

Crown Pastoral Land Tenure Review

Lease name : IRISHMAN CREEK

Lease number : PT 014

Addendum to Conservation Resources Report

As part of the process of Tenure Review, advice on significant inherent values within the pastoral lease is provided by Department of Conservation officials in the form of a Conservation Resources Report. This report is the result of outdoor survey and inspection. It is a key piece of information for the development of a preliminary consultation document.

Note: Plans which form part of the Conservation Resources Report are published separately.

These documents are all released under the Official information Act 1982.

November 09

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IRISHMAN CREEK PASTORAL LEASE



DEPARTMENT OF CONSERVATION

**RECOMMENDATION REPORT
ADDENDUM**

Department of Conservation

FEBRUARY 2009

**THE DEPARTMENT OF CONSERVATION'S FURTHER
RECOMMENDATIONS FOR THE TENURE REVIEW
OF IRISHMAN CREEK PASTORAL LEASE (Parts Run
343, and Section 1 SO 15864) HELD BY IRISHMAN
CREEK STATION LIMITED UNDER PART 2 CROWN
PASTORAL LANDS ACT**

**AN ADDENDUM TO THE DEPARTMENT OF
CONSERVATION'S RECOMMENDATIONS, JULY 2002**

This addendum to the Department of Conservation Recommendations Report, July 2002, is in reply to a request from LINZ to consider and update advice in light of government policy, CBC Paper Min (07) 10/12 and CBC Paper Min (07) 23/19. These Recommendations are in addition to the previous Recommendations dated, July 2002.

Additional information from Nick Head (Botanical ecologist) (December, 2008), Warren Chinn (Invertebrate Ecologist) (January, 2009), Scott Bowie (Freshwater Ecologist), (January, 2009) and a Review of Assessment of Landscape Values of the Central "Dryland" Mackenzie Basin by Anne Steven (June, 2007) has informed these recommendations.

1 Recommendations

- 1.1** That the proposals described below be submitted to the CCL's service providers, during the consultation process on the preliminary proposal for this tenure review, as representing the views developed under delegated authority from the Director-General of Conservation. *(Note that additional proposals, developed after this report is submitted may also be put forward at the consultation stage.)*
- 1.2** Note that statutory consents will be required before the CCL can include (in the preliminary proposal for this tenure review) the designations set out in paragraphs 2.5 and 2.6 below.
- 1.3** Note that any disposition of land by the Crown will be subject to the relevant provisions of Part IVA Conservation Act.

2 Proposals and Justification

2.1 Land to be restored to full Crown ownership and control

CA1 Lake Pukaki Lateral Moraine

Existing Status: Pastoral Lease

Authority: s.35(2)(a)(i) CPLA

Proposal

That an area of approximately 2,449 hectares be designated as land to be restored to full Crown ownership and control as a conservation area to be managed by the Department of Conservation for the purposes of protecting the natural environment and providing public access.

Description:

The area includes that land south and north of the Tekapo Canal that takes in the higher elevation Lake Pukaki lateral moraine belt which extends from the southern boundary of the pastoral lease to the northern boundary of the pastoral lease. It includes Mount McDonald and the western slopes of the Mary Range.

Justification:

The proposal contributes to the Mackenzie Basin landscape and is part of the backdrop to Lake Pukaki and in part contributes to the visual corridor for the Tekapo canal road. The proposal provides opportunities for active and passive recreation and opportunities for the Te Araroa trail. The proposed area contains acutely and chronically threatened flora & fauna within an 'At Risk' Lenz environment.

Species and their habitats

50. The *highest significance* will be accorded to nationally critical, nationally endangered and nationally vulnerable (i.e. acutely threatened) threatened species and their habitats. Significance increases with the species' vulnerability to total extinction.

- *Oreomyrrhis colensoi* var *delicatula* (Nationally Endangered) and *Myosotis pygmaea* var *minutiflora* (Nationally vulnerable) within ephemeral kettleholes located in the upper central moraine corridor.
- *Holcaspis bidentella*, (Nationally Critical) small ground beetle found under stones or vegetation in areas dominated by either native shrublands or tussock grasslands.

51. The *highest significance* will be accorded to reproducing populations of any plant, reptile, non-migratory fish or restricted mobility invertebrate in the Hitchmough decline (i.e. chronically threatened) categories, and their associated habitat.

- The proposal provides habitat for the following species ranked 'serious decline':
 - Dwarf broom *Carmichaelia vexillata*, on moraines.
 - Dwarf wood rush (*Luzula celata*) within ephemeral kettleholes.
 - Pygmy club rush (*Isolepis basilaris*) within ephemeral kettleholes.
- The proposal provides habitat for the following species in 'gradual decline':
 - Coral broom *Carmichaelia crassicaule*; in short tussockland/shrubland.

53. *High significance* will be accorded to species listed as range restricted or sparse, and their habitat.

- The proposal provides habitat for the following species ranked 'range restricted':
 - *Centrolepis minima* found in kettleholes
- The proposal provides habitat for the following species ranked 'sparse':

- Mueller's sedge, *Carex muelleri*; scattered throughout short tussock lands
- Trailing bindweed, *Convolvulus verecundus*; on bouldery interfluves in outwash plain.
- Orchid, *Hymenochilus tristis*; in depleted short tussock lands of hummocky moraines.
- Shrub, *Coprosma intertexta*, in remnant shrublands on steep bouldery moraine ridges and at toe slopes of low terrace risers.
- *Pleurosorus rutifolius* on Mt Mary Rock bluff

60. *Significance may be accorded to non threatened indigenous species and their habitats.*

- Cushion daphne (*Pimelea pulvinaris*), mat broom, (*Carmichaelia uniflora* and /or *C. nana*) and mat daisy (*Raoulia parkii*) that are associated with the outwash surfaces occur on unique habitats. The threat ranking for the Pimelea species is likely to be increased as a result of the recent threatened plant revision.
- Prostrate kowhai (*Sophora prostrata*) associated with dry shrublands on the Mary Range is locally uncommon and close to its western limit.
- The small ground beetle, *Demetrida lateralis* distribution is restricted to the Mackenzie Basin.
- The Stealthy spider, (*Matua valida*), (Data deficient), restricted to inland Otago and the Mackenzie Basin.
- The occurrence of both upland bully and Canterbury galaxias in this system is significant.

Ecosystems, habitats and communities

63. *The highest significance will be accorded to remnants of woody indigenous vegetation in their approximate position in the pre human landscape. Fire and climate change in the high country has removed much of the woody vegetation, so what remains in its original environment is important.*

- Shrubland, dominated by small-leaved coprosmas, matagouri, native broom, are in reasonable condition, and constitute remnants of the original pre-human vegetation cover.
- Shrublands of steep bouldery moraine ridge slopes, while commonly not as dense or as diverse as those found elsewhere in the proposal, do represent remnants of pre-human vegetation cover.

64. *The highest significance will be accorded to the remnants of the most distinctive (unusual and/or rare and/or naturally uncommon) ecosystems, habitats and communities for example alpine fellfield, flush, bog or snowbankupland conifer forest/shrubland, alluvial floodplain or terrace forest/shrubland, dryland forest/shrubland, lowland hill country forest/shrubland, volcanic forest/shrubland, saline patches, stony fans and terraces, kettleholes, cliffs and talus, braided riverbeds, limestone outcrops and the wet or dry frosty hollows of floodplains, palustrine wetlands, peat lakes, deepwater lakes with bryophyte communities, riverine lakes and oxbows, freshwater margin indigenous turf communities, flushes and seepages, ephemeral tarns and wetlands, anastomising rivers, braided rivers and associated aquifer systems and springs and karst freshwater systems.*

- The proposal includes a relatively intact sequence of significant ecosystems that include moraine shrubland, alluvial terrace shrubland, dryland shrubland, stony fans and terraces associated with the fluvio-glacial outwash plain, kettleholes and turf communities of ephemeral tarns plus red tussock grasslands.

65. *High significance will be accorded to examples of Level IV "at risk environments" where the example's soils are uncultivated and it has characteristic indigenous species present i.e. characteristic of the original indigenous vegetation.*

The proposal includes an 'At Risk' land environment which still retains some components of the original vegetation.

71. *Significance may be accorded to areas recommended for protection under the PNAP.*

- The area is part of a natural area recommended for protection, N. E. Face Mt Mary, (RAP Pukaki 13, Mackenzie PNAP Survey report) identified as one of the best dryland scrub associations in the Pukaki Ecological district. The area continues to support healthy dryland scrub associations.

72. *Significance may increase as species and community diversity in the area increases.*

- The inclusion of a contiguous sequence of landform across an altitude sequence and their associated habitats means that species and community diversity of the proposal is greater than if only part of the sequence was included.

73. *Significance may increase with the size or natural protection of the area under consideration.*

- The proposal includes part of the largest and most intact sequence of glacial landforms and associated dryland habitats and plant communities remaining in the MacKenzie Basin. Protection of these areas will create a large dryland area which includes a full range of interconnected ecotones allowing for greater ecological functioning and sustainability into the long term.

74. *Significance may be accorded to places where there are seed sources available at the site or nearby, of species originally characteristic of the area, to enable the ecosystem to self-restore.*

- Woody species should naturally regenerate in the vicinity of existing shrublands contained within the proposal. These are scattered across the different environments within the proposal i.e. lowland hill slopes, moraine ridges, melt water channels, and along toe slopes of terraces, enabling shrubland regeneration to be fairly widespread. The original vegetation cover of outwash surfaces was likely to have had a significant fescue tussockland component. The proposal includes areas of healthy fescue tussockland where tussock recruitment is evident. This area will provide a seed source for self-restoration elsewhere on outwash surfaces.

Biodiversity protected area design and function

78. *Significance may be accorded to places that if protected, will increase the effectiveness of protection and management nearby.*

- The protection of this proposal, in conjunction with adjacent proposals, will create a large dryland area which can be managed more effectively.

Recreation Values

86. *The highest significance will be accorded to securing recreational opportunities identified in the CMS, and securing the ability to deliver public enjoyment.*

- The proposal lies within the Waitaki Unit of the CMS. A priority for this unit is to provide new recreational facilities and opportunities. The proposal secures the ability to provide integrated interpretation and access facilities in a moraine environment, adjacent to Hayman Road.
- The proposal includes Mount McDonald and the northern end of the Mary Range including Trig U which provides opportunities for scenery viewing.

89. *High significance will be accorded to securing public access to sites of significant inherent value unless there are special reasons for not having public access.*

- The moraines within the proposal provide a unique setting and opportunity for recreation because of their close proximity to Hayman Road, which is often used as a tourist route. The proposal provides an excellent opportunity to provide public access to, and interpretation of, this important sequence of glacial landforms.

90. *High significance will be accorded to securing public access that enables the completion of Te Araroa/The Long Pathway in the South Island high country.*

- The proposal, by virtue of its location is adjacent to the Te Araroa (The Long Pathway) Trail which follows the shore of Lake Pukaki and the Tekapo Canal. The legal protection of this area provides alternative opportunities for this national trail.

Landscape Values

108. *High significance will be accorded to other remaining examples of landscapes that characterised New Zealand before humans arrived.*

- This area is considered to be sufficiently natural in character, based on the remnant indigenous species and the unmodified and highly legible and distinctive landforms, to assign significance on the basis of representative pre-European landscape. The proposal comprises landscapes that are relatively unmodified. The patterns of landforms are intact.

109. *High significance will be accorded to generally recognised iconic high country landscapes or scenery.*

- The Mackenzie Basin as a whole is a generally recognized 'iconic' landscape. Various parts of the Basin are repeatedly depicted in paintings, postcards, greeting cards, calendars and pictorial books on South Island scenery.
- The Tekapo Canal bypass route is a major tourist route. The scenery viewed from the road, especially that closer to the road, would be widely remembered and valued.
- The landscape, within the visual corridors of the Tekapo Canal Road has a high visual profile which, combined with the natural character and distinctive landforms, would assure that it is generally recognised as an iconic high country landscape.

111. *Significance may be accorded to areas that can be restored or managed to contribute landscape linkages between generally recognised or iconic natural landforms and features (including vegetation).*

- This area is an important part of the continuum of the glacial landscape around the east side of Lake Pukaki, a large part of which is a nationally important geopreservation site. This area provides linkages with the moraines immediately adjacent which are also proposed for protection. The area therefore contributes to the improved landscape continuity and integrity.

112. *Significance may be accorded to generally recognised or iconic striking or unique discrete landforms or natural features in the high country and their context.*

- There are a number of landscape elements that are considered classic and visually striking: moraine 'dumps', moraine ridge patterns and meltwater channels. A natural open grassland and shrubland setting is important to sustain their value as discrete landscape elements as is the clarity of their inter-relationships with other landforms.
- The Mary Range, which this area includes in part, is a prominent landform dividing the expansive Mackenzie Landscape compartment from the ice scoured Lake Pukaki Landscape compartment.

113. *Significance may be accorded to landscapes that have high qualities of coherence, pleasantness and intactness including working landscapes.*

- The proposal has landscapes that generally have high degrees of naturalness, coherence and legibility. The homogenous low short cover is very important to these attributes, as is the minimal presence of cultural elements. Landforms and patterns of landforms remain intact, the large scale of the landscape is significant.

Management and Boundary Issues:

The area will require active conservation management, especially in terms of weed and animal pest control.

- The area should not be grazed to maximise the regeneration and succession of indigenous plant communities.
- Any wildling conifers should be removed before they spread further.
- Rabbit and hare control may be required. Feral cats, weasels, stoats, hedgehog and rats may require control effort from time to time.
- Access points. The proposal adjoins Hayman Road and the Tekapo Canal road which is a private road. There are existing access points/farm tracks to the area some of which could be developed with a carpark, signage and route marking. Access off the Tekapo Canal Road would require discussion with Meridian Energy.
- New fencing may be required for some of the proposed boundaries. Their location should be determined on the ground.

CA2 Central Moraine and Outwash Surface

Existing Status: Pastoral Lease

Authority: s.35(2)(a)(i) CPLA

Proposal

That an area of approximately 2,426 hectares be designated as land to be restored to full Crown ownership and control as a conservation area to be managed by the Department of Conservation for the purposes of protecting the natural environment and providing public access.

Description:

The area includes the northern part of Irishman Creek pastoral lease. It is a large area of gentle terrain west of State Highway 8. Proposed CA2 also incorporates the outwash surface adjacent to Irishman Creek.

Justification:

The proposal contributes to the Mackenzie Basin landscape and in part contributes to the visual corridor for State Highway 8. The proposal provides opportunities for active and passive recreation and opportunities for the Te Araroa trail. The proposed area contains chronically threatened flora & fauna within a 'Chronically threatened' and 'At Risk' Lenz environment.

Species and their habitats

51. The highest significance will be accorded to reproducing populations of any bird, plant, reptile, or invertebrate species in the Hitchmough decline (i.e. chronically threatened) categories, and their associated habitat.

- The proposal provides habitat for the following species ranked 'serious decline':
 - *Carmichaelia vexillata* on outwash surface.

- The proposal provides habitat for the following species ranked ‘gradual decline’:
 - Mat daisy, *Raoulia monroi*, on bouldery interfluves of outwash plain.
 - Coral broom, *Carmichaelia crassicaule*, in short tussockland/shrubland throughout.

53. High significance will be accorded to species listed as range restricted or sparse, and their habitat.

- The proposal provides habitat for the following species ranked ‘sparse’:
 - Shrub *Coprosma intertexta*, in remnant shrublands on steep bouldery moraine ridges, and at toe slopes of low terrace risers.
 - *Aciphylla subflabellata* in red tussockland and at wetland margins.
 - *Hymenochilus tristis* (Green hood orchid) in outwash plain.

60. Significance may be accorded to non threatened indigenous species and their habitats.

- Cushion daphne (*Pimelea pulvinaris*), mat broom (*Carmichaelia nana*) and mat daisy (*Raoulia parkii*) that are associated with the alluvial outwash plain occur on unique habitats and face a threat of habitat destruction. The threat ranking for these species is likely to be increased as a result of the recent threatened plant revision.
- The little known, large headed fly, *Tomosvaryella novae-zealandiae* found near the northern boundary.
- The Stealthy spider, (*Matua valida*), (Data deficient), restricted to inland Otago and the Mackenzie Basin.
- The Ground weta, *Hemiandrus “fluroviarius”*, potentially a subspecies endemic to the Mackenzie Basin.
- The occurrence of both upland bully and Canterbury galaxias in this system is significant.

Ecosystems, habitats and communities

62. *The highest significance will be accorded to examples of Level IV “much reduced environments”, where the example’s soils are uncultivated and it has characteristic indigenous species present i.e. characteristic of the original indigenous vegetation. For the purposes of this standard “much reduced environments” are defined as those LENZs that have less than 20% of their land area still in indigenous vegetation cover (whether protected or unprotected). The significance of the example increases with area size and characteristic indigenous species richness. The significance of the example increases with vulnerability i.e. as the percentage of that LENZ represented in the protected areas network is nearer to zero and as losses of its indigenous cover accelerate.*

- The proposal includes a ‘Chronically threatened’ land environment which still retains some components of the original vegetation.

63. *The highest significance will be accorded to remnants of woody indigenous vegetation in their approximate position in the pre human landscape. Fire and climate change in the high country has removed much of the woody vegetation, so what remains in its original environment is important.*

- Shrubland, dominated by small-leaved coprosmas, matagouri and native broom are in reasonable condition and constitute remnants of the original pre-human vegetation cover.
- Shrublands of steep bouldery moraine ridge slopes do represent remnants of pre-human vegetation cover.

64. *The highest significance will be accorded to the remnants of the most distinctive (unusual and/or rare and/or naturally uncommon) ecosystems, habitats and communities for example alpine fellfield, flush, bog or snowbankupland conifer forest/shrubland, alluvial floodplain or*

terrace forest/shrubland, dryland forest/shrubland, lowland hill country forest/shrubland, volcanic forest/shrubland, saline patches, stony fans and terraces, kettleholes, cliffs and talus, braided riverbeds, limestone outcrops and the wet or dry frosty hollows of floodplains, palustrine wetlands, peat lakes, deepwater lakes with bryophyte communities, riverine lakes and oxbows, freshwater margin indigenous turf communities, flushes and seepages, ephemeral tarns and wetlands, anastomising rivers, braided rivers and associated aquifer systems and springs and karst freshwater systems.

- The proposal includes a relatively intact sequence of significant ecosystems that include moraine shrubland, alluvial terrace shrubland, dryland shrubland, stony fans and terraces associated with the fluvio-glacial outwash plain, kettleholes and red tussock grasslands.

65. *High significance will be accorded to examples of Level IV “at risk environments” where the example’s soils are uncultivated and it has characteristic indigenous species present i.e. characteristic of the original indigenous vegetation.*

- The proposal includes an ‘At Risk’ land environment which still retains some components of the original vegetation.

69. *Significance may be accorded to components of freshwater ecosystems ranked nationally important in DOC December 2004.*

- Most of the Waitaki River, including all catchments on this pastoral lease, is recognised as a 'Type II' in the Waters of National Importance (WONI) documentation (Chadderton et al 2004). 'Type II' implies that the waterway contains special features of national significance. Only sections of 'Type II' catchments are of national importance. This significance is because it is in the top ten sites by Natural Heritage Value score in its biogeographical unit; and also for its threatened bird, plant and fish communities in the Waitaki River.

71. *Significance may be accorded to areas recommended for protection under the PNAP.*

- Part Balmoral Fescue and Red Tussock Grassland (RAP Tekapo 9, Mackenzie PNAP Survey report) continues to support fescue tussock and red tussock.

72. *Significance may increase as species and community diversity in the area increases.*

- The inclusion of a contiguous sequence of landform across an altitude sequence and their associated habitats means that species and community diversity of the proposal is greater than if only part of the sequence was included.

73. *Significance may increase with the size or natural protection of the area under consideration.*

- The proposal includes part of the largest and most intact sequence of glacial landforms and associated dryland habitats and plant communities remaining in the MacKenzie Basin. Protection of these areas will create a large dryland area which includes a full range of interconnected ecotones allowing for greater ecological functioning and sustainability into the long term.

74. *Significance may be accorded to places where there are seed sources available at the site or nearby, of species originally characteristic of the area, to enable the ecosystem to self-restore.*

- Woody species should naturally regenerate in the vicinity of existing shrublands contained within the proposal. These are scattered across the different environments within the proposal i.e. lowland hill slopes, moraine ridges, melt water channels, and along toe slopes of terraces, enabling shrubland regeneration to be fairly widespread. The original vegetation cover of the outwash plain was likely to have had a significant fescue tussockland component. The proposal includes areas of healthy

fescue tussockland where tussock recruitment is evident. This area will provide seed source for self-restoration elsewhere on the outwash plain.

Biodiversity protected area design and function

78. *Significance may be accorded to places that if protected, will increase the effectiveness of protection and management nearby.*

- The protection of this proposal, in conjunction with adjacent proposals, will create a large dryland area which can be managed more effectively.

Recreation Values

86. *The highest significance will be accorded to securing recreational opportunities identified in the CMS, and securing the ability to deliver public enjoyment.*

- The proposal lies within the Waitaki Unit of the CMS. A priority for this unit is to provide new recreational facilities and opportunities. The proposal secures the ability to provide integrated interpretation and access facilities in a glaciated environment, adjacent to State Highway 8.

89. *High significance will be accorded to securing public access to sites of significant inherent value unless there are special reasons for not having public access.*

- The proposal provides a unique setting and opportunity for recreation because of its close proximity to State Highway 8, which is a major tourist route. The proposal provides an excellent opportunity to provide public access to, and interpretation of, this important sequence of glacial landforms.

90. *High significance will be accorded to securing public access that enables the completion of Te Araroa/The Long Pathway in the South Island high country.*

- The proposal, by virtue of its location provides alternative opportunities for the Te Araroa trail. The Te Araroa Trail presently utilises the canal roads.

Landscape Values

108. *High significance will be accorded to other remaining examples of landscapes that characterised New Zealand before humans arrived.*

- This area is considered to be sufficiently natural in character, based on the remnant indigenous species and the unmodified and highly legible and distinctive landforms, to assign significance on the basis of representative pre-European landscape. The proposal comprises landscapes that are relatively unmodified. The patterns of landforms are intact.

109. *High significance will be accorded to generally recognised iconic high country landscapes or scenery. .*

- The Mackenzie Basin as a whole is a generally recognized 'iconic' landscape. Various parts of the Basin are repeatedly depicted in paintings, postcards, greeting cards, calendars and pictorial books on South Island scenery.
- State Highway 8 is a major tourist route. A large number of tour buses and campervans pass adjacent to the proposal everyday. The scenery viewed from the road, especially that closer to the road, would be widely remembered and valued.
- The landscape within the visual corridors of State Highway 8 have a high visual profile which, combined with the natural character and distinctive landforms, would assure that it is generally recognised as an iconic high country landscape.

113. *Significance may be accorded to landscapes that have high qualities of coherence, pleasantness and intactness including working landscapes.*

- The proposal has landscapes that generally have high degrees of naturalness, coherence and legibility. The homogenous low short cover is very important to these attributes, as is the minimal presence of cultural elements. Landforms and patterns of landforms remain intact, the large scale of the landscape is significant.

Management and Boundary Issues:

The area will require active conservation management, especially in terms of weed and animal pest control.

- The area should not be grazed to maximise the regeneration and succession of indigenous plant communities.
- Any wildling conifers should be removed before they spread further.
- Rabbit and hare control may be required. Feral cats, weasels, stoats, hedgehog and rats may require control effort from time to time.
- Access points. The proposal adjoins State Highway 8. There are existing access farm tracks to the area some of which could be developed with a carpark, signage and route marking.
- New fencing will be required for some of the proposed boundaries. Their location should be determined on the ground.

CA3 East of State Highway 8

Existing Status: Pastoral Lease

Authority: s.35(2)(a)(i) CPLA

Proposal

That an area of approximately 893 hectares be designated as land to be restored to full Crown ownership and control as a conservation area to be managed by the Department of Conservation for the purposes of protecting the natural environment and providing public access.

Description:

The area includes the eastern part of Irishman Creek pastoral lease. It is a large area of gentle terrain east of State Highway 8 and west of the Tekapo River.

Justification:

The proposal contributes to the Mackenzie Basin landscape and in part contributes to the visual corridor for State Highway 8. The proposal provides opportunities for active and passive recreation and in conjunction with other land, opportunities for the Te Araroa trail. The proposed area contains acutely and chronically threatened flora & fauna within a 'Chronically threatened' Lenz environment.

Species and their habitats

50. *The highest significance will be accorded to nationally critical, nationally endangered and nationally vulnerable (i.e. acutely threatened) threatened species and their habitats. Significance increases with the species' vulnerability to total extinction.*

- *Myosotis pygmaea var minutiflora* (Nationally vulnerable) within ephemeral kettleholes

51. *The highest significance will be accorded to reproducing populations of any bird, plant, reptile, or invertebrate species in the Hitchmough decline (i.e. chronically threatened) categories, and their associated habitat.*

The proposal provides habitat for the following species ranked 'serious decline'.

- Dwarf broom, *Carmichaelia vexillata*, on moraines.

The proposal provides habitat for the following species ranked 'gradual decline'.

- Mat daisy, *Raoulia monroi*; on bouldery interfluves of outwash surfaces.
- Coral broom, *Carmichaelia crassicaule*; in short tussockland/shrubland

53. High significance will be accorded to species listed as range restricted or sparse, and their habitat.

- The proposal provides habitat for the following species ranked 'sparse':
 - *Colobanthus brevicephalus* in deflation hollows.

57. *Significance may be accorded to adjacent habitat suitable for any acutely or chronically threatened species i.e. adjacent to habitat having significance under paras 50 or 51.*

- The nationally endangered grasshopper, *Brachaspis robustus*, is found on the adjacent Patterson's Terrace which is a monitoring site for this species. This species of grasshopper was found during a survey in 2003 by S Morris on the pastoral lease in this vicinity. It is probable that these grasshoppers are present today on the pastoral lease adjacent to Patterson's Terrace. They were not found during the October 2008 survey as it was too early in the season.

60. Significance may be accorded to non threatened indigenous species and their habitats.

- Cushion daphne, (*Pimelea pulvinaris*), and mat daisy, (*Raoulia parkii*) that are associated with the alluvial outwash surfaces occur on unique habitats. The threat ranking for these species is likely to be increased as a result of the recent threatened plant revision.

Ecosystems, habitats and communities

62. *The highest significance will be accorded to examples of Level IV "much reduced environments", where the example's soils are uncultivated and it has characteristic indigenous species present i.e. characteristic of the original indigenous vegetation. For the purposes of this standard "much reduced environments" are defined as those LENZs that have less than 20% of their land area still in indigenous vegetation cover (whether protected or unprotected). The significance of the example increases with area size and characteristic indigenous species richness. The significance of the example increases with vulnerability i.e. as the percentage of that LENZ represented in the protected areas network is nearer to zero and as losses of its indigenous cover accelerate.*

- The proposal includes a 'Chronically threatened' land environment which still retains some components of the original vegetation.

64. *The highest significance will be accorded to the remnants of the most distinctive (unusual and/or rare and/or naturally uncommon) ecosystems, habitats and communities for example alpine fellfield, flush, bog or snowbankupland conifer forest/shrubland, alluvial floodplain or terrace forest/shrubland, dryland forest/shrubland, lowland hill country forest/shrubland, volcanic forest/shrubland, saline patches, stony fans and terraces, kettleholes, cliffs and talus, braided riverbeds, limestone outcrops and the wet or dry frosty hollows of floodplains, palustrine wetlands, peat lakes, deepwater lakes with bryophyte communities, riverine lakes and oxbows, freshwater margin indigenous turf communities, flushes and seepages, ephemeral tarns and wetlands, anastomising rivers, braided rivers and associated aquifer systems and springs and karst freshwater systems.*

- The proposal includes a relatively intact sequence of significant ecosystems that include alluvial terrace remnant shrubland, stony fans and terraces associated with the fluvio-glacial outwash surfaces, kettleholes and turf communities of ephemeral tarns.
- Dryland shrubland, kettleholes and ephemeral wetlands are rare ecosystems

69. *Significance may be accorded to components of freshwater ecosystems ranked nationally important in DOC December 2004.*

- Most of the Waitaki River, including all catchments on this pastoral lease, is recognised as a 'Type II' in the Waters of National Importance (WONI) documentation (Chadderton et al 2004). 'Type II' implies that the waterway contains special features of national significance. Only sections of 'Type II' catchments are of national importance. This significance is because it is in the top ten sites by Natural Heritage Value score in its biogeographical unit; and also for its threatened bird, plant and fish communities in the Waitaki River.

73. *Significance may increase with the size or natural protection of the area under consideration.*

- The proposal includes part of the largest and most intact sequence of glacial landforms and associated dryland habitats and plant communities remaining in the MacKenzie Basin. Protection of these areas will create a large dryland area which includes a full range of interconnected ecotones allowing for greater ecological functioning and sustainability into the long term.

Biodiversity protected area design and function

78. *Significance may be accorded to places that if protected, will increase the effectiveness of protection and management nearby.*

- The protection of this proposal, in conjunction with adjacent proposals, will create a large dryland area which can be managed more effectively.

Recreation Values

86. *The highest significance will be accorded to securing recreational opportunities identified in the CMS, and securing the ability to deliver public enjoyment.*

- The proposal lies within the Waitaki Unit of the CMS. A priority for this unit is to provide new recreational facilities and opportunities. The proposal secures the ability to provide integrated interpretation and access facilities in a glaciated environment, adjacent to State Highway 8.

89. *High significance will be accorded to securing public access to sites of significant inherent value unless there are special reasons for not having public access.*

- The proposal provides a unique setting and opportunity for recreation because of its close proximity to State Highway 8, which is a major tourist route. The proposal provides an excellent opportunity to provide public access to, and interpretation of, this important sequence of glacial landforms.

90. *High significance will be accorded to securing public access that enables the completion of Te Araroa/The Long Pathway in the South Island high country.*

- The proposal, by virtue of its location and adjacent land proposals provides alternative opportunities for the Te Araroa trail. The Te Araroa Trail presently utilises the canal roads.

Landscape Values

108. High significance will be accorded to other remaining examples of landscapes that characterised New Zealand before humans arrived.

- This area is considered to be sufficiently natural in character, based on the remnant indigenous species and the unmodified and highly legible and distinctive landforms, to assign significance on the basis of representative pre-European landscape. The proposal comprises landscapes that are relatively unmodified. The patterns of landforms are intact.

109. High significance will be accorded to generally recognised iconic high country landscapes or scenery. .

- The Mackenzie Basin as a whole is a generally recognized 'iconic' landscape. Various parts of the Basin are repeatedly depicted in paintings, postcards, greeting cards, calendars and pictorial books on South Island scenery.
- State Highway 8 is a major tourist route. A large number of tour buses and campervans pass through the proposal everyday. The scenery viewed from the road, especially that closer to the road, would be widely remembered and valued.
- The landscape within the visual corridors of State Highway 8 have a high visual profile which, combined with the natural character and distinctive landforms, would assure that it is generally recognised as an iconic high country landscape.

113. Significance may be accorded to landscapes that have high qualities of coherence, pleasantness and intactness including working landscapes.

- The proposal has landscapes that generally have high degrees of naturalness, coherence and legibility. The homogenous low short cover is very important to these attributes, as is the minimal presence of cultural elements. Landforms and patterns of landforms remain intact; the large scale of the landscape is significant.

Management and Boundary Issues:

The area will require active conservation management, especially in terms of weed and animal pest control.

- The area should not be grazed to maximise the regeneration and succession of indigenous plant communities.
- Any wildling conifers should be removed before they spread further.
- Rabbit and hare control may be required. Feral cats, weasels, stoats, hedgehog and rats may require control effort from time to time.
- Access points. The proposal adjoins State Highway 8. There are existing access farm tracks to the area some of which could be developed with a carpark, signage and route marking.

2.2 Land to be restored to or retained in Crown control (Qualified Designation)

Nil

2.3 Existing Reserve

Nil

2.4 Existing Conservation Area

Nil.

2.5 Land being disposed of subject to a Protective Mechanism

Covenants

CC1 Lake Pukaki Lakeside Covenant

Existing Status: Pastoral Lease

Authority: s.40(1)(c) CPLA

Proposal

That an area of approximately 1,796 hectares be designated as land to be disposed of as freehold subject to the creation of a landscape covenant for the purposes of protecting lakeside values as per Cabinet Minute, CBC Min (07) 23/19 and natural values.

Description

The proposal comprises the land east of Lake Pukaki and north of the Tekapo canal.

Justification

Irishman Creek Pastoral Lease is listed as one of the lakeside properties within 5km and visible from Lake Pukaki that is covered by the above cabinet minute. The proposed covenant area is within the 5km zone and is visible from State Highway 80, Mt Cook Road. The proposed area contains a *Carex* wetland which provides habitat for a variety of wetland bird species and kettleholes with threatened plants.

Species and their habitats

50. The highest significance will be accorded to nationally critical, nationally endangered and nationally vulnerable (i.e. acutely threatened) threatened species and their habitats. Significance increases with the species' vulnerability to total extinction.

- *Myosotis pygmaea var minutiflora* (Nationally vulnerable) within ephemeral kettleholes.

51. The highest significance will be accorded to reproducing populations of any plant, reptile, non-migratory fish or restricted mobility invertebrate in the Hitchmough decline (i.e. chronically threatened) categories, and their associated habitat.

- The proposal provides habitat for the following species ranked 'serious decline':
 - Dwarf wood rush (*Luzula celata*) within ephemeral kettleholes

53. High significance will be accorded to species listed as range restricted or sparse, and their habitat.

- The proposal provides habitat for the following species ranked 'sparse':

- *Aciphylla subflabellata* at wetland margins

Ecosystems, habitats and communities

64. The *highest significance* will be accorded to the remnants of the most distinctive (unusual and/or rare and/or naturally uncommon) ecosystems, habitats and communities for example alpine fellfield, flush, bog or snowbankupland conifer forest/shrubland, alluvial floodplain or terrace forest/shrubland, dryland forest/shrubland, lowland hill country forest/shrubland, volcanic forest/shrubland, saline patches, stony fans and terraces, kettleholes, cliffs and talus, braided riverbeds, limestone outcrops and the wet or dry frosty hollows of floodplains, palustrine wetlands, peat lakes, deepwater lakes with bryophyte communities, riverine lakes and oxbows, freshwater margin indigenous turf communities, flushes and seepages, ephemeral tarns and wetlands, anastomising rivers, braided rivers and associated aquifer systems and springs and karst freshwater systems.

- The proposal includes a relatively intact *Carex secta* wetland.
- The proposal includes relatively intact kettleholes.

Management and Boundary Issues:

- The purpose of the covenant is to comply with CBC Min (07) 23/19 and protect the *Carex* wetland and kettlehole communities. Land subdivision, large artificial structures, barriers or activities that may cause pollution or significantly impact on Lake Pukaki's aquatic system, or activities that would effect the *Carex* wetland and kettleholes would not be compatible with this aim.
- The *Carex* wetland should be fenced to protect the area from grazing by farm animals.
- Light sheep grazing of the kettlehole area is acceptable.

CC2 North of Tekapo Canal Covenant

Existing Status: Pastoral Lease

Authority: s.40(1)(c) CPLA

Proposal

That an area of approximately 1,327 hectares be designated as land to be disposed of as freehold subject to the creation of a covenant for the purposes of protecting the landscape and natural values.

Description

The proposal comprises the land north of the Tekapo canal that is not proposed for full crown ownership and control or unencumbered freehold. The northern and eastern boundary of the proposed covenant area is CA2 with CA1 forming the western boundary.

Justification

The proposal contributes to the Mackenzie Basin landscape and in part contributes to the visual corridor for State Highway 8. Remnant shrublands exist in pockets along with short tussock grassland with threatened flora and fauna species present which all contributes to maintaining a natural appearance.

Species and their habitats

50. The *highest significance* will be accorded to nationally critical, nationally endangered and nationally vulnerable (i.e. acutely threatened) threatened species and their habitats. Significance increases with the species' vulnerability to total extinction.

- *Holcaspis bidentella*, (Nationally Critical) small ground beetle found under stones or vegetation in areas dominated by either native shrublands or tussock grasslands.

51. *The highest significance will be accorded to reproducing populations of any plant, reptile, non-migratory fish or restricted mobility invertebrate in the Hitchmough decline (i.e. chronically threatened) categories, and their associated habitat.*

- The proposal provides habitat for the following species ranked 'serious decline':
 - Dwarf broom, *Carmichaelia vexillata*, on moraines.
- The proposal provides habitat for the following species in gradual decline:
 - Coral broom, *Carmichaelia crassicaule*; in short tussockland/shrubland

53. *High significance will be accorded to species listed as range restricted or sparse, and their habitat.*

- The proposal provides habitat for the following species ranked 'sparse':
 - Shrub, *Coprosma intertexta*, in remnant shrublands on moraine ridges, and at toe slopes of low terrace risers.

60. *Significance may be accorded to non threatened indigenous species and their habitats.*

- The Stealthy spider, (*Matua valida*), (Data deficient), restricted to inland Otago and the Mackenzie Basin.
- The occurrence of both upland bully and Canterbury galaxias in this system is significant.

69. *Significance may be accorded to components of freshwater ecosystems ranked nationally important in DOC December 2004.*

- Most of the Waitaki River, including all catchments on this pastoral lease, is recognised as a 'Type II' in the Waters of National Importance (WONI) documentation (Chadderton et al 2004). 'Type II' implies that the waterway contains special features of national significance. Only sections of 'Type II' catchments are of national importance. This significance is because it is in the top ten sites by Natural Heritage Value score in its biogeographical unit; and also for its threatened bird, plant and fish communities in the Waitaki River.

Landscape Values

108. *High significance will be accorded to other remaining examples of landscapes that characterised New Zealand before humans arrived.*

- This area is considered to be sufficiently natural in character, based on the remnant indigenous species and the unmodified and highly legible and distinctive landforms, to assign significance on the basis of representative pre-European landscape. The proposal comprises landscapes that are relatively unmodified. The patterns of landforms are intact.

109. *High significance will be accorded to generally recognised iconic high country landscapes or scenery. .*

- The Mackenzie Basin as a whole is a generally recognized 'iconic' landscape. Various parts of the Basin are repeatedly depicted in paintings, postcards, greeting cards, calendars and pictorial books on South Island scenery.
- The Tekapo Canal bypass route is a major tourist route. The scenery viewed from the road, especially that closer to the road, would be widely remembered and valued.
- The landscape within the visual corridors of the Tekapo Canal Road has a high visual profile which, combined with the natural character and distinctive landforms, would assure that it is generally recognised as an iconic high country landscape.

113. *Significance may be accorded to landscapes that have high qualities of coherence, pleasantness and intactness including working landscapes.*

- The proposal has landscapes that generally have high degrees of naturalness, coherence and legibility. The homogenous low short cover is very important to these attributes, as is the minimal presence of cultural elements. Landforms and patterns of landforms remain intact, the large scale of the landscape is significant.

Management and Boundary Issues:

- The purpose of the covenant is to maintain the landscape character of the proposed area. Activities that would significantly impact on the landscape value of the area would not be compatible, e.g. plantation forestry, shelterbelts, buildings and subdivision.
- Any wildling conifers should be removed before they spread further.

2.6 Other Qualified Designations

Easements

2.6.1 CA1 –CA2 Connection (a-b)

Existing Status: Pastoral Lease

Authority: s.36 (3)(b) CPLA

Proposal: That the designation of land under s.35(2)(c) CPLA, for disposal, be subject to an easement under s.36(3)(b) CPLA. The easement would be for as of right public access for foot, horse and mountain bike, and for conservation management purposes by vehicle.

Description: The easement would follow the existing farm track from the north eastern boundary of proposed CA1 to the south western boundary of proposed CA2.

Justification: An easement is required to provide public and management access between proposed areas CA1 and CA2. The proposed easement provides the linkage between these two areas and provides an opportunity to provide public access from the northern end of the property to the southern end. This easement in conjunction with proposed CA1 and CA2 provides an alternative route for the Te Araroa Trail which presently utilises the canal roads which are private roads.

Type of Protective Mechanism: Easement under s.7 (2) Conservation Act.

2.6.2 Mary Burn Track (c-d)

Existing Status: Pastoral Lease

Authority: s.36 (3) (b) CPLA

Proposal: That the designation of land under s.35 (2) (c) CPLA, for disposal, be subject to an easement under s.36 (3) (b) CPLA. The easement would be for Department of Conservation management purposes by vehicle.

Description: The easement would follow the farm track that exists adjacent to the fence that is the proposed eastern boundary of proposed CA1 north to where the farm track re enters proposed CA1.

Justification: The easement provides management access to proposed CA1 and CA2.

Type of Protective Mechanism: Easement under s.7 (2) Conservation Act.

3 Marginal Strips

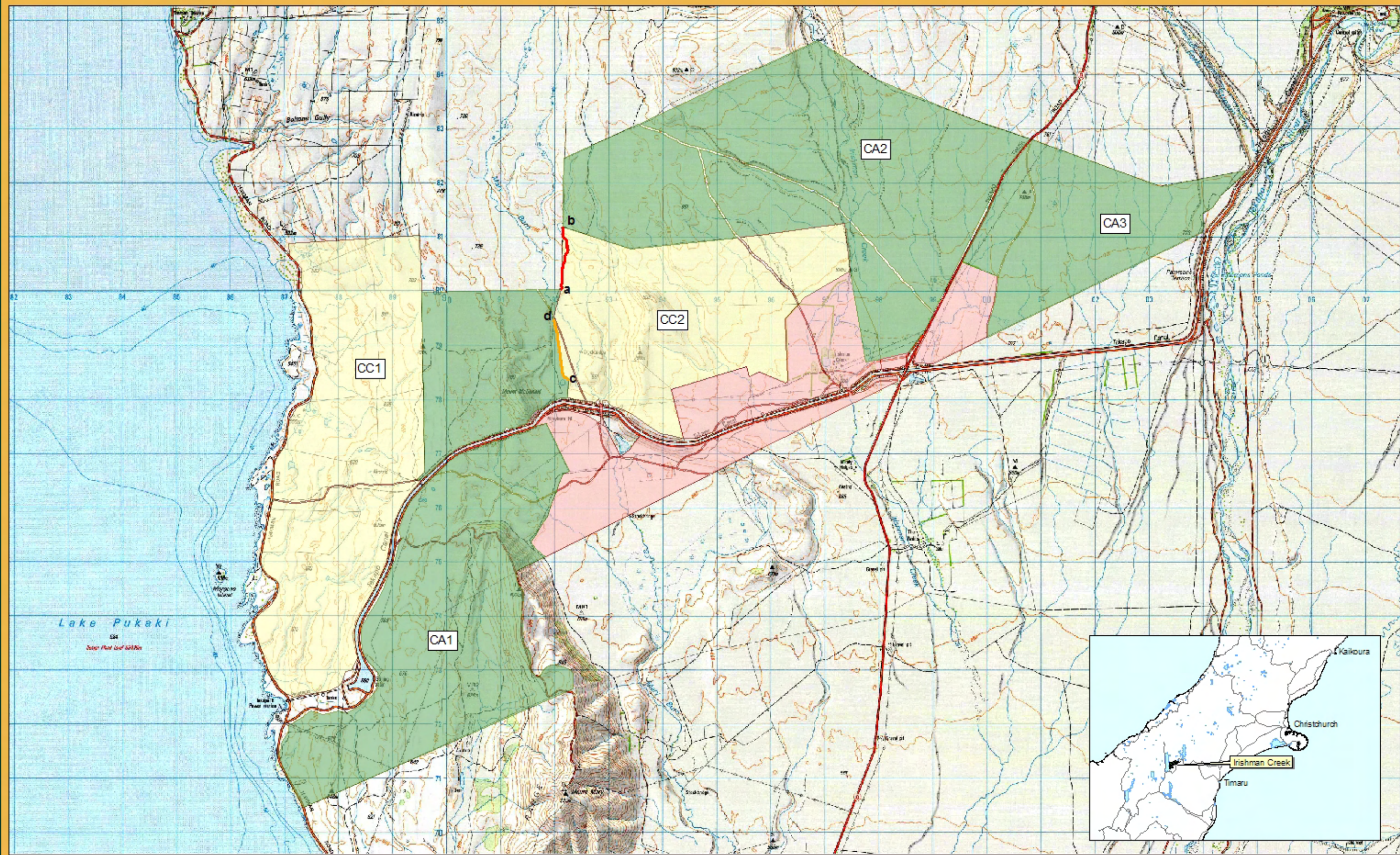
Qualifying waterways have been determined by survey by TL Survey Services Ltd and reported on in September 2007.

4 Other Matters

All matters raised by the NGO's have been considered and are covered in the recommendations of this report and the July 2002 Recommendations.

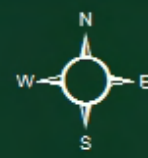
5 Attachments

Illustrative Department of Conservation Recommendations Map.



IRISHMAN CREEK - Revised Recommendations


 Department of Conservation
Te Papa Atawhai
 New Zealand Government
 CANTERBURY CONSERVANCY - TENURE REVIEW



0 3 Kilometers

- Public and management access
- Management access
- Proposed Full Crown ownership and control
- Proposed freehold with covenant
- Proposed freehold