eroding Land

These scattered areas have critical soil erosion problems. There is a high proportion of bare ground which is subject to intense frost heave action which promotes severe sheet and wind erosion over these areas. Enough soil remains for revegetation to be practicable. Without revegetation these areas would soon become barren lands. Revegetation is enhanced only when stock are limited in access.

(iv) Marginal Pastoral Land

This is the worst eroding Class VII land. Critical berms and wetlands are also included in this category. Although destocking is not required, careful stock/pasture management is needed to protect soil and water values both on and off site. Oversowing and topdressing or oversowing is also required.

(v) Safe Pastoral Land

This includes the best of Class VII land and all Class VI land. These units are usefully divided into shady and sunny aspects on the basis of grazing pressures and the resultant differences in the amount of bare ground i.e. the sunny faces are generally grazed harder and are therefore at risk with regard to resulting erosion. Oversowing and topdressing of bare sunny faces is required with erosion control fencing to separate out the shady/sunny faces and control grazing pressures on them.

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As is apparent from the Issues Map the zones are scattered within each other, therefore no soil conservation strategy to deal with the existing or potential erosion problem will be simple e.g. fencing to separate out all critically eroding areas from those that can be used more intensively is nonsensical. The question therefore arises how to control grazing in areas that many contain critically eroding areas?

3.02 Fan, Terrace, Floodplain Zone

The main issues on the fan, terrace and floodplain section of the property are shown on the Fan/Terrace/Floodplain Issues Map.

(i) The area of older floodplain soils with severe and moderate depletion ratings, for which the difficulties of implementing soil conservation measures are compounded by a soil aluminium level that prohibits the growth of many species.

(ii) Areas of severe depletion which will require oversowing and topdressing to provide an adequate vegetative cover against erosive winds. Because of the severe loss of the soil resource to date, no cultivation should be permitted in these units.

(iii) Moderate depletion units are in a critical state. With oversowing and topdressing and/or shelter the remaining good soil can be retained for productive uses at a later stage e.g. once shelter has been provided these areas could be cultivated but in the meantime they could be oversown and topdressed to provide an excellent grazing resource.

(iv) Minimal depletion areas are in general the best soils of the property for arable development and as such require protection from wind erosion in this case through the provision of windbreaks and the use of wise cultivation practices.

3.2 Soil and Water Conservation Problems

The conservation problem on "Twin Peaks" involves the following areas:

a. the critically eroding, severe to extremely depleted Class VIII land at high altitude. Sheet and wind erosion are the erosion problems.

b. the severely depleted Class VII. These are snow tussock areas which are severely sheet and wind eroded and are of marginal value for pastoral use.

c. the moderate to severely depleted sunny faces on Class VI and VII lands which suffer sheet and wind erosion.

d. the moderate to severely depleted fan and terrace soils which are Class VI.

e. the Class III and IV soils at risk to severe wind erosion when cultivated.

3.3 Soil and Water Conservation Objectives

a. to limit stock numbers on the critically eroding Class VIII land by strictly limiting stock numbers on blocks containing this Class.

b. to separate, as far as is practicable, the severely eroded and eroding Class VII land from the adjacent less erosion prone Class VI and VII lands.

c. to restrict grazing on the severely depleted Class VII land to a sustainable level.

d. to separate the moderate to severely depleted Class VI and VII sunny faces from the adjacent, shady, better vegetated faces.

e. to improve the vegetative cover on the marginal pastoral Class VII land, severely depleted sunny faces of Class VI and VII and the moderate to severely depleted fan and terrace soils of Class VI land.

f. the protection, from wind erosion, of arable Class III and IV areas.

3.4 Completed Works

There have been no subsidized conservation works to date on "Twin Peaks".

3.5 Proposed Work Programme

3.51 The programme is designed to separate the Class VIII and severely eroded Class VII from the better Class VII and the Class VI areas using erosion control fences. A partial programme of oversowing will improve the vegetative cover over a medium sized paddock which contains 43% terrain requiring revegetation. Because of the erosion control fencing stock water needs to be provided to some paddocks. Windbreaks are required over the terrace/floodplain area to protect the arable soils from wind erosion as they are more intensively developed for cropping and/or lucerne (Programme Map).

3.52 First Year

Job 1 is an erosion control fence to separate the steep, high altitude, critically eroding and marginal pastoral use lands from the safe pastoral areas on the front foothills, adjacent to Killermont, with a 3.7km erosion control fence.

Job 2 is an erosion control fence to fence out an area that, in combination with Job 6, will allow the revegetation of 43% of this area that is presently marginal pastoral or severely eroded land. Grazing limitations, as to the period of use, will be required to ensure that the vegetation cover does not again become depleted. A 0.9km erosion control fence will effect this result.

3.53 Second Year

Job 3 a 1.1km erosion control fence will separate an area of safe pastoral land from steeper, high altitude, marginal pastoral snow tussock land adjacent to Dunston Peaks. This will alleviate grazing pressure on this more sensitive, less well vegetated, higher country.

Job 4 is the provision of stock water to the lower, front hill blocks. This is now required because the erosion control fencing programme has denied stock access to Manuka Creek, their traditional watering source on the hill/mountain blocks. The extension of this system to other areas has productivity increase basis only and will be implemented at the cost of the landholder. Subsidised work will cover piping, of approximately 2.0km to the paddocks; two troughs, a concrete storage tank and an outlet pipe system from Manuka Creek to the tank.

Job 5 is the planting of three windbreaks of 1.45km total. They comprise one windbreak running northeast to southwest and two short offshoots running northwest to southwest. There is a definite need for two direction subsidised shelterbelts. The Ahuriri River gorge funnels gale force winds onto these plains from the northwest. The plains are also open to the northeast where winds from the alpine system are funnelled through the Lake Ohau region. Cultivation for lucerne and for crops put soils at a high risk of wind erosion.

3.54 Third Year

Job 6 is to oversow a new paddock which contains 43% severely eroded, high altitude, snow tussock ground. These 73ha will be oversown with sulphur-molybdate coated Maku lotus seed at 3kg/ha without any fertilizer. Due to slow annual growth this block will need to be controlled through the use of a limited grazing period policy. Should the landholder apply fertilizers at a later date and maintain this increase in fertility and accompanying amount of growth then the limitation may be lifted at the discretion of the Soil Conservator and Department of Lands and Survey jointly.

Job 7 is to plant a windbreak of 1.33km that joins up two existing windbreaks so that paddocks used for lucerne and cropping are protected. An offshoot from the main break is to account for the two significant wind directions in terms of erosion, as noted under Job 5.

Job 8 is a windbreak of 0.4km which is positioned to protect a paddock, that is normally cultivated, from the winds that blow out of the Ahuriri River gorge.

* For windbreak species and design refer to Appendix 2.

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4.2.B

3.6 Probable Future Works

Main items that remain from which future works might arise include:

(i) further erosion control fencing to subdivide the sunny and shady faces on the front, lower, hill country. Three, of approximately 3.7km total, would appear to be the most likely programme.

(ii) further oversowing of critically eroded land at high altitude, behind the proposed erosion control fences of this plan.

(iii) more windbreaks on the terraces/floodplains to construct a comprehensive, effective windbreak pattern around all those areas that might, in the future, be cultivated, but which are presently not cultivated.

(iv) revegetation of the aluminium toxic soils to prevent further severe erosion.

3.7 Programme Costs

All costs include 5% contingencies.

Total cost and total grant figures include 25% fees.

Job No.	Type	km/ha	Unit Cost	Net Total	Net Rate	Net Grant	Total Cost	Rate	Total Grant	Local Share
Yr 1										
1	ECF	3.7	3618/km	13388	50%	6694	16735	60%	10041	6694
2	ECF	0.9	3672/km	3305	50%	1653	4131	60%	2478	1653
Yr 2										
3	ECF	1.1	3597/km	3957	50%	1979	4946	60%	2967	1979
4	SW	-	-	6400	50%	3200	8000	60%	4800	3200
5A	WT	0.79	3508/km	2771	50%	1386	3464	60%	2078	1386
5B	WT	0.66	3508/km	2315	25%	579	2894	40%	1158	1736
Yr 3										
6	OS	73ha	21/ha	1533	50%	767	1916	60%	1149	767
7	WT	1.33	3493/km	4646	50%	2323	5807	60%	3484	2323
8	WT	0.4	3500/km	1400	50%	700	1750	60%	1050	700
TOTAL:				39715		19281	49643		29205	20438

3.8 Benefits

For the expenditure of 49,643, including the runholders contribution of 20,438, the following benefits are anticipated:

(i) improved vegetative cover on high altitude, severely depleted soils following:

(a) erosion control fencing and spelling of the hinterland with block stock limitations

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(b) oversowing with Maku lotus on strategic areas

(ii) reduced wind erosion hazard on arable soils on the terrace/ floodplain units.

The local share requirements of this plan will be financed out of income. Improved stock performance as a result of these works is anticipated to produce the required rate of return.

3.9 Legal Agreement

A legal agreement will be operative if the plan is approved and subject to the owner's acceptance of any conditions of approval.

Conditions

3.91 Windbreaks must be managed by pruning or side trimming to maintain permeability.

3.92 The Commission reserves the right to maintain the windbreak at the landholder's cost where mismanagement occurs.

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APPENDIX 1

Land Use Capability Unit Descriptions

Class III		Moderate limitations to Arable use.
	IIIe9	
	IIIw2	
Class IV		Severe limitations to Arable use.
	IVe10	
	IVs4	
Class VI		Moderate limitations to Pastoral use.
	VIe13	
	VIe14	
	VIe16	
	VIe17	
	VIe18	
	VIe21	
	VIe22	
	VIe23	
	VIe25	
	VIw1	
	VIs3	
	VIs4	
Class VII		Severe limitations to Pastoral use.
	VIIe3	
	VIIe8	
	VIIe9	
	VIIe10	
	VIIe12	
	VIIe13	
	VIIe14	
Class VIII		Land unsuited to Pastoral use.
	VIIIe2	
	VIIIe3	
	VIIIe7	
	VIIIs3	

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APPENDIX 1

Land Use Capability Unit Descriptions

Class III Moderate Limitations to Arable Use.

IIIe9 Mid-altitude terraces and fans, 300 to 600 metres altitude; Grampians, Simons, Tekapo, Omahau, Bendrose and Pukaki soils, mostly deep, supporting silver/fescue tussock grassland. Suited to intensive grazing at 3 stock units per hectare, developable by dryland methods to carry 5 stock units per hectare, and by irrigation to carry 15 stock units per hectare. Suited to productive forestry. Suited to limited rotational cropping, requiring windbreaks. The major limitation to pastoral use is the short growing season and summer drought; wind erosion hazard and summer drought are moderate limitations to arable use.

IIIw2 Terraces and wet lands, 200 to 400 metres altitude; Cox soils, mostly deep, supporting rushes, sedges and flax. Suited to intensive grazing at 2 s.u./ha, cropping in rotation with pasture. Drainage will be necessary where not in conflict with wildlife or flood control requirements. Periodic wetness and cold winters are moderate limitations to arable use.

Class IV Severe Limitations to Arable Use.

IVe10 Dry flat floodplains and terraces in the Mackenzie basin, 350 to 750 metres altitude; Bendrose, Pukaki, Simons and Sawdon soils, medium fertility, supporting a fescue tussock grassland. Suited to limited fodder cropping, hay and intensive grazing at 1 su/ha. Developable by dryland methods to carry 3.5 su/ha and with irrigation to carry 12 su/ha. Moderately suited to production forestry. Major limitation to pastoral and forestry uses is summer drought and cold winters. Weak soil structure causes the wind erosion hazard to be a severe limitation to any use which involves cultivation.

IVs4 Upland floodplains, 350 to 750 metres altitude; Bendrose, Sawdon and Eweburn soils, shallow and stony, supporting fescue tussock, matagouri and some sedges. Suited to intensive grazing at 2.5 stock units per hectare, and developable to carry 6 stock units per hectare with cultivation, windbreaks and fertilizer. Shallowness and stoniness of soil are major limitations to pastoral use; arable use is severely limited by shallowness, stoniness and relatively low fertility.

Class VI Moderate Limitations to Pastoral Use.

VIe13 Lowland dry hygrous YGE and YGE/YBE intergrade hills and steeplands, to 1050 metres altitude. Tengawai, Spylaw and Kakahu Hill soils in good condition (depletion rating 1) with silver/fescue tussock grassland and some scrub. Suited to semi-intensive grazing at 1 stock unit per hectare, and suited to productive forestry on easier slopes. Aerial oversowing and topdressing and subdivision fencing would allow pastoral development to carry up to 3 stock units per hectare.

VIe14 Lowland dry hygrous YGE and YGE/YBE intergrade hills and steeplands, to 1050 metres altitude. Tengawai, Spylaw and Kakahu Hill soils, in moderately good condition (depletion rating 2) with silver/fescue tussock grassland and some scrub. Suited to semi-intensive grazing at 1 stock unit per hectare, and suited to

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productive forestry on easier slopes. Oversowing and topdressing and subdivision fencing would allow development of controlled grazing up to 2.5 stock units per hectare.

VIe16 Middle altitude rolling and sloping lands, 200 to 750 metres altitude. Meyer, Dalgety, Tekapo and Kurow soils, supporting fescue tussock grassland and some matagouri. Suited to semi-intensive grazing at 0.6 stock units per hectare and developable to carry 3.5 stock units per hectare with oversowing, topdressing, fencing and stock water supply. Wind erosion hazard and drought are the major limitations to pastoral use. Moister sites are suited to productive forestry.

VIe17 Shady, mid-altitude hill slopes, 200 to 900 metres altitude. Meyer Hill, Kurow Hill, Tiroiti Hill, Blackstone Hill and Tekapo Hill soils, supporting fescue tussock grassland. Suited to semi-intensive grazing at 1 stock unit per hectare, and developable to carry 3 stock units per hectare with oversowing, topdressing and fencing. Suited to production forestry with establishment difficulties. Moderate sheetwash and wind erosion hazard and drought are the major limitations to pastoral use, but are generally less severe than on VIe18.

VIe18 Sunny mid-altitude hill slopes, 200 to 900 metres altitude. Meyer Hill, Kurow Hill, Tiroiti Hill, Blackstone Hill and Tekapo Hill soils, supporting fescue tussock grassland with some matagouri. Suited to semi-intensive grazing at 0.5 stock units per hectare, and developable to carry 2.5 stock units per hectare with oversowing, topdressing and fencing. Moderate wind erosion hazard and drought are the major limitations to pastoral use.

VIe21 Dry sub-hygrous yellow grey earth steeplands, to 1050 metres altitude. Omarama and Arrow soils in moderately good condition (depletion rating 2) with fescue tussock grassland and some scrub. Suited to semi-extensive grazing at 0.4 stock units per hectare, but responds well to O.S.T.D. to carry up to 2.5 stock units per hectare with subdivision fencing. Lucerne establishment is possible in wet seasons.

VIe22 Dry sub-hygrous yellow grey earth steeplands, to 1050 metres altitude. Omarama and Arrow soils, severely depleted (3) with fescue tussock grassland and some scrub. Suited to semi-extensive grazing at 0.35 stock units per hectare, but developable to 1 stock unit per hectare with O.S.T.D., fencing and temporary spelling. Severe scree and wind erosion are limitations to pastoral use, and scrub can hinder stock access, necessitating light cattle grazing.

VIe23 Sub-hygrous upland terraces, 250 to 900 metres altitude; Mackenzie, Glenbrook and Larbreck soils, shallow and stony, supporting fescue tussock grassland. Suited to extensive grazing at 0.25 stock units per hectare, developable to carry 1.25 stock units per hectare by dryland methods, and up to 10 stock units per hectare using irrigation. Moderately suited to productive forestry. Major limitations to use of these light, stony soils are wind erosion hazard, summer drought, low fertility, and high permeability causing rapid soil moisture depletion and requiring large amounts of irrigation water.

VIe25 Rolling mountain and hill tops, 600 - 1100 metres altitude; Teviot and Kirkliston soils, with snow tussock grassland, depletion rating 0-2. Suited to semi-extensive grazing at 0.6

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stock units per hectare, and developable with fencing and aerial over-sowing and top-dressing to carry up to 4 stock units per hectare. Marginally suited to productive forestry. The favourable moisture regime on these sites renders them at least as suitable for pastoral development as adjacent, lower dryer sites. The major limitations to pastoral development are wind erosion hazard, low fertility and cold winters with high snow risk.

VIs3 Drier upland terraces and fans, 350 to 900 metres altitude. Ranfurly, Grampians, Dalgety, Glenbrook, Pukaki and Mackenzie soils, shallow and stony, supporting fescue tussock grassland. Suited to semi-extensive grazing at 0.5 stock units per hectare, and developable to 2.5 stock units per hectare with dryland techniques. Could be developed to carry 8 stock units per hectare with irrigation and lucerne; water usage would be relatively high, however, and windbreaks and stock water would be required. Suited to production forestry, with a windthrow hazard. Stoniness and high permeability of soil are major limitations to pastoral use.

VIs4 Upland and floodplains 300 to 1050 metres altitude; Tasman, Bendrose and Eweburn soils, shallow and stony, supporting fescue tussock and matagouri. Suited to semi-extensive grazing at 0.6 stock units per hectare, and developable to 1 stock unit per hectare with fencing, fertilizers and scrub control. Drought and wind erosion not a problem; major limitations to pastoral use are shallowness and stoniness of soil. May be required for river control or water quality control purposes.

VIw1 Swamps and wetlands, up to 900 metres altitude; Willowbridge, Dobson and Braemar soils, wet and peaty, supporting rushes, sedges, niggerheads and waterweeds. Suited to semi-intensive grazing at 1 s.u./ha, and developable to carry 3 s.u./ha. Unsuited to cultivation or productive forestry. These sites are valuable as stream flow regulators and bird habitat, and pastoral development would be at the expense of these values. In their undeveloped state, the main limitations to pastoral use are wetness and predominance of plants of low pastoral value.

Class VII Severe Limitations to Pastoral Use.

VIIe3 Dry sub-hygrous yellow grey earth steeplands in poor condition; Omarama and Arrow soils. Severe erosion hazard plus regular drought limits carrying capacity to 0.4 stock units per hectare on unimproved sites, although careful management could at least double this. Limited cattle grazing to maintain access through scrub is a viable and necessary alternative to burning, and spring/summer spelling is necessary.

VIIe8 Rolling mountain tops from 900 to 1500 m altitude; Puketeraki, Carrick, Kirkliston and Teviot soils, with snow tussock grassland. Suited to summer grazing at 0.3 stock units per hectare developable to 0.75 stock units per hectare with fencing and grazing control. Severe wind erosion hazard, needs protection from fire. Generally unsuited to productive forestry.

VIIe9 Strongly rolling mountain tops and high country hills from 900 to 1350 m altitude; Puketeraki Hill, Carrick Hill, Kirkliston Hill and Teviot Hill soils, with snow tussock grassland. Suited to summer grazing at 0.2 stock units per hectare, developable to 0.4 stock units per hectare with fencing and grazing control. Severe sheetwash and wind erosion hazard, needs protection from fire.

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Unsuited to productive forestry.

VIIe10 Steep mountain slopes from 750 to 1350 m altitude; Benmore and Dunstan soils in good condition, depletion rating 1- 2, with snow tussock grassland. Suited to autumn grazing at up to 0.35 stock units per hectare. Severe sheetwash and wind erosion hazard, needs protection from fire.

VIIe12 Steep mountain slopes from 750 to 1350m altitude; Kaikoura soils in good condition, depletion rating 1 - 2, with snow tussock grassland. Suited to autumn grazing at 0.3 stock units per hectare. Severe sheetwash and wind erosion hazard (worse than VIIe10), needs protection from fire and overgrazing.

VIIe13 Steep greywacke mountain slopes from 100 to 1350m altitude. Kaikoura soils in poor condition, depletion rating 3, with depleted snow tussock grassland. Suited only to emergency grazing during droughts, at 0.13 stock units per hectare. Present depletion and erosion hazard are very severe limitations to pastoral use of this land, whose primary use should be for watershed protection.

VIIe14 Steep mountain slopes from 750 to 1250 m altitude. Benmore and Dunstan soils in marginal condition, depletion rating 3, with snow tussock grassland. Suited only to occasional permit grazing at about 0.12 stock units per hectare. Severe sheetwash, wind and scree erosion, with some gullies restricting the use of this land, which must be protected from fire and overgrazing.

Class VIII Land Unsuited to Pastoral Use.

VIIIe2 Mountain slopes 1350 to 1700 metres altitude. Kaikoura, Dunstan, Benmore, Puketeraki, Carrick, Kirkliston soils, in good condition, depletion rating 1-2, with snow tussock grasslands. Suited only to watershed protection, and such compatible secondary uses as tramping, skiing, etc. Vegetation includes little that is palatable; should be retired from grazing.

VIIIe3 Mountain slopes 900 to 1700 metres altitude. Kaikoura, Dunstan, Benmore, Puketeraki, Carrick and Kirkliston soils undergoing active erosion, but with some soil remaining upon which revegetation could be encouraged. This land requires retirement from pastoral use; O.S.T.D. and other revegetation techniques may be applied where warranted.

VIIIe7 Mountain slopes, 900 to 2200 metres altitude. Alpine, Kaikoura, Dunstan and Benmore soils, eroded completely to scree. These lands are an active and continuing source of detritus, with revegetation not possible with known techniques. The few alpine herbs should be protected by retirement from pastoral use.

VIIIs3 Mountain slopes and tops, 1200 to 2200 metres altitude. Alpine, Obelisk, Kaikoura, Benmore, Dunstan, Puketeraki situations, with no soil remaining, only steinfelder and wind erosion pavements. No active scree erosion, and treatment neither necessary nor possible. Unsuited to pastoral use due to lack of vegetation.

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APPENDIX 2

Windbreaks

Suitable species to be used in this area are outlined below with their growth characteristics.

	Fast	Medium	Slow
Conifer	Cupressocyparis leylandii hardiest sites	Pinus nigra P ponderosa	C antlantica C deodora C torulosa hardiest sites
Deciduous	Betula papyrifera B verucosa/alba Alnus glutinosa A incana		Juniperus chinensis Eucalyptus stellulata Quercus palustris

Two row windbreaks (diagram of Appendix 2) can be either all conifer, all deciduous or a combination of both. The final choice will depend on the ability of the windbreak to work effectively. The above species are some of these recommended by the New Zealand Forest Research Institute, Rangiora, for the high country.

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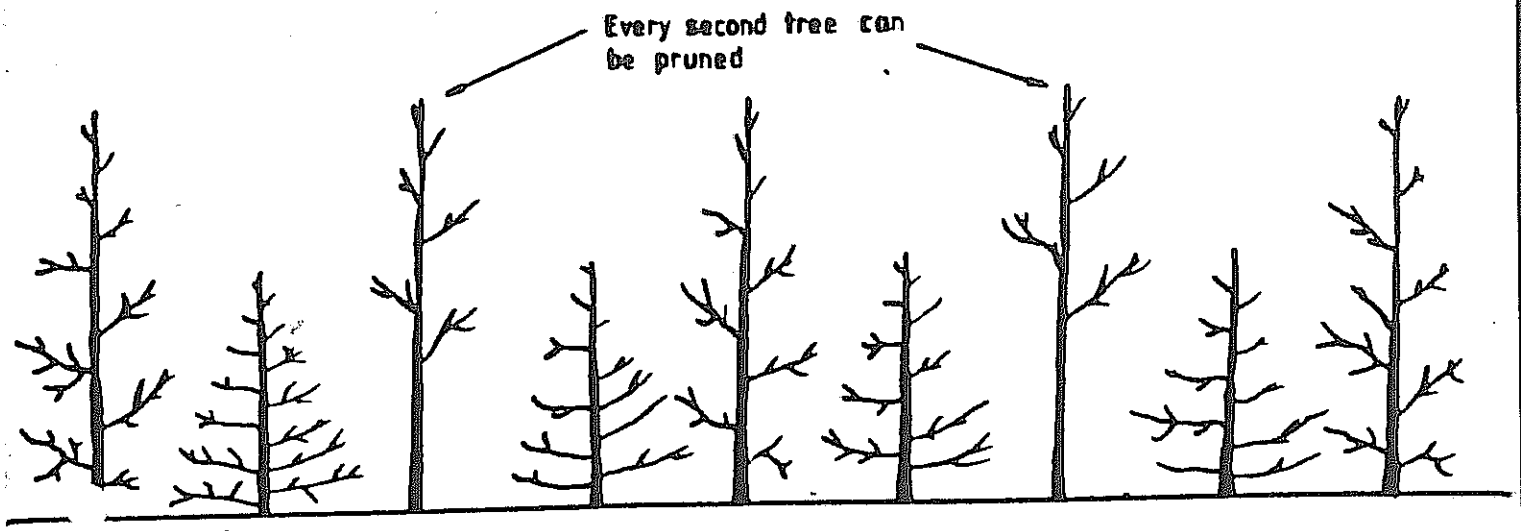
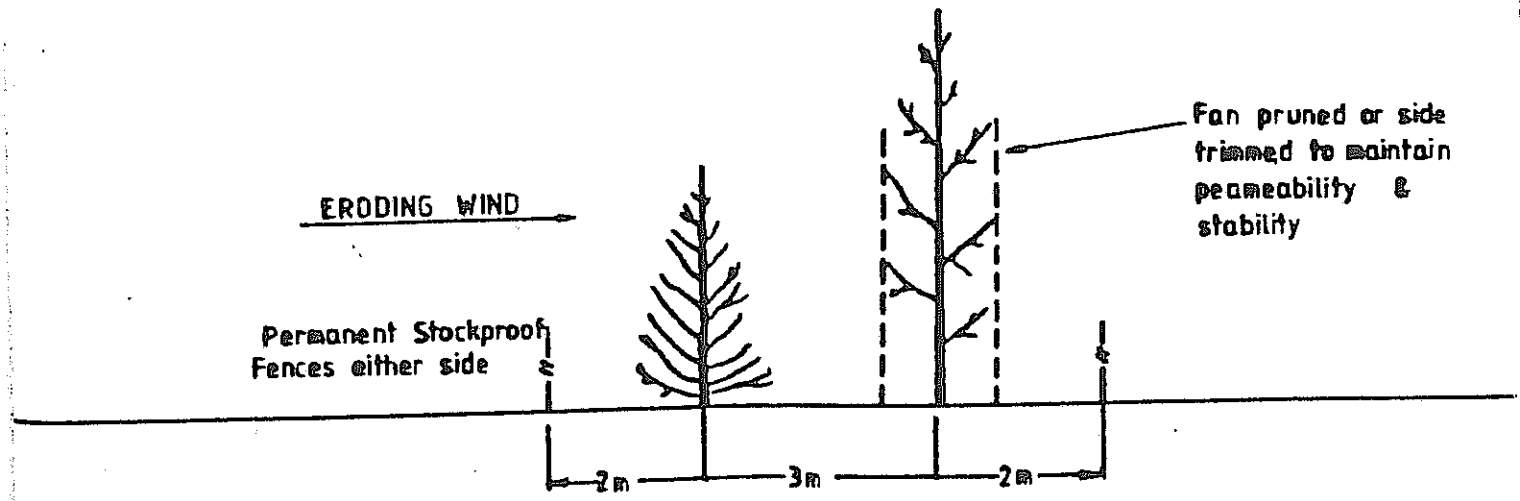
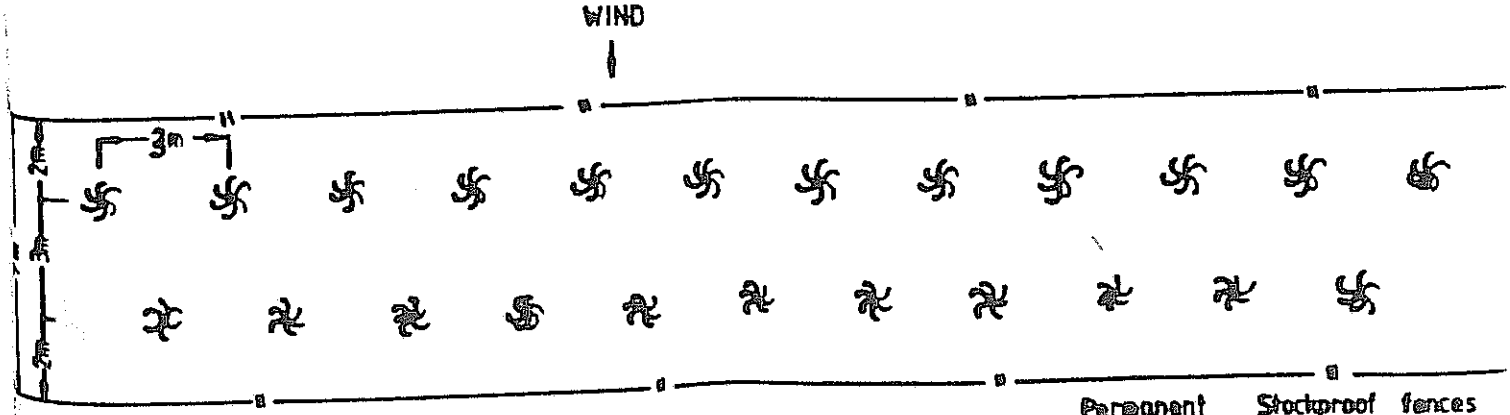
ECOMMENDED DESIGN FOR:

TWO ROW SHELTERBELTS







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APPENDIX 3

Paddock 24

Stock unit figures are derived from Land Use Capability Units carrying capacity assessments. Note: Class VIII has no carrying capacity per se.

L.U.C. Unit	Area(ha)	Carrying Capacity Rate		Total s.u.	
		Unimproved	Improved	Unimproved	Improved
VIe13	33	1	3	33	99
VIe14	14	1	2.5	14	35
VIe21	7	0.4	2.5	3	18
VIIe8	23	0.3	0.75	7	17
VIIe9	15	0.2	0.4	3	6
VIIe10	7	0.4	0.4	3	3
VIIe12	16	0.2	0.3	3	5
VIIe14	31	0.13	0.25	4	8
VIIIe3	51	-	-	-	-
TOTAL	197			70	191

The reduced carrying capacity figure used for the improved state of this paddock is a result of the non-application of fertilizer as part of the improvement programme. The sowing of Maku Lotus alone will not realize the improved capacity figures used above and thus 2/3 of these figures has been used to assess the safe grazing of this paddock in an improved state.

The 127 stock units per annum need to be calculated on a daily basis for various classes of stock to allow easy interpretation of stock numbers that can be grazed in the period January to mid May. Calculations give

570 hoggets
490 wethers
343 ewes

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2. Paddocks 26 and 27 behind the erosion control fences 1, 2 and 3

L.U.C. Unit	Area(ha)	Carrying Capacity Unimproved	Total s.u. Unimproved
VIs3	2	0.5	1
VIs4	24	0.6	14
VIe13	80	1.0	80
VIe14	13	1.0	13
VIe22	78	0.4	31
VIe25	3	0.6	2
VIIe3	28	0.4	11
VIIe8	32	0.3	10
VIIe9	68	0.2	14
VIIe10	59	0.4	24
VIIe12	207	0.2	41
VIIe13	92	0.13	12
VIIe14	107	0.13	14
VIIs3	318	-	-
VIIe2	41	-	-
VIIe3	299	-	-
VIIe7	123	-	-
TOTAL	1574 ha		267 s.u.

As there is no provision within this programme for any development of Class VI and safe Class VII areas within these two blocks, the stock unit figures are based solely on the unimproved carrying capacity.

As noted previously the 267 stock units per annum need to be expressed in stock numbers for the period January to mid May. Calculations give:

1203 hoggets
1031 wethers
722 ewes

IN WITNESS WHEREOF these presents have been executed on the day and year first hereinvefore written

I, HAMISH LESLIE BROWN of
(~~Owner~~/Occupier (delete non-applicable))

"TWIN PEAKS" OMARAMA
(Address)

herein do hereby bind myself and my successors in title to perform and observe the terms and conditions of this agreement.

SIGNED by the said)
Hamish Leslie Brown) H. L. Brown
)
)
)
)

as the ~~Owner~~/Occupier
in the presence of:) J M Harman Witness
) R.D. Omarama Address

THE COMMON SEAL of the)
WAITAKI CATCHMENT COMMISSION)
was hereunto affixed in pursuance of a)
resolution of the Commission in the)
presence of:)
)
)
)
)

G J Hanson Chairman

Secretary

I, Leslie Alexander Pullar of Kurow, Secretary to the Waitaki Catchment Commission DO HEREBY CERTIFY that the within written Agreement is one that is capable of registration and I do hereby apply for the registration of the said Agreement against the land above described in accordance with the provisions of Section 30A of the Soil Conservation and Rivers Control Act 1941.

Date: 15 October 1985 Signature:

GJH
H.L.B.

OFFICE COPY

Registered in TRIPLICATE.

10.12 24.OCT 85 645952

PARTICULARS ENTERED IN REGISTER
LAND REGISTRY OTAGO

DIST. LAND REGISTRAR

286/94

OTAGO DISTRICT LAND REGISTRAR NEW ZEALAND

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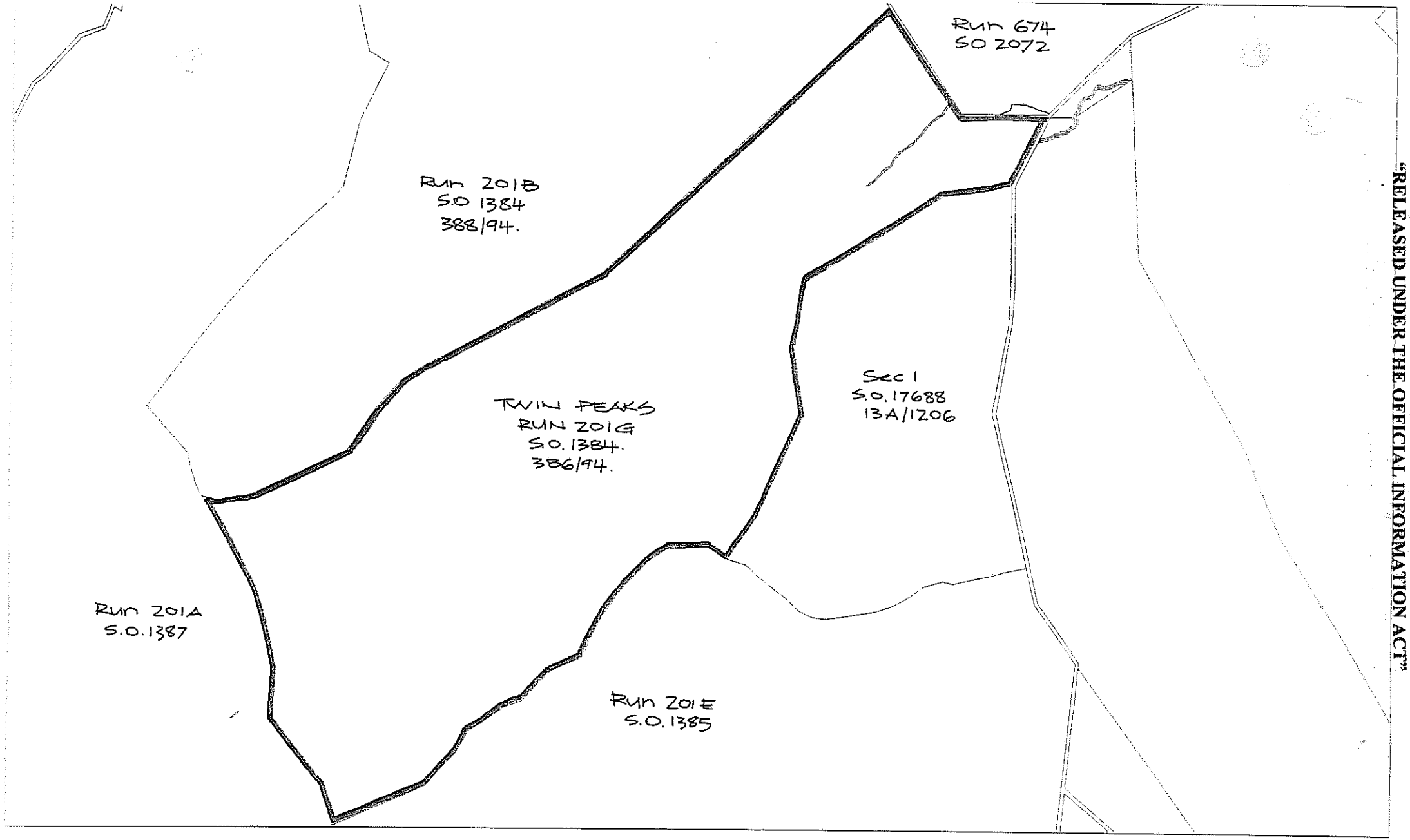


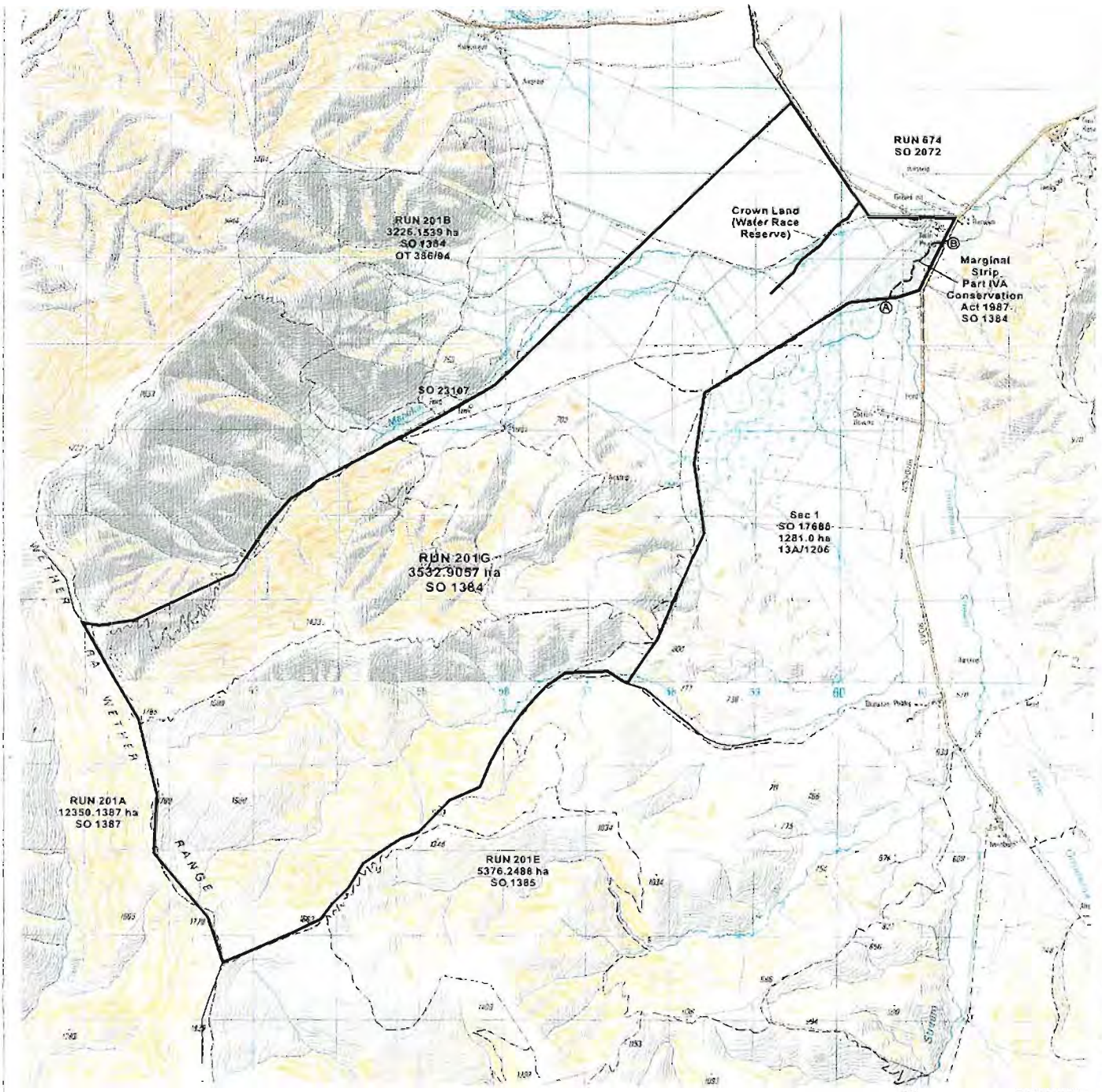
Scale 1:60000

0 1000 2000 3000 4000 5000 6000 7000 8000m

TWINPEAKS

TERRALINK NZ LTD(Terraview)-DCDB Data as at -1.08.2000Title & Valuation data as at -1.08.2000Geodetic data as at 11.10.97.
Cadastral Information from LINZ Digital Cadastral Database (DCDB). CROWN COPYRIGHT RESERVED.

TWIN PEAKS
AHURIRI VALLEY
OMARAMA
OT 386/94



Part Sheet NZMS 260 Sheet H49 Omarama

PASTORAL LEASE BOUNDARY

Ⓐ----Ⓑ MARGINAL STRIP
Part IVA Conservation Act 1987

0 1 km 2 km 3 km

Scale - 1:50,000

Mapping by
John McMeeking Mapping
DTZ Dunedin - 03 479 2233
Abercrombie and Associates Ltd
23.10.2001

PASTORAL LEASE LAND TENURE REVIEW

LAND STATUS CHECK

TWIN PEAKS

ABERCROMBIE & ASSOCIATES LIMITED

ABERCROMBIE AND ASSOCIATES LIMITED
PROPERTY MANAGERS AND CONSULTANTS

P O BOX 5056
MORAY PLACE
DUNEDIN

PHONE (03) 471 9496
FACSIMILE (03) 471 9455
EMAIL office@abercrombie.co.nz

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This report has been prepared on the instructions of Crown Property Management, Land Information New Zealand, and is undertaken for the purposes of the Crown Pastoral Leases Act 1998.

LAND STATUS REPORT	TWIN PEAKS	P204	[LIPS Ref. 12501]
Property	1	of	1

Land District	Otago
Legal Description	Run 201G, situated in Ahuriri and Hawkdun Survey Districts.
Area	3532.9057 hectares [by title & QVNZ].
Status	Crown Land subject to Pastoral Lease P 204.
Instrument of Lease	Reg Vol OT386/94 registered in Land Transfer Office but not under Land Transfer Act. Lease renewed by memorandum 786690.
Encumbrances	645952 - Land Improvement Agreement. Subject to Marginal Strip along Omarama Stream pursuant to Section 24(9) & (F), Conservation Act 1987 upon lease renewal by memorandum 786690 [see SO 1384].
Mineral Ownership	Crown *[see comment below]*
Statute	Land Act 1948, Crown Pastoral Land Act 1998

Data Correct as at:	30 October, 2001
Accredited Supplier certification	As attached

Prepared by	David J Abercrombie
Crown Accredited Supplier	**Abercrombie & Associates Ltd**

Certified correct as to status:

Chief Surveyor
Land Information New Zealand, Dunedin

8 / 11 / 2001

Notes: This information does not affect the status of the land but was identified as possibly requiring further investigation at the due diligence state: See Crown Pastoral Standard 6 paragraph 6	Nil comment.

Research Data: Some items may not be applicable

SDI Print obtained	Yes [See attached]
NZMS 261 Ref	H39
Local Authority	Waitaki District Council
Crown Acquisition Map	Yes To determine agreement for purchase from Ngai Tahu
SO Plan	901, 1384, 1385, 1387 *[See evidence attached]*
Relevant Gazette Notices	Not applicable
CT Reference / Lease Reference	Pastoral Lease P 204, Reg Vol OT386/94 Lease renewed by 786690. NOTE: For history of land see below *[See evidence attached]*
Legislation Cards	Not applicable
CLR	Yes *[See evidence attached]*
Allocation Maps [if applicable]	Not applicable
QVNZ Reference	26050/10200
Crown Grant Maps	Yes - There are no references for the subject property

Research - continued

If Crown land - Check Irrigation Maps.	Yes There are no references for the subject property
Mining Maps	Yes There are no references for the subject property
Other Relevant Information a] Concessions - Advice from DoC b] Subject to any provisions of the Ngai Tahu Claims Settlement Act 1998 c] Mineral Ownership d] Other Info	a] Nil *[See evidence attached from DoC]* b] Only on divestment of freehold or a lease of fifty years or greater by LINZ as a Crown Body c] Mines and Minerals are owned by the Crown because the land has never been alienated from the Crown since its acquisition from Ngai Tahu by way of the Kemp Purchase.

History of ownership:

Purchased from Ngai Tahu by the Kemp Purchase of 1848.

No record of crown grants having been made.

Records show the first selection for lease and hence formal occupation to be by way of Small Grazing Run Lease 730 in 1915 resulting from application 6132. There was no registration of the lease.

National Endowment Lease 730 was subsequently granted and the first registration made as recorded in register volume OT174/140.

National Endowment Lease 1160 was subsequently granted as recorded in register volume OT259/141.

Pastoral Lease P204 was subsequently granted as recorded in register volume OT386/94.

Pastoral Lease P204 was renewed by memorandum 786690.

Status, description of land and area are now as indicated above.

ABERCROMBIE AND ASSOCIATES LIMITED
PROPERTY MANAGERS AND CONSULTANTS

P O BOX 5056
MORAY PLACE
DUNEDIN

PHONE (03) 471 9496
FACSIMILE (03) 471 9455
EMAIL office@abercrombie.co.nz

C:\DATA\CONSULT\CLIENT\QVNZ\GENERAL\Certification.wpd

CERTIFICATION

PRE TENURE REVIEW; LAND STATUS CHECK
Twin Peaks

REFERENCE: LIPS 12501

1. I, David J Abercrombie [Nominated Person for Accredited Supplier - Abercrombie & Associates Limited] gives an assurance that:

   a. I am authorised to undertake status checks by virtue of an agreement between Land Information New Zealand and Abercrombie & Associates Limited, and.
   b. I am authorised to undertake the status check in relation to a tenure review of the land concerned, and
   c. The document attached to this certificate is in order for signature.

2. The decision when made will comply with the following statutory requirements:
   [State statutory authority in full]

   Crown Pastoral Land Act 1998

3. In giving this assurance David J Abercrombie undertakes that all relevant policy instructions, legal requirements, court judgements and any other matters have been taken into account and applied where appropriate.
   [List all policy instructions, legal requirements, etc.]

   Instructions issued by CCPO, Crown Property Management

   CCPO, Crown Pastoral Land Standard 6
   Paragraph 7.1
   Appendix 3

David J Abercrombie
Accredited Supplier

Date: 30 October 2001

Abercrombie & Associates

Toitu te Land whenua Information New Zealand

PO Box 5056.

with compliments

Moray Place.

Dunedin

Twin Peaks signed - returned as requested.

Please note my letter of 8.11.01 to Mr van Bolderen ~~date~~ (copy attached.)

[signature]

Internal Memo

Toitu te whenua Land Information New Zealand

Dunedin Regional Office
John Wickliffe House
Princes St
Private Bag 1929
Dunedin
New Zealand
Tel 64-3-477 0650
Fax 64-3-477 3547
Internet
http://www.linz.govt.nz

To: Mr John van Bolderen
REGIONAL REGULATORY-TITLES

cc:

From: Max Warburton
REGIONAL REGULATORY-SURVEY

Date: 8 November 2001

File Ref: SAS 03 04 00 Vol 17

Subject: **RUN 201G, TWIN PEAKS. P 204: OT 386/94**

OT 386/94 was renewed on 1 July 1991. As a consequence the within land became subject to Pt IVA of the Conservation Act 1990 Sec 24 (9) and 24F (see addition to SO 1384).

The resulting encumbrance should be recorded on the title as agreed in our discussions. Appropriate action to correct omissions of this sort will assist in facilitating the impending tenure review process.

Max Warburton

COMPUTER INTEREST REGISTER UNDER LAND TRANSFER ACT 1952

R.W. Muir
Registrar-General
of Land

Identifier OT386/94
Land Registration District Otago
Date Registered 21 October 1958 02:35 pm

Prior References
OT259/141

Type	Lease under s83 Land Act 1948		
Area	3532.9057 hectares more or less	**Term**	Thirty-three years commencing on the first day of July 1958 and renewed for a further 33 years commencing on the 1.7.1991

Legal Description Run 201G

Proprietors
Hamish Leslie Brown as to a 3/5 share
Jennifer Ann Brown as to a 2/5 share

Interests

645952 Land Improvement Agreement pursuant to Section 30A Soil Conservation and Rivers Control Act 1941 - 24.10.1985 at 10.12 am

735272.5 Mortgage to The National Bank of New Zealand Limited - 11.8.1989 at 9.52 am

786690 Memorandum renewing the term and fixing for the first 11 years the annual rent at $2,700.00 calculated on a rental value of $180,000.00 - 27.8.1991 at 10.20 am

884499 Variation of Mortgage 735272.5 - 16.6.1995 at 10.19 am

COMPUTER INTEREST REGISTER UNDER LAND TRANSFER ACT 1952

Search Copy

R.W. Muir
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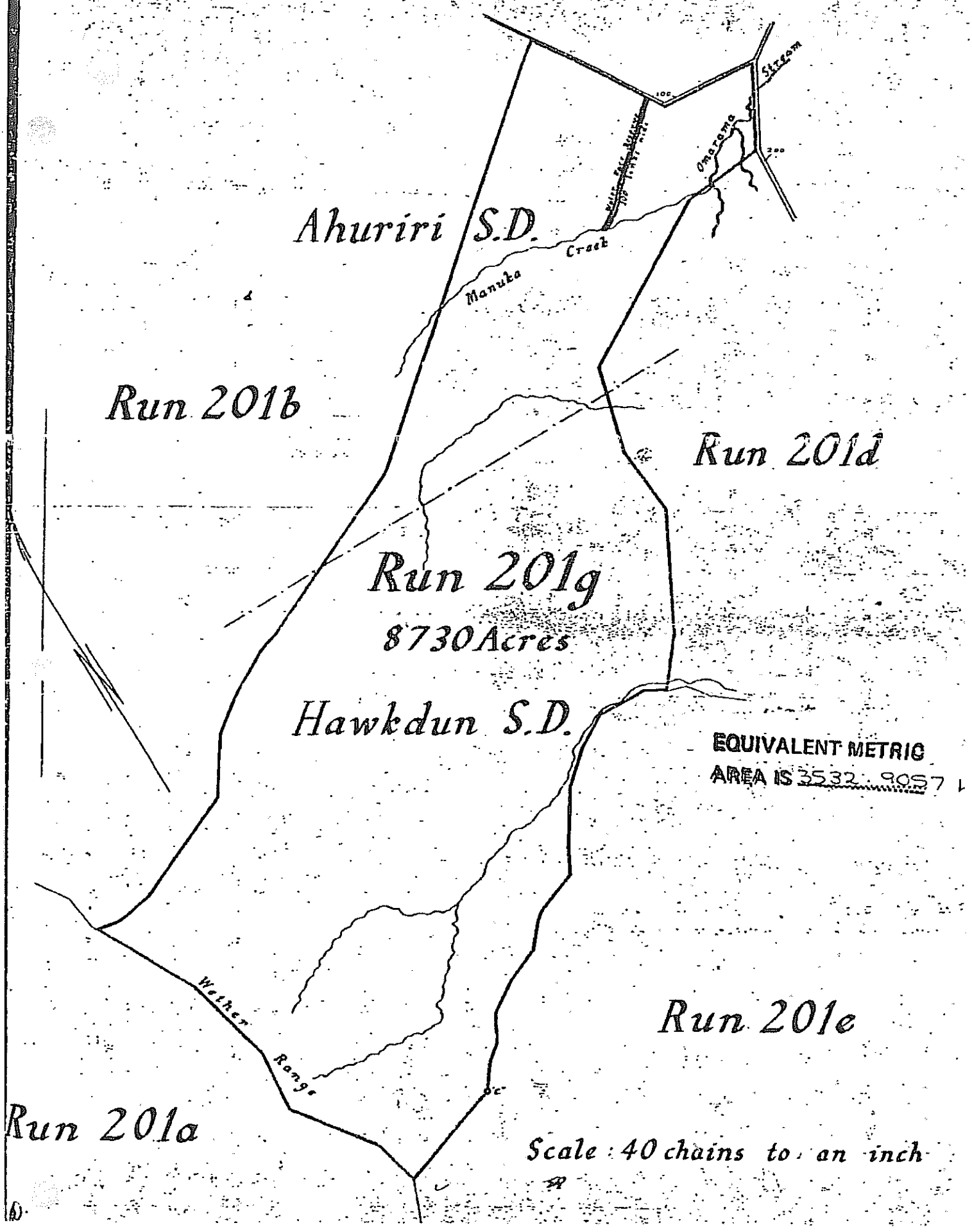
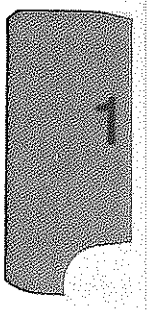
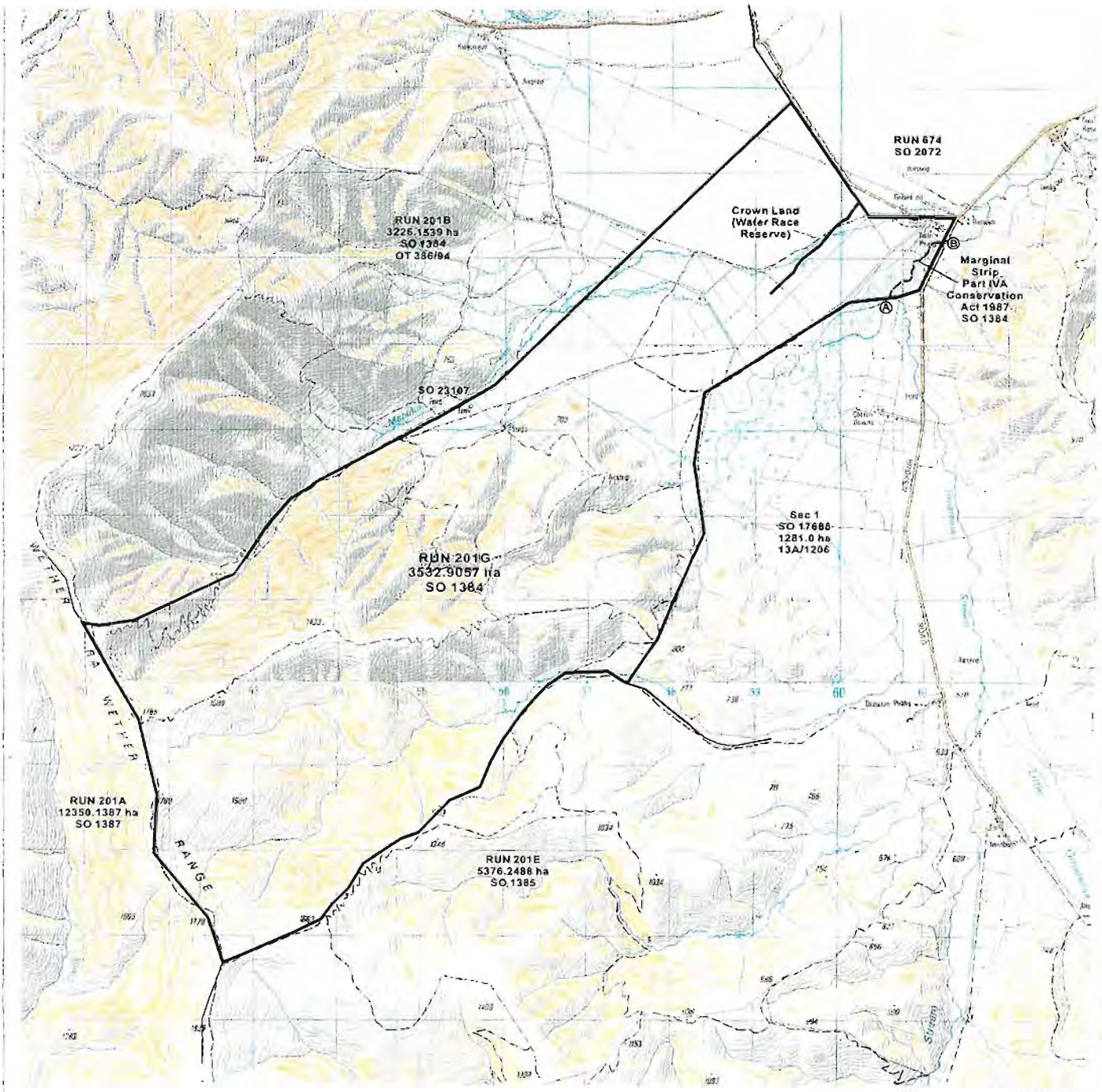


EQUIVALENT METRIC AREA IS 3532.9057 ha



TWIN PEAKS
AHURIRI VALLEY
OMARAMA
OT 386/94



Part Sheet NZMS 260 Sheet H49 Omarama

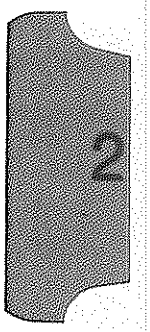
PASTORAL LEASE BOUNDARY

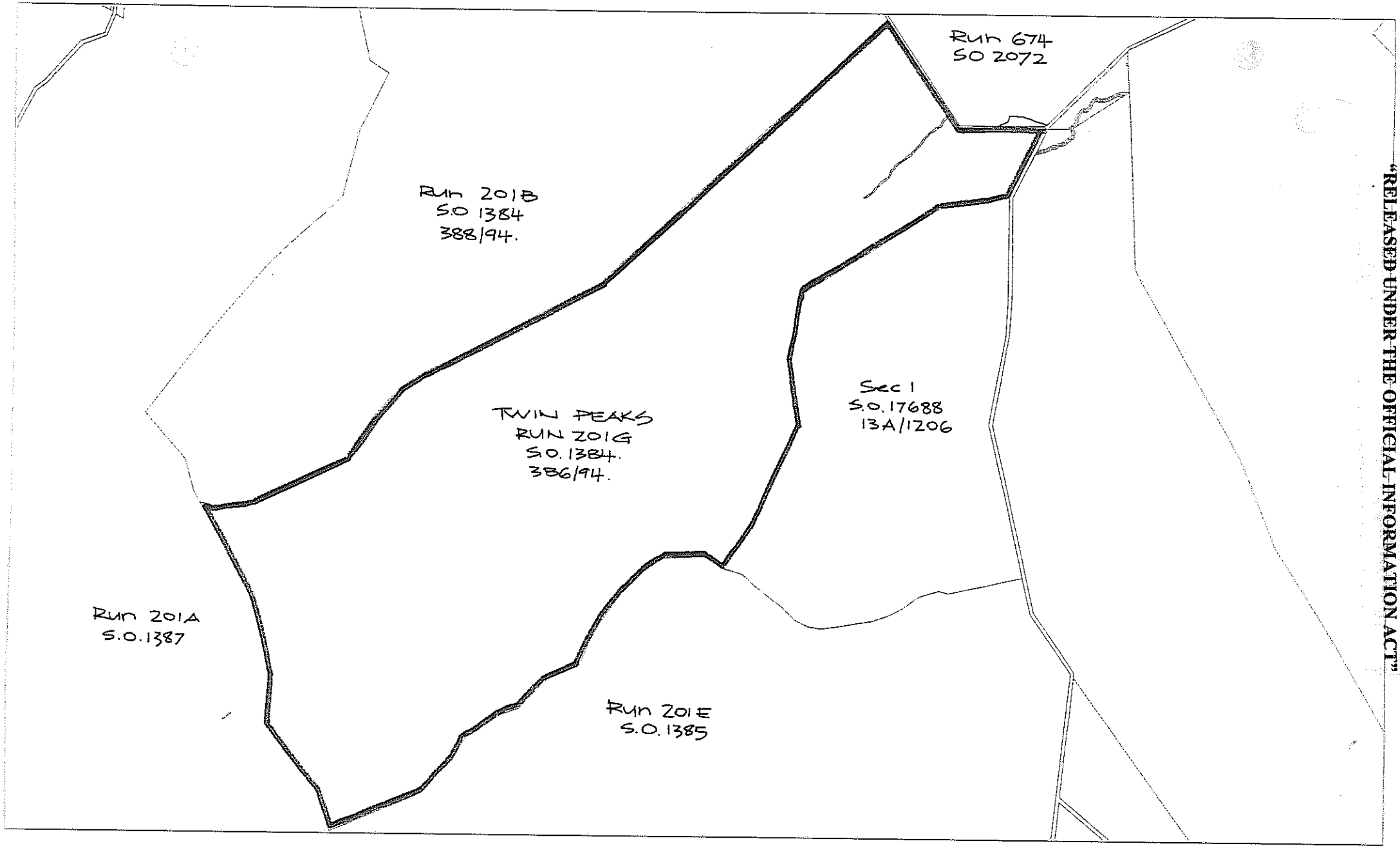
Ⓐ----Ⓑ MARGINAL STRIP
Part IVA Conservation Act 1987

0 1 km 2 km 3 km

Scale - 1:50,000

Mapping by
John McMeeking Mapping
DTZ Dunedin - 03 479 2233
Abercrombie and Associates Ltd
23.10.2001



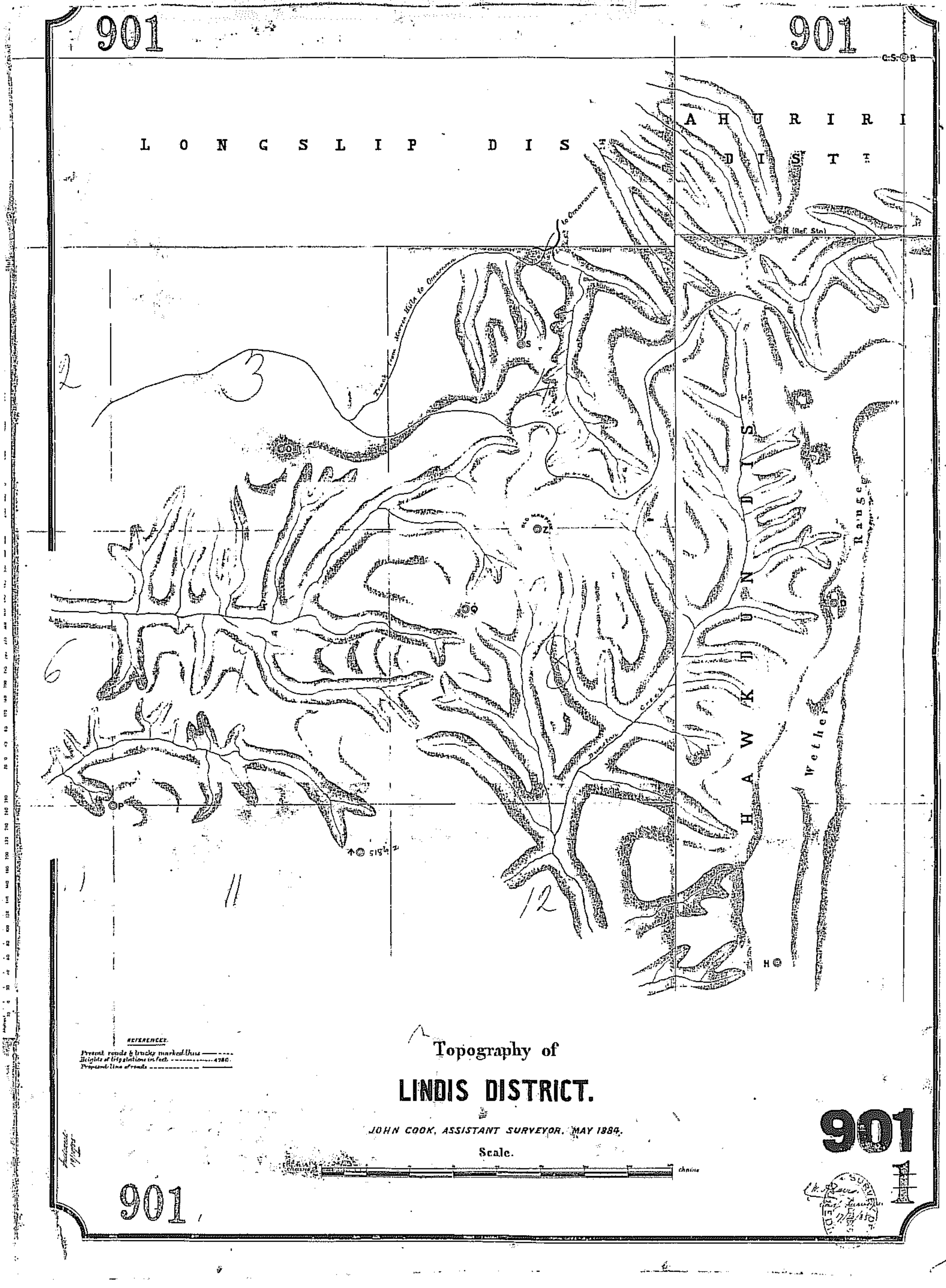


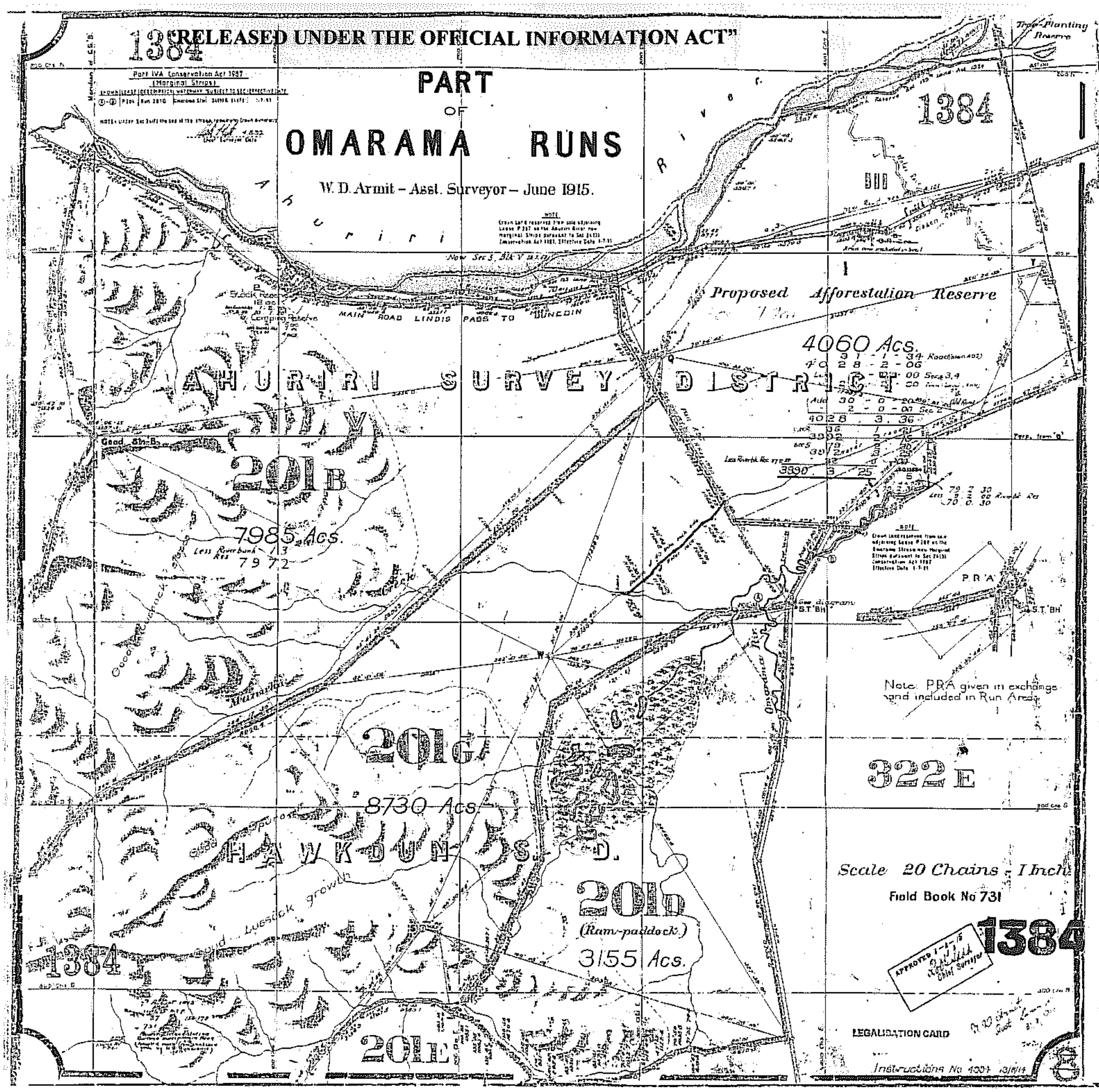
Scale 1:60000

0 1000 2000 3000 4000 5000 6000 7000 8000m

TWINPEAKS

TERRALINK NZ LTD(Terraview)-DCDB Data as at -1.08.2000Title & Valuation data as at -1.08.2000Geodetic data as at 11.10.97.
Cadastral Information from LINZ Digital Cadastral Database (DCDB). CROWN COPYRIGHT RESERVED.


901
901
G.S. B
LONGSLIP DIST
AHURIRI DIST
R (Ref. Stn)
Track from Morven Hills to Omarama
to Omarama
S
O
Z
Q
D
P
H
HAWKDUN DIST
Wether Range
Dunstan Creek
REFERENCES.
Present roads & tracks marked thus
Heights of trig stations in feet 4780
Proposed line of roads
Topography of
LINDIS DISTRICT.
JOHN COOK, ASSISTANT SURVEYOR, MAY 1884.
Scale.
chains
chains
901
1
901


1384
PART
OF
OMARAMA RUNS
W. D. Armit – Asst. Surveyor – June 1915.
Tree-Planting Reserve
Ahuriri River
MAIN ROAD LINDIS PASS TO DUNEDIN
Proposed Afforestation Reserve
4060 Acs.
AHURIRI SURVEY DISTRICT
201B
7985 Acs.
201G
8730 Acs.
HAWKDUN S. D.
20lb
(Ram-paddock.)
3155 Acs.
322E
201E
Omarama River
P.R.'A'
Note: PRA given in exchange and included in Run Area
Scale 20 Chains = 1 Inch
Field Book No 731
LEGALISATION CARD
1384