

**IN THE ENVIRONMENT COURT
CHRISTCHURCH REGISTRY**

Under the Resource Management Act 1991
In the matter of appeals under clause 14(1) of the First Schedule to
the Act

Between

**FEDERATED FARMERS OF NEW ZEALAND (INC)
MACKENZIE BRANCH
ENV-CHC-2009-000193**

**HIGH COUNTY ROSEHIP ORCHARDS LIMITED AND
MACKENZIE LIFESTYLE LIMITED
ENV-2009-CHC-000175**

**MOUNT GERALD STATION LIMITED
ENV-2009-CHC-000181**

**MACKENZIE PROPERTIES LIMITED
ENV-2009-CHC-000183**

**MERIDIAN ENERGY LIMITED AND GENESIS
ENERGY LIMITED
ENV-2009-CHC-000184**

**THE WOLDS STATION LIMITED
ENV-2009-CHC-000187**

**FOUNTAINBLUE LIMITED & OTHERS
ENV-2009-CHC-000190**

**R, R AND S PRESTON AND RHOBOROUGH DOWNS
LIMITED
ENV-2009-CHC-191**

**HALDON STATION
ENV-2009-CHC- 000192**

Appellants

And **MACKENZIE DISTRICT COUNCIL**
Respondent

STATEMENT OF EVIDENCE OF CHRISTOPHER RAYMOND GLASSON

9 September 2016

INTRODUCTION

Qualifications and Experience

1. My full name is Christopher Raymond Glasson. I have the qualifications of a B.A, Dip LA, and am a Fellow and Registered member of the NZILA. I have practiced as a Landscape Architect for the past 36 years, the last 29 as Director of Chris Glasson Landscape Architects Limited, based in Christchurch. The practice has undertaken many land based projects throughout New Zealand and overseas.
2. Relevant previous landscape planning and design projects in the Mackenzie Basin and Upper Waitaki locality have included Mt Cook Village and National Park (1980-2010), Twizel reserves assessment, Lake Alexandrina assessment, Pukaki Downs subdivision of 15 lots, Upper Waitaki catchment irrigation consent landscape assessment for Canterbury Regional Council, numerous irrigation plan assessments for farms in the Mackenzie Basin, and landscape evidence for Plan Change 13.
3. Not only have I undertaken this extensive array of projects in the locality, but I have a thorough knowledge of this high country landscape, from travelling through, and working and holidaying in this majestic landscape. I undertook a considerable amount of work at Mount Cook village with the objective of integrating the built forms into the landscape so that the integrity of the National Park could be maintained.

Code of Conduct

4. I acknowledge that I have read and am familiar with the Environment Court's Code of Conduct for Expert Witnesses, contained in the Environment Court Practice Note 2014, and agree to comply with it. My qualifications as an expert are set out above. Other than where I state that I am relying on the advice of another person, I confirm that the issues addressed in this statement of evidence are within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

SCOPE OF EVIDENCE

5. I have been engaged by Federated Farmers of New Zealand Inc to present landscape evidence in regard to the Mackenzie Basin, and review the Mackenzie District Council's landscape assessment in relation to this area. This evidence is not site specific but addresses principles and broad scale issues.
6. In my evidence I address the following matters in terms of the Mackenzie Basin and Plan Change 13:
 - The character of the Mackenzie Basin and it's differing qualities and sensitivities and capacity to absorb change
 - The potential to absorb further agricultural development
 - The importance of maintaining the landscape character of the basin.

THE MACKENZIE BASIN CHARACTER

7. The Mackenzie Basin is a place with its own distinctive identity. While there have been numerous changes and additions to the landscape over many years, its identity remains relatively consistent.
8. Characteristics include its vast and open landscape, the distant mountains enclosing the basin, a generally natural environment of grassland, lakes, shelter belts and rivers. It is a very grand landscape of contrasting colours but mainly with tawny landscape colours predominate. The most enduring features are its vastness and openness contained by the grandeur of a mountain backdrop, and the overall cohesiveness of this landscape.
9. However, the Mackenzie Basin has been modified by humans since their arrival. In gaining a living, and developing an economy, people organised their lives around the natural environment in terms of the techniques available to them, and the values that they set. The modification that people initiated in the basin has increased with the length of occupation, development of skills, and growth in numbers.
10. The forest and scrubland vegetation was transformed into montane tussock grassland both by periodic natural fire around 600 years ago and by Polynesian burning. With the advent of European pastoralism as the major land use in the upper Waitaki, from the 1850's onward, animal grazing became firmly established and led to the development of the current widespread short tussock grassland in the basin.

11. The existing vegetation is very much a depleted fescue tussock grassland, with predominantly hawkweed, and some areas of matagouri, divaricating coprosma, kowhai and corokia scattered throughout the basin.
12. The most significant modification to the basin, other than the introduction of farming, was the advent of the Upper Waitaki power scheme and the development of Twizel township. Roothing, development and raising the lakes, removal of Pukaki village, increasing the size of Tekapo village, canals, dams, penstocks, a rowing course, and the new town of Twizel all contributed to this change. Commercial woodlots are also prevalent throughout the basin, along with wilding pines where their dark green colour contrasts with the tawny grassland.
13. The Mackenzie Basin is identified as an Outstanding Natural Landscape (ONL) in the First Interim Environment Court Decision relating to proposed Plan Change 13 to the Mackenzie District Plan.

PLAN CHANGE 13

14. The stated objective of the Council Plan Change 13 is to protect the Mackenzie Basin from inappropriate subdivision, use and development on the premise that the entire Basin is an outstanding natural landscape. The outcome is to address the activities which impact on landscape values.

OUTSTANDING NATURAL LANDSCAPES (ONL)

15. The ONL status was challenged in the High Court. The Court upheld the ONL status because it was concerned that the Plan had insufficient policies and objectives to protect the basin from inappropriate subdivision, use and development, brought about by the ongoing pastoral intensification.
16. To understand the basin, Landscape Architect, Graham Densem, on behalf of the Council has undertaken a thorough study of the Basin and identified visually vulnerable areas.

17. While trying to protect medium to high visually vulnerable areas the Council has applied a “non complying” approach where there is to be no development, and limiting development only to farm nodal areas.
18. It is my opinion that within these visually vulnerable areas there are discrete places which are able to accommodate development due to landform and vegetation patterns.
19. For example, in many areas the “Scenic grasslands” and “Tussock Grasslands” area does not extend for 1km from the roads due to the presence of the terrace landforms and vegetation, making areas beyond the road invisible to the viewing public. For this reason it would be prudent that farms proposing changes to the landform outside farm nodal areas should undertake a farm development plan, which makes sense of the landform and vegetation patterns.

VISUAL AMENITY VALUE

20. Under section 7(c) of the RMA, particular regard must be given to “the maintenance and enhancement of amenity values”. In relation to the Mackenzie Basin, the values include those which characterise the place as being remoteness and isolation of the location where solitude and tranquillity can be experienced, the ability to attain very large panoramic views, and to be part of a rugged and open grassland landscape unimpeded by trees. Farming contributes to the amenity of the basin because it has determined the land use of the flat land, hence amenity values, to some extent have also been created by the impact of human activity.
21. These values can be influenced by such factors as where one experiences these values from, who is viewing it (residents, travellers, recreationalists), the degree of change in the landscape a viewer can accommodate, and the value inhabitants place on a location. Should intensification of farming practices and developments occur, then there is potential for that amenity to change. Changing the status quo does not necessarily create a negative visual amenity, because amenity can be affected by many variables e.g: composition of the view, people’s response to change, the dominance of the changes, and the scale of the landscape. These areas are visible against a massive backdrop and are minute in comparison with the vast scale in which they appear. The amenity value remains intact and this change does not have to be a negative one.

22. The same occurs in the Upper Manuherika Valley near St Bathans where parts of the valley floor are modified due to irrigation, fertilizer application, ploughing and grazing. At times of the year the valley floor appears as green swards rather than as a tawny tussockland. However, such is the majesty and grandeur of the Hawkdun and St Bathan Ranges and the tussock grassland terraces, that the green valley floor occurring in springtime does not detract from the inherent visual amenity values.
23. The majority of the views toward farms are experienced from state highways and scenic viewing areas (locals and tourists) and from recreational users of rivers, lakes, cycle and walking tracks and camping areas. There are many farms in the basin where the majority of the landscape is seldom appreciated by the public.

POTENTIAL TO ACCOMMODATE FUTHER AGRICULTURAL DEVELOPMENT

Scale of the Landscape

24. This is a huge landscape that can absorb appropriate change without the basin losing its identity. The Mackenzie Basin has discrete areas of development. The location and size of Twizel is very limited, Tekapo is grouped into a contained crescent shaped landform below the skyline, and Mount Cook village only becomes visible to the traveller on arrival.
25. In my opinion, while the Council has virtually “locked up” the basin for non-complying activities in the objectives and policies, through the ONL and by applying broad Scenic Grassland (SG), Tussock Grassland (TG) and Lakeside Protection Area (LPA) statuses to the landscape, there is a lack of understanding around the specific landscape values for each farm.
26. Therefore, if the Council does not provide specific information as to exactly where and how these SG, TG and LPA statuses relate to each farm, and as a result, I am of the opinion that individual farm plans and analyses should be undertaken. This would help to determine what degree of change the landscape is capable of absorbing and how change would be best integrated in order to minimise adverse effects. Currently the imposition on these farms is too generic.
27. One of the characteristics of the basin is that there are many types of landforms making for discrete locations of development. Together with the vastness of scale and the lack of public viewpoints, other than from the roads, this is a landscape that can

absorb development if undertaken in a sensitive manner and without it being detrimental to, or compromising the overall landscape character and visual quality of the basin. In my opinion it would be possible to put together a suite of rules and plans to secure this outcome such that the Council could be satisfied that compliance with those parameters would ensure an acceptable result.

Nodal Concept

28. Nodal type developments are what essentially exist in the basin and to continue this concept makes sense.

29. Nodal developments are particularly suitable for residential or village development and for farming purposes. Currently the land practices are generally for extensive grazing purposes and farm dwellings are well separated. However, this could change to smaller units due to the presence of irrigated land. There may also be a need for further farm dwellings, and not necessarily in an existing farm node, but as groups of individual buildings. This scenario could be accommodated in my opinion by a new nodal concept.

Visibility

30. Places like Twizel are barely visible to a passing motorist, while Tekapo is contained within a landform and Mount Cook Village is well integrated into the landform with the place being celebrated as a unique solution. The same could occur elsewhere in the basin. A house or cluster development need not be totally hidden but if well located and designed it could integrate with the landscape and be embraced by the public. New houses on Simon's Hill and Simon's Pass Stations, while slightly visible from SH8 fit well, due to siting, design and colour and appear as recessive buildings in the landscape. These are the types of controls that could be used to allow for a level of discretionary activity.

Vulnerability

31. This landscape is no more vulnerable to change than many others. The important point to understand is the significance of a change and that it be undertaken in a sensitive manner. Take for example the upper Waitaki hydro scheme. It is a huge project causing an initial change to the landscape, but because of the methods undertaken in its design and implementation it has not had an undue effect on the identity and visual quality of the basin.

32. All landscapes can be vulnerable to changes in landuse development. However, the key factor is where change is located and how it takes place. The south and central basins of the Mackenzie Basin are no more vulnerable than the edge of Lake Pukaki. In fact in some places, like the southern part of the south basin, I believe the vulnerability would be very low for development because it is a less sensitive area and able to be more easily integrated.

Sensitivity

33. While the landform of the farm stations remains intact and of moderate to high naturalness the land-cover is highly modified. The sensitivity for these farms varies, dependent on the viewsheds from public viewpoints. Sensitivity diminishes the further one moves away from the road, river and lake edges. This is such a vast scale that developments can be placed easily without causing visual degradation. I refer again to the township of Twizel. It has been easily absorbed without unduly affecting the intactness and coherence of the basin, even with the addition of 2ha allotments. The southern end now has Lake Ruataniwha as its boundary.

Development Controls

34. There is a need to control the potential development of subdivisions, so that they don't lessen the landscape values of the basin. Change will occur, if market forces prevail, and farms do not want to remain in a perilous state with soil erosion, wilding pines and other factors dominating operations. It is a fine balance of a place with the retention of its character and one which is a landscape of viable production and prosperity. Change will be inevitable to farming practices in the basin because, without viable production and prosperity the land-cover will gradually be eroded, wilding pines will increase in dominance and the rabbit population will escalate. All these matters will have the potential to change the character and identity of the Mackenzie Basin.

35. I believe that there is capacity for a level of discretionary activity throughout the basin subject to appropriate controls.

Pastoral Infrastructure

36. The following is a summary of the potential positive and adverse effects relating to pastoral elements of the Mackenzie Basin.

i. **Fencing**

Low intensity and low visibility post and wire type fencing is a common feature of the Mackenzie Basin which would generally not be considered to be out of place in all but the most pristine and highly

characteristic areas of the Mackenzie Basin. Effects are generally insignificant to minor on landscape and amenity values. This is due to the fencing being prevalent throughout the basin, of a low profile and permeable in nature.

ii. Oversowing and top dressing

The Mackenzie Basin is an area which has been traditionally dominated by dryland farming. However, oversowing and top dressing, is not an uncommon feature in certain areas of the Mackenzie Basin. There is a seasonal greening effect, but this is mitigated somewhat by a transient effect that changes with the seasons to blend with the characteristic tawny colours of the basin. Again, this type of activity is not uncommon in the Mackenzie basin and is therefore unlikely to be viewed as out of place in appropriately located areas.

This method is also helpful for preventing erosion in areas where the existing vegetation cover has become heavily depleted by invasive species such as briar rose, hieracium, wilding pines and pests.

For these reasons, the effects of oversowing and top dressing on landscape and amenity values, particularly in areas where existing vegetation has been heavily depleted are unlikely to be more than minor. This is providing areas to be sown and dressed are sensitively located and do not displace significant areas of native scrubland/ grassland or affect the more pristine and highly characteristic areas of the basin. For example, the flat plains between the northern end of Lake Benmore and Tekapo could be more likely to absorb this type of change, provided appropriate setbacks were in place to protect more sensitive areas, vegetation cover and waterways.

Irrigation Infrastructure

37. The following is a summary of the potential positive and adverse effects that irrigation development of the rural landscape can create.

38. The landscape and visual effects of irrigation proposals on landscape character are derived from new forms (pivots), lines (pipes), textures (crops), patterns (pivots circles) and colours (green pasture), which could occur in the landscape as a result of irrigation development.

39. The landscape and visual effects of irrigation development affecting the quality of the landscape are the presence of structures, naturalness of landform and vegetation, the extent of sensitive areas, visibility, visual harmony, outstanding landscape and features, and each location's ability to absorb change.

40. The landscape effects associated with irrigation development would be:

- i. On-farm works – These works include earthworks, centre pivots, K lines, pump sheds, races, fences and spray irrigators. Irrigation development therefore has a lesser visual effect on the flat areas where straight lines and geometrical patterns dominate than on sloping fans, rolling or more steep country. As with off-farm works, there can be a reduction in both naturalness and landscape continuity as the landscape becomes modified and disrupted by a variety of colours.
- ii. Long-term management – Irrigation can bring about significant management changes to the landscape. Changes to landscape character result from colour (greening of the landscape from its current ochre-red colour affects the landscape's visual harmony), patterns (these become geometric, especially with the use of centre pivot) and texture (grassland versus cropping or horticulture). The modification of landforms and vegetation affects the landscapes' naturalness and visual quality. The effect of colour change has the most significant long-term change on the landscape.
- iii. Off-farm works – These are generally structures and include roads, intake, pipelines and races, and depending on the extent and amount of these structures, they can reduce the level of naturalness.
- iv. Intensification of irrigated land
Intensification for irrigation purposes has the potential to adversely affect both the character and quality of views experienced by the high number of visitors who come to these areas. General effects are likely to be the increased intensification, changes in landscape character from altering land use and cumulative change effect when their effects are introduced sequentially within viewsheds. More specific effects would include greening of the landscape, geometric patterning and the

presence of pivots and associated earthworks and structures. Pivots are essentially permeable in nature, and can be less intrusive if located discreetly. They are large in scale and industrial in form and therefore have the potential to detract from views and dilute landscape character, amenity and cohesiveness. These effects are more likely to have a greater impact in areas where the views are open and expansive and the high quality and more sensitive areas.

Lower profile and less visible infrastructure such as K-lines and bayonets can be useful to reduce effects in areas where the physical impacts of large pivots are potentially intrusive. However, there are still potential effects from changes in character due to changes in use and land use intensification (more so in dairy conversions) and potential for cumulative effects. There is also a year-round greening effect which has a greater impact than unirrigated exotic pasture for example which changes to a tawny colour with the seasons. For those reasons it may be more difficult to integrate irrigation into the high quality and more sensitive areas in the Mackenzie basin, such as scenic viewing areas.

Farm accessory buildings

41. Due to their relative permanence, buildings have the capacity to impede views and dilute landscape character and amenity, particularly in areas of high sensitivity. However, provided farm accessory buildings are well clustered around the home farm base or within an accepted proposed node area, it is possible to integrate structures within an existing agricultural setting so that effects are kept to a minimum. Mitigation could include siting structures within a change in the landscape, and away from ridgelines. Using materials and colours on the building that blend and complement the landscape and using mounding to reduce or eliminate the structures' visibility, as occurs at Mount Cook Village.

Changes in vegetation and land cover

42. As described earlier, the Mackenzie Basin has undergone a succession of modifications, since the arrival of man and the introduction of changing land uses such as agriculture and the introduction of exotic species. These have all brought about significant change to the character, colour and vegetation of the area. As mentioned

earlier, if left unchecked, there are many areas of the basin which could degrade further due to erosion, pests and invasive species.

43. For reasons described earlier I believe it is important to differentiate areas which are more sensitive to change and which are more readily able to accommodate change. Some of these areas may be able to absorb some form of well managed and well integrated change.
44. We must ensure that all areas of significant indigenous vegetation are protected and enhanced, as also stated in the RMA. However, due to the vastly differing range of indigenous vegetation quality and cover in the Mackenzie, I do not believe that it is appropriate to deny all changes in land use in this area, especially in areas of lesser character, sensitivity and vulnerability which are more readily able to accommodate change. Rather than creating a rigid solution to vegetation cover, a more flexible approach could result in a more desirable outcome which could be achieved with a collaborative planning approach.

Farm Plans

45. Working with farmers, it may be possible to create a more tailored solution, which allows for individual farm use plans. The plans could incorporate enhancement of biodiversity on a local level and tie into an overarching biodiversity strategy for the area. Thereby, improvements could be made to both native biodiversity and enable land to be used in a productive manner, while retaining the landscape character and amenity values of the basin.
46. The application of the Mackenzie District Plan's policies and objectives to all farms is too Draconian and arbitrary. For example; to say that all land within 1km of the Tekapo-Lilybank Road be left in its current state and for any pastoral intensification to be non-complying is a completely arbitrary decision, when one cannot view the landscape beyond 50 meters from the road. It is a vast landscape with the hills and mountains being of a higher level of naturalness than often the fore and mid-ground are. These vertical landforms require the most protection, the landforms which perform the farming operations require a lesser degree of protection, as much of the land has already been modified to some degree. A blanket covering of 500m or 1km from the road to land that should be "locked up" is not good land use planning.

47. It is my opinion that what is best, is that the farms should undertake individual farm plans. This allows for the landscape character to be maintained, areas to be productive and flexibility for land use.
48. All this should be undertaken in a collaborative approach between the Council and the landowner. It may also achieve a greater continuity across the basin for co-ordinated land use strategy and biodiversity rather than the piecemeal approach that is constantly promoted, i.e.: biodiversity around lakes, rivers, retention of large blocks of tussock and matagouri.
49. Each farm needs a plan which ties into a comprehensive and overarching strategy of the basin to ensure the best outcome for the landscape of the basin and the farm.

CONCLUSION

50. On close inspection of the Mackenzie Basin I can conclude that it is a modified landscape exhibiting different farming practices and management regimes.
51. How best development can be provided for without destroying the qualities and characteristics of environment is the key issue. It is a challenging balancing act. However, successful solutions grow from a comprehensive understanding of the problems and opportunities that must be overcome to establish suitable areas for development, as well as a collaborative approach between the Council and the landowner.