

Crown Pastoral Land Tenure Review

Lease name: MT NIMROD

Lease number: PT 094

Public Submissions - Part 5

These submissions were received as a result of the public advertising of the Preliminary Proposal for Tenure Review.

November

10

Submission 16

Submission 16



19 March 2010

58 Kilmore Street, Christchurch 8013 PO Box 345, Christchurch 8140
 General enquiries: 03 365 3828 Customer services: 03 353 9007
 Fax: 03 365 3194 or: 0800 EC INFO (0800 324 636)
 Email: ecinfo@ecan.govt.nz Website: www.ecan.govt.nz

Mike Todd
 Opus International Consultants Ltd
 PO Box 1482
CHRISTCHURCH 8140

Dear Mike

ATTACHMENT TO ENVIRONMENT CANTERBURY'S SUBMISSION ON THE MT NIMROD PASTORAL LEASE PRELIMINARY PROPOSAL - ISSUES FOR WATER QUALITY MANAGEMENT

I would like to provide this further information as an attachment to the Environment Canterbury submission on the Mt Nimrod Preliminary Proposal for tenure review. This report addresses the current state of water bodies crossing the Mt Nimrod pastoral lease and issues for their long-term sustainable management.

The Mt Nimrod Pastoral Lease contains the upper reaches of the Nimrod Stream, White Rock Stream, and part of the Motukaika River catchment. Nimrod Stream joins the White Rock River and flows for approximately 9km before joining the Pareora River. The Motukaika River also flows into the Pareora River approximately 12km from the boundary of the Mt Nimrod Pastoral Lease.

These streams are hill fed, and have a clean rocky substrate. Relatively recent water quality sampling of the Motukaika Stream and White Rock River show both waterways have a clean clear water column. Other water quality tests indicate that current land-use practices are having little negative impact on the streams. These streams are relatively unmodified, and provide excellent habitat for freshwater fish and invertebrates, and ECAN records indicate Koaro (a native galaxid), trout and upland bullies have all been found in these waterways. Year round flows in these upland reaches mean they can provide individuals (invertebrate and fish) for repopulating downstream reaches should they dry out or suffer a major disturbance.

There is a consented community water supply at point NZMS 260 J39:4055-3919, which allows the Waimate District Council to take water from the Nimrod Stream for potable and domestic water supplies, and stock drinking water (consent # CRC092155). This point is just outside the Mt Nimrod Pastoral Lease boundary. The Pareora River, which inevitably receives all the water from this catchment, is heavily used for recreational purposes over the summer months, and also supplies water to the community at the Pareora huts.

There appears to be no reference to water quality considerations in the Mt Nimrod Pastoral Lease Tenure Review Preliminary Proposal document except the request from Fish and Game that marginal strips be required along Nimrod Stream and White Rock Rivers. I would suggest that this is a reasonable request for the following reasons.

- 1) Both streams are currently in a relatively pristine state, and are likely to contain healthy viable stream communities.

Our Ref:
Your Ref:
Contact:

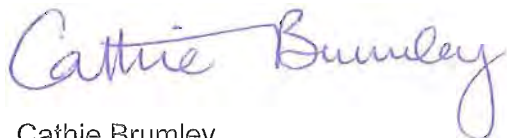
- 2) These streams are susceptible to degradation caused by direct stock access and contaminant (sediment and faecal matter etc) runoff because of the steepness of the terrain in the lease area and the current lack of riparian margin protection.
- 3) These streams provide water that is used by the community for potable and domestic supply and recreational purposes.
- 4) The upper reaches of the White Rock River are contained in the lease area, which then flows through the Mt Nimrod Reserve. Riparian protection would assist in maintaining visibly clean water in the Reserve area.

Report prepared by
Graeme Clarke
Surface Water Quality Analyst
Environment Canterbury

Environment Canterbury has sought the extension of the proposed CA1 conservation area along the length of the White Rock River from the current lower boundary of CA1 down to the SR2 proposed scenic reserve to include the river and its riparian margins and the steep south-facing slopes of the catchment. This report provides further information to support this recommendation.

Thank you for the opportunity to contribute to the tenure review of this property

Yours sincerely



Cathie Brumley
SENIOR RESOURCE MANAGEMENT PLANNER



18 March 2010

58 Kilmore Street, Christchurch 8013 PO Box 345, Christchurch 8140
 General enquiries: 03 365 3828 Customer services: 03 353 9007
 Fax: 03 365 3194 or: 0800 EC INFO (0800 324 636)
 Email: ecinfo@ecan.govt.nz Website: www.ecan.govt.nz

The Commissioner of Crown Lands
 C/- Opus International Consultants Ltd
 PO Box 1482
CHRISTCHURCH 8140

Attention: Mike Todd

Dear Mike

MT NIMROD PASTORAL LEASE**SUBMISSION ON PRELIMINARY PROPOSAL FOR TENURE REVIEW**

Thank you for advising Environment Canterbury of the release of the Preliminary Proposal for tenure review of Mt Nimrod Pastoral Lease. We appreciate the opportunity to review the proposal and make a submission in relation to the future management of this land.

Environment Canterbury has statutory responsibilities under the Resource Management Act 1991 (RMA) for the sustainable management of natural and physical resources of the region, including soil conservation, water quality and quantity and maintenance of biodiversity; and under the Soil Conservation and Rivers Control Act 1941 for the establishment and management of Land Improvement Agreements and Soil and Water Conservation Plans. In addition, Environment Canterbury also has statutory responsibilities under the Biosecurity Act 1993 for the management or eradication of animal and plant pests, in accordance with regional pest management strategies. These responsibilities are entirely compatible with achievement of the objectives of Tenure Review, specifically to "promote the ecologically sustainable management of High Country land" and protecting land with "significant inherent values" by retaining it in Crown ownership.

The Canterbury Regional Policy Statement 1998 (CRPS) provides an overview of the resource management issues of the region, and sets out how natural and physical resources are to be managed in an integrated way to promote sustainable management. Key to the management of soils is the maintenance or restoration of a resilient vegetative cover over non-arable land that is sufficient to prevent land degradation or the onset of erosion (Ch7 Objective 1). Sustainable management of water resources requires safeguarding the life-supporting capacity of water, including associated aquatic ecosystems and careful management of land within the headwaters and the riparian zone. Large landscapes are a feature of the Canterbury high country and the CRPS recognises the importance of protecting both the interconnectedness of landscape components and the vast, open nature of these landscapes.

Environment Canterbury has notified its Proposed Natural Resources Regional Plan (NRRP) to address the resource management issues identified in the CRPS and to provide more specific standards and methods, including rules, to achieve the objectives. The NRRP recognises the close relationship between land and water ecosystems by promoting the integrated management of soil and

Our Ref: PL5C-103; AG5T/130
Your Ref:
Contact: Cathie Brumley

water resources across the region. In particular, the provisions of the plan emphasise the links between land use practices and the management of water quality.

The Canterbury Regional Pest Management Strategy (2005) [which is a revised combination of the former CRPMS (1998) and the Canterbury Regional Pest Management Strategy Biodiversity Pests (2002)] identifies a number of species of plants and animals for control or management as pest species.

Under the 2004 amendment to the Resource Management Act, regional councils have been given the responsibility to protect indigenous biodiversity (s32(1)(ga)) in association with their functions for land and water management. Recognising the important services provided by indigenous ecosystems together with the requirements for their long-term protection is inherent in providing for this responsibility.

In line with these statutory responsibilities and documents, and Section 24 of the Crown Pastoral Lands Act (1998) (CPLA), Environment Canterbury technical and planning staff have reviewed the information held by the Council on land and water resources relevant to the Mt Nimrod pastoral lease to assess the impacts, if any, of this Preliminary Proposal on the long-term sustainable management of the land and water resources. Our comments and recommendations are listed below.

General comments

The Mt Nimrod pastoral lease occupies a prominent location on the eastern flanks of the Hunter Hills below the Mt Nimrod peak.

The upper slopes (above the CA1 area) were retired and surrendered from the lease in 1995 under a Soil and Water Conservation Plan for the purpose of erosion control and catchment flow management. Together with the CA1 area proposed as a conservation area this will provide valuable protection for the Mt Nimrod landscape.

The lease includes the catchments for two important tributaries of the Pareora catchment. The headwaters of the White Rock River, including Mt Nimrod Stream, drains the eastern slopes of Mt Nimrod before flowing into the Pareora River which is an important catchment for its inherent ecological values and as well as providing a water supply for drinking and agricultural purposes.

Important areas from an ecological point of view are the mid slopes which still retain some remnant bush areas within the deeply incised river valleys, and largely indigenous tussock grassland communities above 750m. These are classed as a "critically underprotected" land environment with less than 30% of their original area remaining in indigenous cover, and less than 10% in any form of protection. Most of the lease falls within this land environment so it has the potential to contribute significantly to the sustainable protection of this environment.

The Conservation Resources Report identifies the overall high quality of the vegetation, particularly above 750m where there is a predominance of indigenous tussock grassland species and significant bush remnants remaining along White Rock River between the upper CA1 area and the lower Mt Nimrod Scenic Reserve. The Preliminary Proposal states that "Protection of the (CA1) area will enhance the linkage between the tussock grasslands higher up on Mt Nimrod and the forest and shrublands remaining in river catchments lower down on the mountain range." So it is disappointing, and somewhat curious, to see that neither of the important linking environments along the White Rock River or the Nimrod Stream have been given any form of protection to achieve this. Of these two river systems, the White Rock River has retained the most intact indigenous cover and it is identified in the CRR as having high ecological value. Protecting the length of the White Rock River between the CA1 area and the SR2 reserve would significantly enhance the quality and biodiversity value of the combined areas.

Tenure review is considered to be the key tool to provide for the long-term protection and management of these values.

Environment Canterbury is therefore disappointed at the limited areas proposed for the protection of biodiversity values that are considered to be either threatened or rare both locally and nationally. The areas proposed for protection have failed to address adequately the values identified for the mid altitude hill country areas of the lease, particular the importance of linkages between alpine and lowland areas of habitat.

The Mt Nimrod lease was subject to a Land Improvement Agreement and considerable subsidies were provided to make improvements for soil conservation and water quality purposes. These included cattle proof fencing, erosion control fencing, bush protection and firebreaks and areas of oversowing and topdressing. The retirement of land above 900m was compensated for with offsite fencing and OSTD to increase grazing potential elsewhere on the lease.

Although the LIA was never registered on the title, the issues addressed by the S&WCP still remain and the need for careful management of Class VII land on the upper hill slopes still stands. Acknowledging and providing for these limitations in the terms of tenure review will provide a more sustainable basis for land management once the lease becomes freeholded.

Based on the resource information and technical knowledge held by Environment Canterbury, the following sections provide a more detailed discussion of the key issues for resource use and protection, and the extent to which the Preliminary Proposal has provided for the integrated and long-term, ecologically sustainable management of land and water resources of the Mt Nimrod lease and the protection of the significant inherent values identified for the land. Due to staff field priorities at this time of the year, the submission has focused on soil conservation and biodiversity values only.

Soil Conservation

The Mt Nimrod pastoral lease occupies the north-eastern slopes of the Hunter Hills below Mt Nimrod. A large part of the upper slopes consists of steep and highly erodible land, but the majority of the lower slopes are Class VI with more potential for improvement for production.

The attached Map 1 shows the land use capability (LUC) ratings for the lease land.

Soil and Water Conservation Plan (S&WCPs)

A Land Improvement Agreement was established over the lease with a Soil and Water Conservation Plan (S&WCP) that involved the retirement and surrender of 600ha of Class VIIe and Class VIII land for the purpose of soil conservation and the maintenance of base water flows for water supply schemes lower down in the catchment. These high altitude areas provided 80% of the base flows of rivers such as the White Rock River and the Motukaka. Retirement of domestic grazing was considered to enhance these values.

For the remainder of the lease a number of soil conservation works were established including:

- 1) Cattle proofing which enabled grazing of the shady faces and reduced the need for burning of rank snow tussock;
- 2) Establishment of erosion control fencing to enable the sunny faces to be spelled and better management of the more eroded areas;
- 3) Bush protection fencing and destocking of two large areas of indigenous bush in the lower parts of the Mt Nimrod Stream and White Rock River, to allow for regeneration of the bush and to improve the control of wallabies and possum;
- 4) Establishment of fire breaks; and
- 5) Productivity improvement through over sowing and top dressing.

These works are shown on the attached S&WCP Map 2. This LIA was not registered on the title.

The implementation of the S&WCP has seen the subdivision of the lease into smaller and more strategic blocks of land that allowed for better grazing control and a consequent improvement in the

vegetation cover over the lease with a reduction in the areas of eroded land. It is considered by Environment Canterbury staff that over time these works will have led to an improvement in the land use capability of some of the more eroded Class VII land to a Class VI status. The extent of this improvement could only be confirmed by further inspection of the land. Unfortunately Environment Canterbury staff did not have the time to undertake any such reassessment for this submission.

The proposed CA1 area includes much of the Class VII land on the western side of the lease and is supported by Environment Canterbury on a soil conservation basis. This also provides enhanced protection of the headwaters of the White Rock catchment which will be important for the long-term management of the quality and quantity of water in this catchment and for the downstream Pareora River.

The north-western slopes of the lease proposed for freehold also contain areas of high erosion vulnerability above 900m. Under the S&WCP some subdivision of the area was enabled through erosion control fencing to control the pressure and timing of stock grazing. While the Preliminary Proposal describes the land as "productive land with excellent vegetative cover, little or no bare ground and no obvious erosion problems occurring", it must be noted that the underlying vulnerability of the land to erosion remains and the maintenance of a healthy and intact vegetation cover must be the primary focus. These upper slopes are also important parts of the northern Hunter Hills landscape.

Recommendations:

Environment Canterbury supports the proposal on the grounds that the CA1 area protects the more vulnerable areas of the property for general conservation purposes.

Indigenous vegetation, fauna and wetlands values

Tenure review provides a valuable opportunity to help achieve two key objectives of the Reserves Act 1977 and the New Zealand Biodiversity Strategy (2001). These are, respectively, "preservation of representative samples of all classes of natural ecosystems and landscapes" and to "maintain and restore a full range of remaining natural habitats and ecosystems to a healthy functioning state." A complimentary objective of the tenure review process is to ensure that conservation outcomes are consistent with the New Zealand Biodiversity Strategy.

The Land Environments of New Zealand landscape classification system (Leathwick et al. 2003)¹ provides a framework for securing protection and/or restoration of examples of the full range of terrestrial vegetation and habitats. Land environments, and potential natural vegetation cover (in the absence of human modification) are classified at four different national scales: Level I (20 land environments nationally), Level II (100 land environments nationally), Level III (200 nationally) and Level IV (500 nationally). Each is nested within higher levels. The 500 Level IV environments provide the most detailed information on the diversity of New Zealand's terrestrial environments and is the best nationally comprehensive estimate of the 'full range' of ecosystems, habitats and biodiversity.

Analysis of Land Environments in conjunction with spatial data depicting indigenous vegetation cover (from Land Cover Data Base) and current legal protection has recently been carried out by Landcare Research (Walker et al. 2005)², for the Department of Conservation. This analysis offers a useful method of identifying the most threatened environments, and therefore determining what should be priorities for protection of indigenous biodiversity as part of tenure review. In reporting this work, the authors recommended that threat classification analysis be carried out using Level IV Land

¹ Leathwick J.R., Wilson G., Rutledge D., Wardle P., Morgan F., Johnston K., McLeod M., Kirkpatrick R. 2003. *Land Environments of New Zealand*. David Bateman, Auckland, New Zealand.

² Walker S., Price R., Rutledge D. 2005. *New Zealand's remaining indigenous cover: recent changes and biodiversity protection needs*. Landcare Research Contract Report: LC0405/038. Prepared for Department of Conservation, March 2005.

Environments, as these provide a more accurate, efficient and plausible assessment at regional and local scales.³

Examples of seven Level IV Land Environments are present on Mt Nimrod Pastoral Lease.(Leathwick et al. 2003):

- Q1.1a, Q1.1d, Q1.2a, Q2.1a – Southeastern Hill Country and Mountains
- E3.1a – Easy rolling foothills, imperfectly drained
- N2.1d, N3.1d – Eastern South Island Plains

These seven Land Environments are listed, in approximate altitudinal sequence (highest to lowest) as they occur on Mt Nimrod PL, in the table below. The table also shows the percentage of indigenous vegetation remaining in each land environment nationally, and the proportion of each environment that is already protected in existing reserves or conservation covenants. Threat categories are assigned on the basis of these figures (from Walker et al. 2007).

Level IV Land Environments	% Indigenous Cover Remaining	% Protected	Threat category	Comment
Q1.1a	98.37	23.74	>30% left, > 20% protected	Comparatively secure from clearance
Q1.2a	98.99	36.51	>30% left, > 20% protected	Comparatively secure from clearance
Q1.1d	84.66	32.48	>30% left; >20% protected	Comparatively secure from clearance
Q2.1a	38	8.09	>30% left; <10% protected	Critically Underprotected
E3.1a	10.3	2.5	10-20% left	Chronically Threatened
N3.1d	13.5	0.3	10-20% left	Chronically Threatened
N2.1d	1.2	0.3	<10% left	Acutely Threatened

The great majority of the pastoral lease area, outside the proposed CA1 area, is composed of the 'Critically Underprotected' land environment Q2.1a. Only small areas of the most threatened land environments E3.1a, N3.1d and N2.1d are found on the lease in the region around the homestead and along the Motukaka River (between the river and the Motukaka Road).

The most important ecological values identified for the Mt Nimrod pastoral lease in the Conservation Resources Report were found on examples of the mountain and hill country land environments Q1.1d and Q2.1a. No ecological values were identified as remaining on examples of the foothill and dry plains land environments E3.1a, N3.1d, N2.1d.

Map 3 shows the distribution of land environments over the Mt Nimrod pastoral lease area.

Assessment of proposed conservation and freehold areas in the Preliminary Proposal

The following table summarises the level of protection provided for each land environment through the proposed Preliminary Proposal designations.

³ Walker S., Cieraad E., Grove P., Lloyd K., Myers S., Park T., Porteous T. 2007. *Guide for Users of the Threatened Environments Classification*. Landcare Research. 35 pp.

Level IV Land Environment	Ecological values present?	Protection proposed?	Comment
Q1.1a Not threatened	Presumably yes, but not discussed in CRR	Yes	Little present on PL. All examples fully protected within CA1.
Q1.2a Not threatened	Presumably yes, but not discussed in CRR	Yes	Little present on PL. All examples fully protected within CA1.
Q1.1d Not threatened	Yes	Yes	Most examples included in CA1.
Q2.1a Critically underprotected	Yes	Partial	Areas supporting forest and scrub habitats protected in SR1 and SR2. Remainder, mostly tall tussock grassland, proposed for freeholding.
E3.1a Chronically threatened	No	No	
N3.1d Chronically threatened	No	No.	
N2.1d Acutely threatened	No	No	

CA1

The proposed CA1 occupies the highest-altitude, south-western corner of Mt Nimrod pastoral lease and comprises the non-threatened of mountain and hill country land environments Q1.1a, Q1.2a and Q1.1d. While these land environments are not considered to be threatened and are adequately protected on a national basis, the examples within the CA1 area are important for their quality and diversity. The protection of this area is therefore supported on the basis of the protection of the significant inherent values.

SR1, SR2

SR1 and SR2 protect examples of native forest, scrub and shrub vegetation on the 'Critically underprotected' land environment Q2.1a and are contiguous with the existing areas protected within the Mt Nimrod and Matata Reserves. Environment Canterbury supports the protection of these areas as making a valuable addition to the region's reserve network.

Freehold land

The large remaining portion of land environment Q2.1a, identified in the Conservation Resources Report (CRR) as having important ecological values, has been proposed for freeholding with no formal protection. Above 750 m the CRR notes the dominance of good vegetation cover of narrow-leaved snow tussock grassland with associate native shrubs and herbs, and few exotic plant species (Sect 2.4-2.5 – CRR). This includes areas of forest and shrub communities remaining on the south-facing slopes of the Mt Nimrod stream from the proposed CA1 down to SR1.

This tussock grassland supports a rich invertebrate community and is also habitat for threatened NZ falcon. The streams contain numerous galaxiids, koura and the longfinned eel.

Using the existing fence line below the current "new" fence as the lower boundary of the CA1 area would increase protection of the higher altitude parts of the "Critically underprotected" land environment Q2.1a above 750m. This would concur with the key area of high ecological value identified in the CRR (see "Mt Nimrod Values" map) while reducing the amount of new fencing required by the current proposal.

The Preliminary Proposal states that "Protection of the (CA1) area will enhance the linkage between the tussock grasslands higher up on Mt Nimrod and the forest and shrublands remaining in river catchments lower down on the mountain range." (p.2). So it is disappointing, and somewhat curious, to see that neither of the important linking environments along the White Rock River or the Nimrod Stream have been given any form of protection to achieve this. Of these two river systems, the White

Rock River has retained the most intact indigenous cover and it is identified in the CRR as having high ecological value. Protecting the length of the White Rock River between the CA1 area and the Mt Nimrod reserve would significantly enhance the quality and biodiversity value of the combined areas.

Recommendations

To provide for the long-term, sustainable protection of the range of significant biodiversity values identified on this land, Environment Canterbury recommends that the CA1 area is extended to include more of those parts of "Critically underprotected" land environment Q2.1a identified in the Conservation Resources Report, and to link with the proposed SR1 and SR2. This could be achieved by incorporating the following:

- 1) *Using the existing fence line below the proposed lower CA1 fence line to protect more of the important tussock grasslands above 750m; and*
- 2) *Extending CA1 down slope along the south-facing slopes of White Rock River to link with SR2.*

Overall Recommendations

Environment Canterbury supports the protection of the area CA1 as contributing to soil conservation and protection of the wider landscape values of the lease. However the Council considers that the Preliminary Proposal currently fails to recognise or provide adequately for the protection of the range of biodiversity values identified for the land in a manner that will be ecologically sustainable in the long-term. Specifically Environment Canterbury requests the following changes to the Proposal:

1. That CA1 area is extended to include more of the "Critically underprotected" land environment Q1.2a :
 - a) By extending the lower boundary to the existing fence line to protect more of the high quality tussock grassland area above 750m; and
 - b) By extending down the White Rock River from the current CA1 boundary to the lower SR2 area to include the lower forest and shrub areas along the south-facing slopes and to provide important linkage between the upper and lower protected areas.

Map 3 attached to this submission shows the amendments requested to protected areas.

Thank you for the opportunity to comment on this Preliminary Proposal.

Yours sincerely



Don Rule

DIRECTOR RESOURCE PLANNING AND CONSENTS

Attachments:

Map 1: Land Use Capability map of the Mt Nimrod pastoral lease

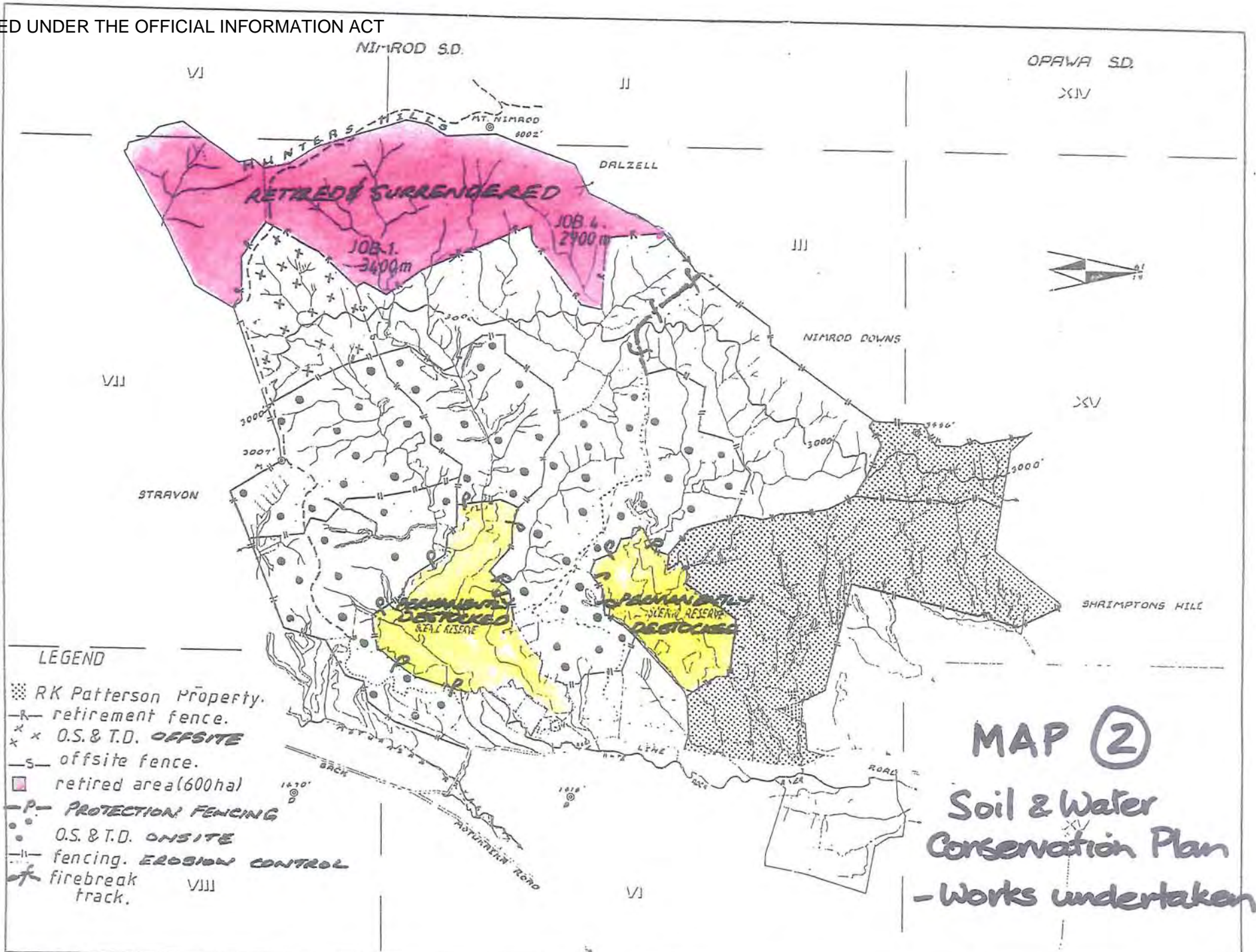
Map 2: Soil & Water Conservation Plans for Mt Nimrod Station

Map 3: Land environments distribution over the Mt Nimrod pastoral lease area

Map 4: Changes recommended to the areas proposed for protection in the Preliminary Proposal



Drawn by H. J. J. J.	Aerial Photos	Scale 1:50,000	KG PATTERSON	Calculation No.	5000 TIMARI
		Area 1:25,000	M. NIMROD	Drawing No.	5000
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LEGEND

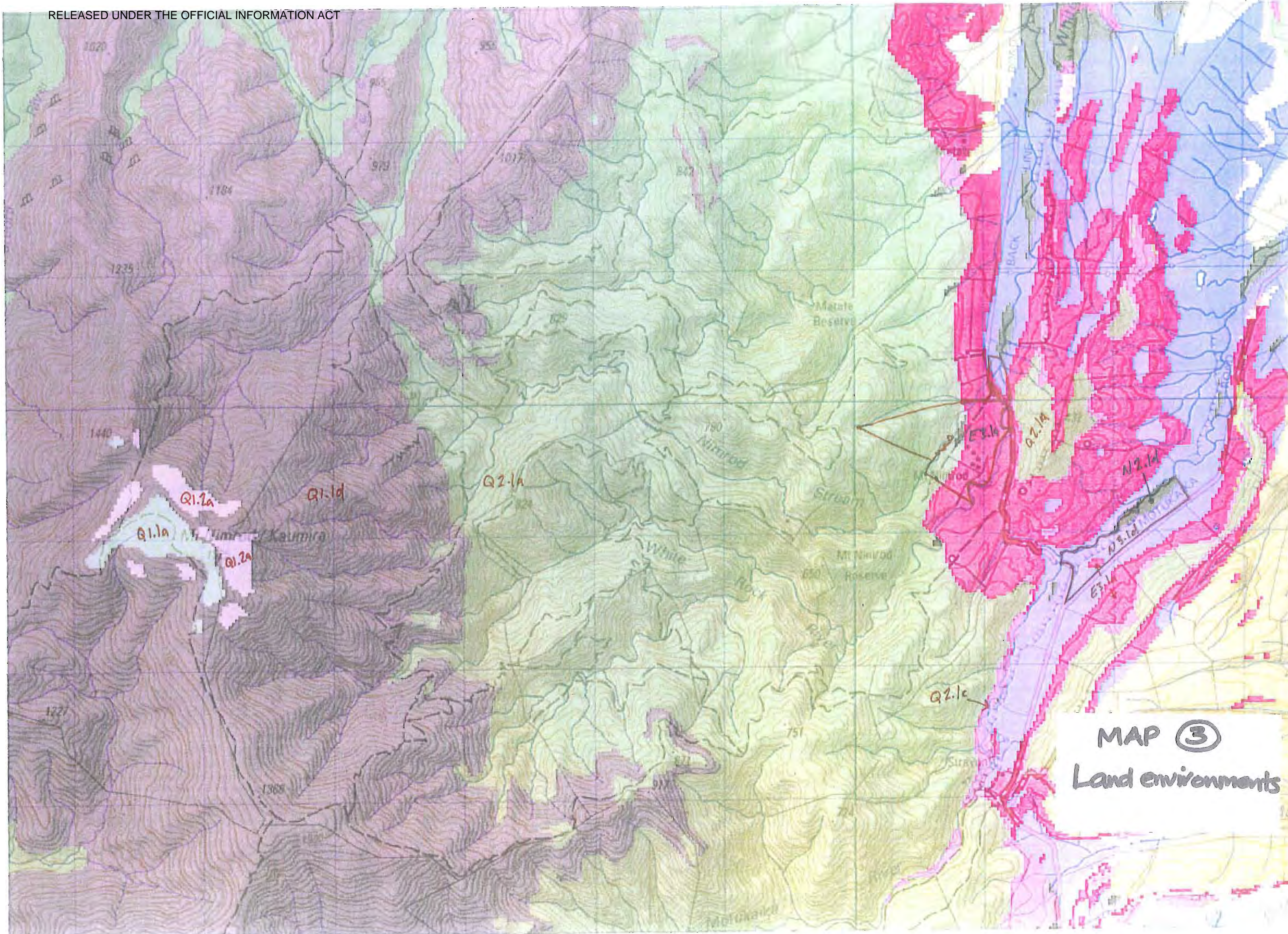
- ▨ RK Patterson Property.
- R- retirement fence.
- x x x O.S. & T.D. OFFSITE
- s- offsite fence.
- retired area(600ha)
- P- PROTECTION FENCING
- O.S. & T.D. ONSITE
- ||- fencing. EROSION CONTROL
- * firebreak track.

MAP ②
Soil & Water Conservation Plan
- Works undertaken

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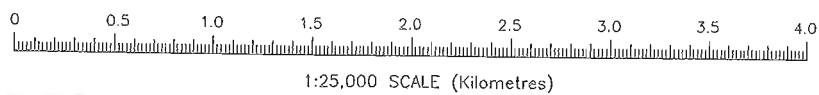
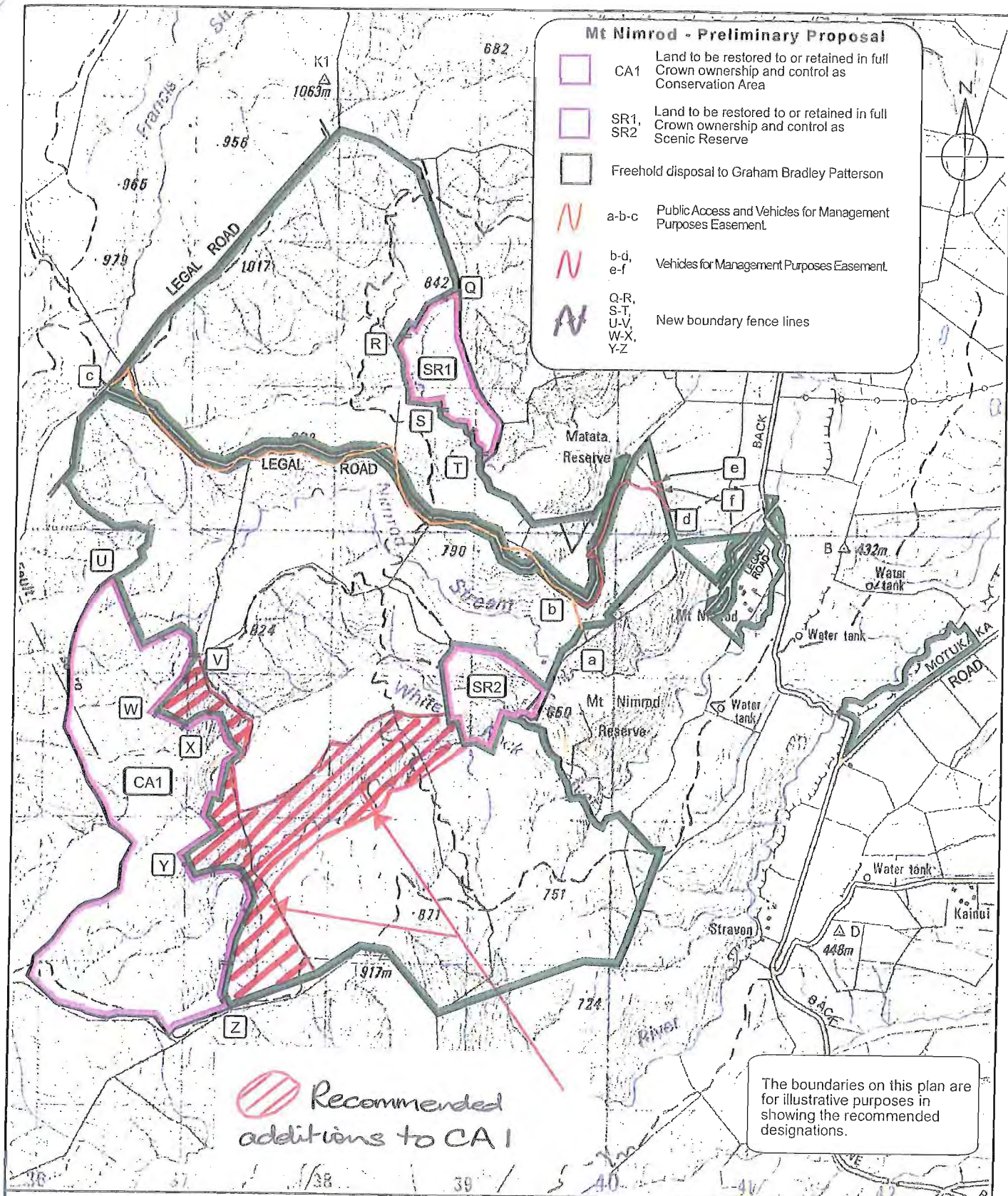
G. B. & K. G. PATTERSON
MT NIMROD

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MAP ③
Land environments

MAP ④ Recommended changes



<p>GLASSON POTTS FOWLER BNZ Aramoh, 137 Aramoh Street, Christchurch 8001, New Zealand Ph (03)374-0515 Fax (03)374-0510 P.O.Box 13075 Email: gpf@gpf.co.nz</p>	<p>MT NIMROD (R.S.41210 & R.S.41211, Pts.RESERVE 3346 & Pts RUN 305)</p>		<p>Canterbury Land District Scale : 1:25,000@A3 Date : August 2002</p>
	<p>Excludes All Legal Roads and Marginal Strips (if Any)</p>	<p>Topographic Map 260 - J39</p>	<p>Drawing No.:7588-03A Sheet No. of Sheets</p>
	<p>TR 80 Mt Nimrod Designations Plan_12082009</p>		