

**BEFORE THE ENVIRONMENT COURT  
AT CHRISTCHURCH**

**ENV-CHC-2009-193, ENV-CHC-  
2009-175, ENV-CHC-2009-181,  
ENV-CHC-2009-183, ENV-CHC-  
2009-184, ENV-CHC-2009-187,  
ENV-CHC-2009-190, ENV-CHC-  
2009-191, ENV-CHC-2009-192**

**IN THE MATTER** of the Resource Management Act  
1991

**AND**

**IN THE MATTER** of appeals under clause 14(1) of the First Schedule to  
the Act in relation to decisions on Plan Change 13 to  
the Mackenzie District Plan

**BETWEEN** **FEDERATED FARMERS OF NEW ZEALAND  
(INCORPORATED) MACKENZIE BRANCH**

**HIGH COUNTRY ROSEHIP ORCHARDS LIMITED AND  
MACKENZIE LIFESTYLE LIMITED**

*(continued next page)*

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**STATEMENT OF EVIDENCE OF DIANE LUCAS ON BEHALF OF  
THE MACKENZIE GUARDIANS INCORPORATED  
DATED: 09 SEPTEMBER 2016**

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**MOUNT GERALD STATION LIMITED**

**MAKENZIE PROPERTIES LIMITED**

**MERIDIAN ENERGY LIMITED AND GENESIS ENERGY  
LIMITED**

**THE WOLDS STATION LIMITED**

**FOUTAINBLUE LIMITED & OTHERS**

**R,R AND PRESTON AND RHOBOROUGH DOWNS  
LIMITED  
HALDON STATION**

Appellants

**AND**

**MACKENZIE DISTRICT COUNCIL**

Respondent

## INTRODUCTION

1. My name is Diane Jean Lucas. I am a landscape architect and director of Lucas Associates Limited, a landscape planning, design and management practice established in Canterbury 37 years ago. I work throughout New Zealand.
2. I hold a BSc in natural sciences, a post-graduate Dip LA, a Master of Landscape Architecture in landscape planning. I am a Registered NZILA Landscape Architect and was made a Fellow of the New Zealand Institute of Landscape Architects in 1987.
3. I was appointed to the government advisory body on environmental policy, the NZ Environmental Council (1982-1988), and co-authored their publication "*Tussock Grasslands. Landscape Values and Vulnerability*".<sup>1</sup>
4. I was appointed by government as expert landscape advisor on the South Canterbury Land Settlement Committee to administer pastoral leases (1984 - 1987), which included consideration of discretionary consent applications for development on a number of stations within the Mackenzie sub-zone.
5. Appointed in 1990 to chair the contestable fund for assisting landowners in the protection of biodiversity on private land, the Nature Heritage Fund (NHF), I regularly assess areas with respect to their ecological significance in terms of representativeness, the sustainability of their natural values, and their landscape and amenity value. The NHF has published regional protection strategies, including the Canterbury Protection Strategy<sup>2</sup> which identified for the Pukaki Ecological District the importance of the extensive depleted short tussockland on unimproved outwash terraces of the Tekapo and Pukaki Rivers, the wetlands along Grays River; and, scattered shrubland and tussockland on moraines.

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<sup>1</sup> Michael Ashdown and Diane Lucas. 1987. *Tussock Grasslands. Landscape Values and Vulnerability*. NZ Environmental Council. Wellington. 119 pp.

<sup>2</sup> M. A. Harding. 2009. *Canterbury Protection Strategy*. A Report to the Nature Heritage Fund Committee. p. 80

6. My team has prepared land and ecosystem frameworks for various parts of New Zealand and undertaken landscape and natural character assessments, and, identified outstanding natural features and landscapes at district, regional and national scales. Since 1995 our projects have received premier landscape planning awards and in 2008 the NZILA Landscape Planning Gold Award.
7. An inaugural comprehensive RMA assessment, the Canterbury Regional Landscape Study was undertaken jointly by Boffa Miskell and Lucas Associates for the Regional Council in 1993, with legal interpretation by Dr Andy Dennis and land typing by Ian Lynn. We identified regionally outstanding natural features and landscapes of Canterbury. The Mackenzie Basin was assessed in that study to comprise an outstanding natural landscape (ONL).
8. I have undertaken research in local, rural and high country areas, including for my masters thesis, *Identifying Acceptable Vegetation Change in High Country Landscapes* (Lincoln University. 1994) which involved an iterative high country case study. From this, development of pattern analysis and land systems approaches has become fundamental to my approach. I researched wilding tree spread and management and was then inaugural chair of the Canterbury Wilding Tree Control Committee.
9. Whilst I have undertaken assessments under the Crown Pastoral Lands Act (CPLA) with regard to landscape values on pastoral lease areas, I have not undertaken any tenure review assessments in the Mackenzie Basin. I have assisted Mackenzie Guardians with submissions on a number of Preliminary Proposals. In my evidence I identify significant values that have been identified under this legislation and recognise the CPLA and government policy.
10. I have undertaken assessments under the RMA of a number of sites within the Mackenzie District, and of the whole District as it contributes to the regional landscapes. I did not provide expert evidence to the earlier Plan Change 13 hearings.

11. In 2009 I provided evidence assessing the landscape and visual effects of the applications for land use permits for 40 sites in the Upper Waitaki catchment to the Environment Canterbury hearing for the Mackenzie Guardians. 19 of these sites were within the Mackenzie District and concentrated within the subzone. Following the decisions in 2011-2012, I have been involved for Mackenzie Guardians in mediation on a number of the Mackenzie sites. Four sites continue in the court process and do not yet have final decisions - Simons Pass (4223 ha)<sup>3</sup>, Simons Hill (2075 ha), Rosehips (893 ha), and, High Country Rosehips (985 ha).
  
12. With the government's establishment of the Mackenzie Forum in 2010, I attended the collaborative process as the Mackenzie Guardians' advisor. I participated throughout the Forum including the final meeting at which I made a presentation with a compilation of officials' maps of identified values which were measured in hectares. It was at this meeting that 100% agreement was achieved around the table involving the 22 parties. The agreement included recognition of needing protection for 162,000 hectares for biodiversity and landscape. Due to the lack of adequate government support for the agreed approach the Mackenzie Guardians withdrew from the process and I have not participated in the Mackenzie Trust subsequently established.
  
13. To update our 1993 study for Environment Canterbury, the *Canterbury Regional Landscape Study Review* was prepared by Boffa Miskell and finalised in July 2010 following my external peer review. As per current best practice, the study amended the criteria to add historical associations and ecological components<sup>4</sup> - aspects we'd excluded in 1993 to avoid duplication within s.6. Assessing large-scale landscape patterning, at a regional scale, Boffa Miskell again identified the floor to the Mackenzie Basin as ONFL, but excluding the more recently developed area around and south of Twizel. (pages 142-3) (attachment 12)

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<sup>3</sup> original command areas as per applications

<sup>4</sup> Amended Pigeon Bay Criteria

14. I have read the Environment Court code of conduct for expert witnesses, and I agree to abide by it. I have prepared this evidence in accordance with that code. I confirm that my evidence is within my area of expertise, except where I state I am relying on the evidence of another person. To my knowledge I have not omitted to consider any material facts known to me that alter or detract from the opinions I express in this evidence.
15. In preparing this proposal to utilise the land typing I have consulted with Ian Lynn, with whom the method has been developed and applied, to provide a method of landscape characterisation as a basis for assessment. I note that this land typing approach is recommended in NZCPS Policy 15 (c) for identifying and assessing natural features and landscapes.

#### **SCOPE OF EVIDENCE**

16. I address the adequacy of the proposed section 293 version of the Plan Change 13 regime to protect the identified outstanding natural landscape. To assist in refinements to the draft document, and to assist in its implementation, I provide an approach to articulating the natural landscape characteristics of the sub-zone. I provide comment on some of the objectives and policies and methods as examples of both support and the need for further refinement.
17. I have read the evidence of Patricia Harte, Graham Densem and Michael Harding for Mackenzie District Council, Andrew Craig for The Wolds Station, and Chris Glasson for Mt Gerald Station.

#### **PRIMARY OBJECTIVE**

##### ***Rural Objective 3B – Activities in the Mackenzie Basin’s outstanding natural landscape***

*(1) Subject to (2)(a), to protect and enhance the outstanding natural landscape of the Mackenzie Basin Subzone in particular the following characteristics and/or values:*

*(a) the openness and vastness of the landscape;*

- (b) the tussock grasslands;*
- (c) the lack of houses and other structures;*
- (d) residential development limited to small areas in clusters;*
- (e) the form of the mountains, hills and moraines, encircling and/or located in, the Mackenzie Basin;*
- (f) undeveloped lakesides and State Highway 8 roadside;*

18. My evidence reviews the proposed provisions and their adequacy, in particular the adequacy of the identified characteristics and values. I support their apparent intent, but I am concerned that greater clarity is likely needed to guide decision makers, land-holders and their advisors in assessing potential effects of activities on the ONL in terms of the biophysical, the associative and the sensory attributes. I therefore briefly address each characteristic listed in 3B(1).
19. To provide some context, I consider the Basin Floor to the sub-zone in terms of the major land types - the River and Lake Lands (H1); the Moraine Lands (H3), the Outwash Plains (H4), and, the Isolated Mountains (H7) - to address the suggested set of characteristics in Objective 3B (1). (attachment 4)

***(a) the openness and vastness of the landscape.***

20. Openness and vastness are important attributes of the Mackenzie Basin ONL, particularly of the extensive natural outwash plains (H4). Their naturally very low stature vegetative cover results in the most naturally expansive basin or valley floor lands in the country. As most remain as undisrupted, unimproved drylands, their natural openness remains. This is also true of the extensive riverlands (H1) that lie above the major lakes. (viewshed. attachment 23)
21. Openness and vastness are spatial attributes referencing a lack of enclosure. On these extensive largely flat landforms, openness and vastness is typically lessened from enclosure by trees and/or structures. However a woodlot or building placed within a vast and open expanse may significantly detract from the outstandingness

but, standing alone or scattered, may not reduce the apparent vastness or openness. The characteristic therefore inadequately addresses potential 'clutter'.

22. Addressing visual barriers, the characteristics of openness and vastness are neutral on land cover character. Thus an alluvial plain may exhibit very extensive and intensive vegetative cover, such as might provide cut and carry to stock, or extensive cropping, or dairy pasture unobtrusively electrically fenced.
23. In my opinion, as written, (a) is of minimal assistance in addressing pastoral intensification as it does not adequately address the natural character of the sub-zone. The intent is to protect characteristics of an outstanding natural landscape, and a focus on the naturalness of the open and vast dimensions needs to also be articulated.
24. The connectivity, continuity and unity of unimproved and dryland vegetative cover is a very important attribute of the basin lands. I support the concern identified by Mr Densem (para. 17) at a lessening of naturalness beyond Farm Base Areas which is increasingly dividing a formerly unified landscape.

***(b) the tussock grasslands***

25. The Basin Floor involves primarily riverlands, moraine and outwash lands. These land types are primarily naturally tussock grasslands. For the moraine lands all of the deposition landforms naturally support tall tussock (land type charts. attachments 10, 11). On the moraine lands, little tall tussock may remain being replaced by short tussock in both unimproved and improved grasslands.
26. For the extensive outwash plains and the riverlands, some short tussock is naturally present to some degree in each landform component, plus red tussock in the swamp areas (attachments 11, 10). However in their unimproved state, with grazing pressure from stock and rabbits, extensive areas of outwash and riverland have very depleted or scarcely existent tussock cover.



27. For the characteristic to address the natural landscape character of the outwash plains in particular, where few tussock may be evident, it is important that there be recognition that “tussock grasslands” is a generic term referring to low stature dryland communities. With no definition in the Plan, to avoid misunderstanding, clarification would assist.
28. An important aspect of the contribution that tussock grasslands and other dryland communities make to the ONL is their continuity. Their extensiveness and patterning responds to landform characteristics. Viewed across the outwash terraces, the tussock may be confined to particular units, such as in the complex patterning of aeolian dunelands (25, 26, 30 insert, 31 lower), or in outwash patterning resulting in units with contrasting soil depths.
29. With the generic term “tussock grasslands” the only reference to indigenosity in the list of characteristics, some refinement would be appropriate.

***(d) residential development limited to small areas in clusters;***

30. This characteristic has the potential for misinterpretation if the clustering is not clearly linked to the farm base areas.

***(e) the form of the mountains, hills and moraines, encircling and/or located in, the Mackenzie Basin;***

31. As the outwash plains are a major characteristic of the Basin Floor, their phenomenal uninterrupted naturally flat form extending across kilometres, they should appropriately be included within this characteristic.
32. In stark contrast to the mountain slopes alongside, the flat form of the riverlands above the lakes, some 5 km across and many kilometres long, are also major contributors to the distinctive landforms of the sub-zone. (attachments 6 - 8)
33. In recognising the contribution of natural landforms, the geomorphic character, to the ONL through an objective, this needs to be carried into policies and methods.

However this has not as yet occurred. As identified by Mr Densem (para. 27), the earthworks policy (3A1) is of very limited applicability.

*(f) undeveloped lakesides and State Highway 8 roadside;*

34. The undeveloped character of the lands associated with the lakes and the highway corridor are important contributors to the ONL. Whilst these are focal areas for visitors, and do require particular management, the descriptor risks assessment considerations focussing on these locations.
35. The term “lakeside” can be very narrowly defined, as can the term “roadside” which means alongside the road. In this vast spacious landscape, a spacious interpretation is required. In this landscape, something that encroaches on the road corridor and therefore adversely affects the ONL can be several hundred metres from the road. Unless specific policies and methods underpin this, the terminology in the characteristic may not be adequate.
36. In addition, because this characteristic provides locaters, being limited to State Highway 8 and the lakesides, and not including State Highway 80 to Aoraki, nor other tourist roads addressed in the methods, the limitations from this wording is questioned.
37. Addressing the experience of the ONL, the basin is enjoyed from many other public locations, including from boats, from off-road access such as walking and cycle routes, and riverside fishing routes. In addition aerial observation is a major aspect for people in their comprehension of the basin landscape. Flight paths through to Central Otago are highly used, plus three airfields within the sub-zone (Glentanner, Tekapo and Twizel), and the “gliding capital of New Zealand” is close by at Omarama.
38. As has been accepted through this plan change process, the landscape importance is not about major views, but about the integrity of the basin landscape as an ONL. Emphasis on road and lakesides through that being the only locational focus in

Objective 3B may detract from the greater landscape in suggesting a single access route as priority.

## **MAPPING**

### ***Landscape Units***

39. I have considered whether the Objective 3B is overly ambitious to address the whole sub-zone in terms of achieving adequate provisions. I reviewed the division into 'landscape units', as provided in 2007 by Mr Densem involving 9 broad assessment units and 39 sub-units. Rather than such complexity, which I consider unnecessary to divide this single large landscape, I considered catchments. My attachments (1 - 4, 7 - 8, 12 - 22) show the broad division of the sub-zone into the Tekapo, Pukaki and Ohau catchments or 'systems'. This broad division may have some applicability, and in particular areas that are a focus, division into sub-catchments could be contemplated.
  
40. Whilst catchment divisions may assist for some particular topics and applications, generally the natural landscape characteristics are land type based and are common to each catchment. Thus a division into broad land types likely provides a more useful framework than other divisions. As a timeless framework, regardless of land use changes such as presence or absence of wilding trees or undeveloped drylands, a land type framework is supported. The most simple would be a division into the broad landscape typology of surrounding mountains, the bedrock country, distinct from the basin floor, the deposition country. This distinction is the primary division in the basin, of floor v walls.
  
41. If desired, the floor can be further divided into broad land types, primarily moraine lands or outwash plains. I note Mr Harding also utilises a distinction between the moraine and outwash plains, such as at paragraphs 35 – 39. As well as geological, soil and ecological distinctiveness, the moraine and outwash plains' distinct and differing landscape character is an important attribute of the basin floor. Thus for the Basin Floor, division into a useful planning and landscape management framework is to recognise the high country land types:

- H1 River and Lake Lands
- H3 Moraine Lands
- H4 Outwash Plains
- H7 Isolated Mountains (attachment 8).

42. If more targeted descriptors for characteristics and/or values were to be included, the land typology could assist. A method that involves a nested hierarchy of information, meaning that more information can be gathered through time as and where it is needed. These land types have been mapped, however there is diversity within each that needs to be respected and responded to. Each land type has been modelled to depict a finer scale division into landform components that can be utilised in any assessment (attachments 10 - 11). For sample areas the landform components have been mapped (attachment 9 upper, centred on Mary Range)
43. As noted by Mr Densem at para 70.13, there has been a lack of a natural science basis to the assessments for Council. Whilst available, it is disappointing they have not yet utilised a land typology to assist in “making sense” of this geomorphically legible landscape.
44. Whilst the District Plan makes some recognition of the need to protect geopreservation sites from adverse effects (e.g. Rural Policy 3A1), they were not recognised by Mr Densem and are not delineated in the plan documents. (attachment 21) As well as an improved identification and delineation of ecological values, and the inclusion of the delineation of geopreservation sites within the plan, a land typology would provide a useful landscape planning framework.
45. The simple distinction of the basin floor into riverlands, moraine, outwash and isolated mountain land types (the Mary Range) would form a useful framework. It would “make sense” to land holders as well as to natural scientists. Then, for use in site or locale assessments, the landform components can be merely noted for assessors to utilise:

**H1 River and Lake Lands** (braided valley fill; valley floor swamp; floodplain terraces; fans; and, large lakes & lake shorelines)

**H3 Moraine Lands** (ablation moraine fields; terminal moraine fields; kettleholes; fluvial valley terraces; lakeshore benches & beaches; fans; meander floodplains; valley fill swamps; terrace & moraine backswamps; and, erosional 'hard' rock hill slopes)

**H4 Outwash Plains** (fluvioglacial outwash plains; outwash terraces; piedmont fans; braided alluvial floodplains; meander floodplains & backswamps; low hard rock ranges; and, minor soft rock hill slopes)

**H7 Isolated Mountain** (upper mountain slopes and summits; lower mountain slopes).

### ***Scenic Viewing Areas***

46. **Rural Policy 3A2 – Scenic Viewing Areas**

*To limit structures and tall vegetation within scenic viewing areas to enable views of the landscape to be obtained within and from those areas.*

The Scenic Viewing Areas (SVA) are mapped within the operative plan. The method seeks *“To ensure that views within and from these areas are not obstructed”* through limiting *“structures and tall vegetation”*. Earthworks and vegetation clearance are also controlled.

47. The SVA provide some assistance in addressing management of landscape change. However they are spatially very limited and, primarily geared to addressing trees and buildings, they are very limited in addressing land use intensification.

48. In addition, I recognise that normal farm activities undertaken in particular scenic viewing areas, such as stacking substantial quantities of plastic-wrapped feed bales, could very effectively obstruct views within and from these areas for seasons or years at a time.

***Pastoral***

49. At para 53 Mr Densem describes the continuum from unimproved drylands to developed irrigated regimes. I agree with his assessment of the visual effects at para. 54 and 57. Mr Densem has not commented on the adverse landscape effects in terms of biophysical factors, on the geodiversity and biodiversity.
50. Most of the Mackenzie Basin sub-zone can be described as “pastoral”. Yet the landscape character varies considerably from herbfield or tussock grassland character contributing high naturalness through a continuum of lesser indigenous and greater exotic dominance to a dense pasture. PC13(s293V) includes the term “pastoral”, and from my field assessments I consider that the full spectrum is displayed, and, due to their varying landscape attributes, greater clarification is required to distinguish unimproved drylands from improved grasslands, and, dry from irrigated pastures.<sup>5</sup>
51. I agree with Mr Densem’s assessment (para. 60) that addressing visual vulnerability is not enough, and that effects on landscape character need to be addressed.

***Scenic Grasslands***

52. In response to the Interim Decision, Mr Densem has identified, described and mapped 13 roadside areas as Scenic Grasslands and their extent is arbitrarily confined within 500 m of the road.

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<sup>5</sup> Identifying the spectrum across 4 pastoral types could assist – Unimproved grasslands ; Improved grasslands; Dryland Pasture; Irrigated pasture. Including recognition that “grasslands” includes non-grass communities, and that “pasture” included non grass crop.

53. I understand from his para. 41 that these grasslands seemingly include improved grasslands and dry pasture. However Mr Densem states that he deleted areas due to “pastoral intensification”. Yet in the Operative Plan “pastoral intensification” means oversowing and topdressing.
54. As is apparent on site, and as shown in Mr Densem’s brief descriptions (para. 46) the scenic aspects being addressed involve much larger areas than are mapped. Whilst protection through the scenic grasslands method is supported, their spatial extent is too limited to be an adequate method to enable protection of the ONL from adverse effects. Mr Densem seeks (para. 50) that they be combined with SVA and LPA to “*ensure the character of these priority areas be maintained.*” This intent is supported, but, given the importance of the natural vast and open character, more spatially extensive protection from adverse effects is needed. The patches delineated (attachment 15 and 19) are not sufficient. Considering the extent of identified SIV (Significant Inherent Values) particularly Landscape SIVs (attachment 13 (2009)), the exceptional naturalness, and the wide visibility across the Basin (viewshed, attachment 23) the delineated patches alone are inadequate.
55. A continuum of dryland regimes is variously included within the Scenic Grasslands delineated. That is, some involve entirely unimproved grasslands, others improved grasslands, and some is dryland pasture. Mr Craig addresses GA11 an improved grassland, which, as identified by Mr Harding (para. 69) is predominantly of fescue tussockland character. As Mr Craig notes at para. 45, OSTD may cause degradation to the indigenous vegetation, particularly the non-tussock communities. As he notes at para. 52, landscape appreciation involves more than visibility, and I agree. Considering the subtlety of the terrain and vegetative cover including the colours and typical clarity of light, plus the increasingly known and valued natural nuances, I do not support Mr Craig’s assessment at para. 67 that a 1 km extent of tussock grassland recognition is excessive. (mapped at attachments 16 – 18)
56. Addressing the Scenic Grassland GA7 that extends along the Lilybank Road on the eastern slopes to Lake Tekapo. Whilst some areas have been seemingly arbitrarily excluded that would more appropriately be addressed under the Scenic Grassland

provisions for landscape protection, I support the method being applied in this area. As identified by Mr Glasson there are also further areas in this vicinity that would be appropriately addressed for landscape management.

57. Within the delineated areas for Scenic Grasslands, Scenic Viewing Areas and Lakeside Protection Areas Mr Densem (para. 61) supports non-complying activity status for pastoral intensification as now defined to ensure thorough assessment. I support his comment that it requires “strong objectives and policies”. Whilst I support the non-complying status, I too consider the Policies, plus, as noted above, the Objectives, to not yet be adequate to sustain the ONL values.

### **PASTORAL INTENSIFICATION**

58. **Policy 3B13 – Pastoral Intensification**

*(2) To avoid pastoral intensification in Sites of Natural Significance, Scenic Viewing Areas and Scenic Grasslands (including tussock grasslands) adjacent to and within the foreground of views from State Highways and the tourist roads.*

59. Addressing Policy 3B13(2), from my field testing I support the need to avoid pastoral intensification in the SONS, SVAs and Scenic Grasslands as stated, including in the tussock grasslands. That is, I understand, for grasslands within 1 km of defined roads. As the 500m Scenic Grasslands are an inadequate extent for addressing effects on the ONL, extension to avoidance of intensification within a 1 km band from the identified roads would be appropriate.

60. *(3) To enable pastoral intensification .....of land for which irrigation consent was granted prior to 14 November 2015 and the effects on the outstanding natural landscape have been addressed through the regional consenting process.*

61. Given the different responsibilities and the apparent delegation of some aspects to district processing, I consider that Regionally consented irrigation should not preclude consideration at District level with respect to effects on the ONL. For ‘live’



consents to be considered as at least a controlled activity, so that mitigation measures can be addressed, would be appropriate.

62. *(4) To manage pastoral intensification elsewhere in order to retain the valued characteristics of the Mackenzie Basin Subzone.*
63. I consider this policy to be ambiguous. I assume that “elsewhere” means outside of the Mackenzie Basin subzone, and am unsure of the methods of achieving this “trade”.
64. *(5) To take into account any agreement between the Mackenzie Country Trust and landowners which secures protection of landscape and biodiversity values as compensation for intensification of production.*
65. The Mackenzie Agreement does not provide for such a direct exchange of rights. In my opinion this misrepresents what was agreed.
66. As any intensification that removes indigenous cover is non-reversible, it is crucial that any such agreement involves an in perpetuity encumbrance. Monitoring and enforcement provisions would also need to be assured.
67. Policy 3B13 (5) requires amendment.

#### **CAPACITY TO ABSORB DEVELOPMENT**

68. **Policy 3B1 - Recognition of the Mackenzie Basin’s distinctive characteristics**  
*To recognise that within the Mackenzie Basin’s outstanding natural landscape there are:*
- (a) Many areas where development beyond pastoral activities is either generally inappropriate or should be avoided;*

*(b) Some areas with greater capacity to absorb different or more intensive use and development, including areas of lesser landscape sensitivity and identified Farm Base Areas.*

#### **BEYOND PASTORAL**

69. A change is needed to clarify the intent of 3B1(a), given that “pastoral” includes a full continuum from unimproved drylands to intensive irrigated pasture, by clarifying whether it refers to unimproved pastoral activity or dryland pastoral activity. That is,

*(a) Many areas where development beyond dryland pastoral activities is either generally inappropriate or should be avoided; As noted by Mr Densem (para 63) the intent is to address intensification, which is a pastoral activity. Hence an edit to achieve clarification would be appropriate.*

#### **LESSER LANDSCAPE SENSITIVITY**

70. I support the change in 3B1(b) from addressing ‘visual vulnerability’ to the more appropriate ‘landscape sensitivity’. Mr Densem supports this change at para. 66.

71. Due to the scale and character of change occurring, that has certificates of compliance, that is consented to occur, that is consented and has lapsed, or, is sought to occur, I do not support any spatial depiction of landscape sensitivity. Spatial depiction in the District Plan in my opinion should involve more timeless aspects.

72. Mr Densem’s statement (para. 68) appears to confuse landscape priorities with landscape importance and landscape sensitivity. I do not consider these interchangeable.

73. As identified in many submissions, and responded to by Mr Densem (para. 70), in such an extensive and vulnerable natural rural area, precise mapping is difficult to achieve unless following cadastral boundaries.

74. Located within the geomorphic framework (for example, on H3 moraine v. H4 outwash) landscape sensitivity can be addressed more appropriately as part of any consent application and consideration process. Thus I agree that site specific assessment is entirely appropriate. However due to the vulnerability of this ONL, all applications will require greater scrutiny by council.

#### **BUILT DEVELOPMENT**

75. The Plan Change provides the opportunity to confine new rural buildings and structures to delineated Farm Base Areas. This is appropriate. Only in exceptional circumstances should there be any provision to build outside of the identified farm base areas.
76. Mr Craig seeks (para. 70) that residential and accommodation buildings be bundled with farm buildings. Even when located within Farm Base Areas, in this vast and open ONL the character of any domestication “tells a story”. Domestication cues to the relationship with the surrounding land. Domestic buildings need not “read” as any other farm building as suggested by Mr Craig (para. 73), for they should cue to residents, workers or visitors relationship to the place. Farm buildings should read as utilitarian. Whilst they can all be complementary and integrated as a base complex, there should not be confusion.
77. Mr Craig suggests (para. 80) an option allowing for farm worker accommodation to be scattered beyond Farm Base Areas. As has been addressed previously by the Court, this invites confusion between sought and actual usage of a residential structure. Neither retired, farm worker nor guest usage should have different status than farm houses in the Farm Base Area. In my opinion, due to the significance and vulnerability of this ONL, it would be appropriate for any non-residential building outside of an already identified Farm Base Area to be a non-complying activity.

From my landscape assessment of vulnerability, like Mr Densem (para. 69) I assess it is appropriate to address non-farm buildings beyond Farm Base Areas as non-complying activities.

## **EARTHWORKS & GEOPRESERVATION**

### **78. *Rural Policy 3A1 - Important Landscapes and Natural Features***

*To limit earthworks on steeper slopes, high altitude areas, and on land containing geopreservation sites to enable the landforms and landscape character of these areas to be maintained.*

79. This policy does not address the moraine lands except where there may be a localised steeper slope or a geopreservation site. With most moraine land gently rolling, and much not within geopreservation sites, the natural attributes of moraine landforms are vulnerable to adverse effects. For example, earthworks to remove erratics that are naturally distinctively strewn over their surface, would, under this policy be a permitted activity. Yet the erratic strewn natural moraine landforms are an important landscape characteristic. (attachment 20, 28 centre)

80. With no geopreservation sites on the outwash plains, excepting for steep terrace scarps, the policy does not address the very extensive outwash plains at all. The subtle terrain character of outwash plains is an important landscape attribute. The surface features, such as the aeolian dunes, are very vulnerable to disturbance.

81. Given the landscape importance of the geodiversity of the outwash, the moraine lands and the riverlands, I agree with Mr Densem that the earthworks policy is inadequate. Both wider applicability and greater specificity are needed.

82. Whilst an explanation states: *“Earthworks, other than small scale earthworks, have the potential to scar the landscape or destroy the landform or visual value of natural features (geopreservation sites)”* Appendix I lists the geopreservation sites from Kenny & Hayward 1998.

83. Whilst the Plan states that the “Controls on Earthworks in Geopreservation Sites” will result in *“Protection of the visual values and natural character of areas containing steep slopes, high altitude areas and natural features (geopreservation sites) from unsightly or damaging earthworks”*, I obtain no such assurance from the policy provisions. In particular, the lack of mapping of the geopreservation areas requires remedying. Sites such as the Pukaki Lateral Moraine are recorded on Planning Map 23 as G15, but not spatially depicted.

#### **Rural Policy 3A5 - In Harmony with the Landscape**

84. *To encourage the use of guidelines for the siting and design of buildings and structures, tracks, and roads, tree planting, signs and fences. To encourage the use of an agreed colour palette in the choice of external materials and colours of structures throughout the district, which colours are based on those which appear in the natural surroundings of Twizel, Tekapo and Fairlie.*
85. Given the sensitivity and nuances of this ONL at the site scale, the guidance in this policy for achieving harmony I assess to not be adequate, particularly with regard to the siting of developments. The biophysical factors are not addressed, the geodiversity and ecological nuances are such that analysis is necessary to avoid, remediate or mitigate effects on them. Natural characteristics such as aeolian dunes on the outwash, erratics strewn on the moraine, need to be considered in the siting and design. It is not adequate to focus on colour. In addition, as colour is such an important ONL attribute, more refined guidance on colour use would be appropriate.
86. **4.2 Controlled Activities — Earthworks and Tracking:**
- 4.2.21 Other than in the areas listed below, any earthworks (both excavation and fill) greater than 300m<sup>3</sup> and less than 1000m<sup>3</sup> per site or bare soil exposed greater than 1000m<sup>2</sup> and less than 2500m<sup>2</sup> per site, will be a controlled activity:
- areas containing Geopreservation Sites identified on the Planning Maps and listed in Appendix I;

Sites of Natural Significance identified on the Planning Maps and listed in Appendix I;

areas above 900m in altitude or land with a slope angle greater than 25°;

areas within 10m of a river;

areas within 50m of a wetland or lake.

areas within 20m of a river listed in Schedule B to the Rural Zone;

Scenic Viewing Areas and Scenic Grasslands.

This rule shall not apply to earthworks:

For utility services

Matters Subject to Council's Control include:

Siting, slope and camber of the track;

Terrain disturbance including vegetation clearance, volumes and materials to be removed;

Rehabilitation of disturbed ground

Impact on landscape, amenity and indigenous ecosystems.

87. I note the impact on geodiversity are not recognised as a matter subject to council's control. As observed with the council issuing of Certificates of Compliance, major works may be undertaken as "utilities" even if within these identified special areas. The method for addressing earthworks and tracking is assessed as inadequate in the protection of the ONL from potentially significant adverse effects.

## **UTILITIES**

88. Considering both **Rural Objective 3B (2)** *To maintain and develop structures and works for the Waitaki Power Scheme: (b) elsewhere within the Mackenzie Basin Subzone so as to achieve objective (1) above.* and Utilities Chapter 15, considering potential landscape effects, I note that utilities are permitted activities unless within Lakeside Protection Areas or SONS. Otherwise there appear to be no methods to implement Rural Objective 3B. Policy 3B7 addresses some utilities in LPA.

89. The utility provisions were likely drafted with consideration only of public or small-scale private works, such as a little water-race. As identified with current extensive and intensive farm development proposals, installing substantial supply pipelines or canals would involve significant works over many kilometres. Considered as a permitted activity would likely not achieve Objective 3B, and further Policies and methods are needed. Examples are provided to provide context for the Court.
90. Whilst Rural Policy 3A1 - Important Landscapes and Natural Features is *“To limit earthworks ... on land containing geopreservation sites to enable the landforms and landscape character of these areas to be maintained”* a Certificate of Compliance has been issued to construct an approximately 9 km pipeline from the Tekapo Canal down through the Lake Pukaki Terminal Moraine geopreservation site, alternatively an approximately 7 km canal as a utility, and hence a permitted activity. (attachment 27)

#### **IRRIGATION CONSENT MAPPING**

91. The Map 1 provided by Mr Densem delineated “Consented Irrigation Sites”. I consider this inappropriate, not only due to inaccuracies, but also as it does not allow for changes through increased, varied or reduced areas being consented or irrigated over time.

#### **TREES**

92. ***Rural Policy 3A4 - Tree Planting***

*To control the adverse effects of siting, design and potential wilding tree spread of tree planting throughout the District, to enable forestry to be integrated within rural landscapes and to avoid screening of distant landscapes.*

Unless located within a traditional Farm Base Area, trees are typically intrusive on the outwash plain. Trees are not natural to the outwash plain and their presence is contrary to the valued natural landscape characteristics. The landscape effects of trees whether as forestry, shelter plantings or wildings is to provide a strong contrast with the natural characteristics in terms of patterns, processes and

elements. (attachment 29) Due to the intrusiveness of trees into the open outwash, the adverse effects they generate, any policy should be more directive than seeking to 'enable', 'integrate' and 'avoid screening of distant landscapes'. There is no recognition of the natural character of the lands and the sensitivity. A revision of provisions is considered would be appropriate.

93. Whilst the outwash plains are particularly vulnerable to adverse effects from trees, the other basin land types have some vulnerability and methods are sought to address these. Methods require tightening to better address the potential adverse effects on the ONL of both planned and unplanned tree presence. For example, at Policy 3B14 re stronger provisions to address ongoing wilding control, and also 4.13A regarding activity status for plantings.

## **VIEWS**

### ***Policy 3B7 – Views from State Highways and Tourist Roads***

*(a) To avoid all buildings, irrigators and exotic trees in the Scenic Grasslands and the Scenic Viewing Areas;*

*(b) To require buildings to be set back from roads, particularly state highways, and to manage the sensitive location of irrigators to avoid or limit screening of views of the outstanding natural landscape of the Mackenzie Basin;*

*(c) To avoid clearance, cultivation or oversowing of Scenic Viewing Areas and Scenic Grasslands, including tussock grasslands, adjacent to and within the foreground of views from State Highways and the tourist roads;*

*(d) Subject to Policy 3B13, to minimise the adverse visual effects of irrigation of pasture adjacent to the state highways or tourist roads.*

94. From my analysis, provisions (a) and (b) are supported as they contribute to protecting the ONL from adverse effects. However in considering the methods of implementation, such as in permitting shelterbelt planting beyond a 300 m setback, this is assessed as an inadequate method to protect ONL attributes from potential adverse effects in many parts of the basin. Given the sensitivity of the natural



landscape values, the vulnerability to adverse effects from shelterbelt planting requires that the provisions be refined.

95. Provision (c) appears confused and might be clarified by referring to avoiding pastoral intensification. For, as worded, a dryland community could seemingly be direct drilled and displaced by an exotic pasture or crop, for example, lucerne. Such an activity would likely seasonally significantly adversely affect the character and naturalness of the Scenic Grassland.

96. 3B7 (d) appears inadequately drafted in that it addresses only irrigation “adjacent” to the highway or road. This is open to interpretation. In the vastness and openness of this landscape (attachments 25 – 28), irrigated land can affect the landscape experience from the road view even when 500 metres or more distant. Addressing the “minimising” of effects is not understood to be the task, but the avoidance, remedying and mitigation of effects. A refinement of the Policy is sought. Also, the implementation methods have to be adequate to ensure that such a policy can be implemented.

97. In my opinion, the views provisions currently inadequately address protecting the naturalness of the ONL.

98. **Policy 30 – Views From Roads**

*To encourage landscape change so that views from roads and in particular state highways 8 and 80, are maintained in an attractive state, in keeping with the extensive rural character of the basin, and to limit screening of distant views.*

*This policy recognizes the importance of views obtained of the Mackenzie Basin from the roads and state highways. Due to the difficulty in drafting workable rules the Council propose to prepare guidelines for landowners providing guidance on the location and alignment of temporary farming structures such as irrigators and covered fee in relation to roads.*

Addressing views from roads, Policy 30 inappropriately addresses only attractiveness and “rural character”, s.7(c) considerations, rather than addressing the outstanding natural landscape. The basis for the ONL and its vast, open and natural characteristics could be ignored in instead addressing attractiveness and ruralness. Guidelines responding to this would not be adequate to protect the ONL from inappropriate affects. Due to the inappropriate direction given by the Policy, if this provision is still to be included, re-wording is sought.

## **ACCESS**

99. The Plan provisions have had a traditional view from the road focus and the experience for off-road users in my opinion requires greater consideration in the landscape management policies and methods.
  
100. Overlooking of the Basin is a common means for people to come to appreciate this vast natural landscape. The natural patterns, processes and elements visible to those flying over in various commercial and private craft provide an important landscape experience. Activities including tree presence, pastoral intensification and built development can all be highly evident due to the subtlety of the natural landscape context. The landscape characteristics, and their protection from inappropriate effects, requires consideration in terms of overlooking. The recognition of the importance of overlooking the basin should be addressed in the policies and methods.

## **CONCLUSION**

101. As acknowledged by Mr Densem (para. 36) there has been considerable unforeseen development pressure since his studies were undertaken almost a decade ago for this Plan Change. The ONL is increasingly fragile and additional measures are needed to avoid, remedy and mitigate the effects of inappropriate activities. Aspects such as the naturalness of the geomorphic, vegetative and ecological character, which are the fundamental basis to the natural landscape character, have as yet been inadequately addressed in the planning measures.

102. Due to the importance and sensitivity of the ONL to development that might elsewhere be insignificant, in this landscape strict planning methods are necessary to support the ONL and protect it from inappropriate effects. Given the scale and sensitivity of the ONL, strict controls only within the patches mapped as Scenic Grasslands, Lakeside Viewing Areas and Scenic Viewing Areas is assessed to be spatially inadequate. Therefore, from my consideration of various activities, utilising non-complying activity status for development outside of Farm Base Areas would be appropriate.

**Diane Lucas**