

PUKAKI DOWNS STATION

LANDSCAPE MAPPING IN RELATION TO THE MACKENZIE BASIN SUB-ZONE PROVISIONS

BEN ESPIE (LANDSCAPE ARCHITECT)

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INTRODUCTION

- 1 This report relates to consultation being undertaken by the Mackenzie District Council (MDC) and other parties regarding the provisions of the Mackenzie Basin Sub-Zone of the Mackenzie District Plan. Proposed provisions circulated by the MDC in November 2015 are currently subject to consultation. Parts of the proposed provisions involve landscape maps of the Mackenzie Basin Sub-Zone. This report gives comments in relation to those landscape maps. Attached to this report are two maps entitled “*Land Description Units and Visibility Plan – Pukaki Downs Station*” and “*Landscape Sensitivity Plan – Pukaki Downs Station*” and also a *Landscape Sensitivity Table*.
- 2 A report very similar to this one has been prepared in relation to Guide Hill Station. There is considerable repetition between the two reports.

EXPLANATION OF LANDSCAPE SENSITIVITY MAPPING AND METHODOLOGY

- 3 In relation to the Mackenzie Basin and Plan Change 13 to the Mackenzie District Plan, Graham Densem has given advice to the Mackenzie District Council regarding landscape matters. In relation to mapping areas of the basin that may be able to accommodate change and areas that may not, Mr Densem introduced some maps as part of his Character and Capacities Report of November 2007¹. Firstly, he introduced a map of “visual vulnerability” sourced from a 1992 report by Boffa Miskell that primarily related to forestry activity². In his Character and Capacities Report, Mr Densem then introduced a map entitled “capacity to absorb development” on which

**EVIDENCE OF BENJAMIN ESPIE 19 AUGUST 2016 APPENDIX 1:
LANDSCAPE SENSITIVITY MAPPING PAPER, LANDSCAPE
SENSITIVITY TABLE AND MAPS.**

¹ G Densem, *The Mackenzie Basin Landscape: Character and Capacities*, prepared for Mackenzie District Council, November 2007.

² Boffa Miskell Partners Ltd, *Landscape Values of the Mackenzie Basin*, prepared for the Department of Conservation Steering Group, September 1992.

he mapped “vulnerability to development”³. At the request of the Environment Court, Mr Densem produced a number of amended versions of this map culminating in a map dated 12 November 2015 entitled “areas of landscape management” that showed areas of high, medium and low “visual vulnerability”. In the document that accompanies this latest map, Mr Densem notes that the “boundaries of High/Medium/Low Visual Vulnerability Areas were drawn at a Basin-wide scale. Where they may come to form the boundary between differing rules regimes in the District Plan, they will require remapping at 1:50,000 scale, in order to be definable at site-specific levels”⁴.

- 4 As is discussed in Mr Densem’s various reports and briefs of evidence, Plan Change 13 was initiated primarily to deal with the threat that ongoing ad-hoc rural living subdivisions and buildings may have on the landscape character and visual amenity of the Mackenzie Basin. Through the course of the various Court proceedings, it is now clear that the threat of pastoral intensification, particularly where it involves irrigation, is also a relevant factor.

- 5 Vivian+Espie have been engaged to examine Mr Densem’s mapping as it relates to Pukaki Downs Station. In doing this work we have been guided by the interim decisions of the Environment Court, particularly the first decision⁵. We have also been guided by the body of work done by the British Countryside Agency and Scottish National Heritage in relation to judging and mapping landscape capacity and sensitivity, and by broad scale landscape capacity/sensitivity studies done in New Zealand in recent years⁶. In terms of methodology, *Topic Paper 6: Techniques and Criteria for Judging Capacity and Sensitivity* produced by the British Countryside Agency and Scottish National Heritage⁷ is of particular relevance. This paper has been very influential in finalising methodology for landscape sensitivity and capacity mapping in the United Kingdom and has also strongly influenced methodologies used in New Zealand for this sort of work in recent years. With reference to that paper, we consider that the most appropriate term for the mapping of the Mackenzie Basin that is to be done following the Court’s decisions is “landscape sensitivity” mapping, rather than “capacity to absorb

³ G Densem, *The Mackenzie Basin Landscape: Character and Capacities*, prepared for Mackenzie District Council, November 2007, Map 7.

⁴ G Densem, *Mackenzie District Plan Change 13, Intensification and Outstanding Landscape: Landscape Management of the Mackenzie Basin in Light of Court Decisions*, prepared for the Mackenzie District Council, November 2015, page 1.

⁵ Decision of the Environment Court [2011]NZEnvC 387, High Country Rosehip Orchards Ltd and others vs. Mackenzie District Council, 14 December 2011.

⁶ All references are listed at the end of this document.

⁷ The Countryside Commission and Scottish Natural Heritage, *Landscape Character Assessment: Guidance for England and Scotland, Topic Paper 6: Techniques and Criteria for Judging Capacity and Sensitivity*, the Countryside Commission and Scottish Natural Heritage, 2004. This document is available free online at <http://publications.naturalengland.org.uk/publication/5601625141936128>

development”, “vulnerability to development” or the other terms for the mapping that have been used by Mr Densem and others. In the current exercise, when mapping the sensitivity of different areas of the Mackenzie Basin, the specific type of change to the landscape that we are considering is not known exactly, although as Mr Densem and others have observed, the changes to the landscape that are likely to be most relevant are those brought by rural living subdivision and buildings or by pastoral intensification.

- 6 In relation to methodology, we have been consistent with the documents discussed above. To summarise our methodology, Pukaki Downs Station has been divided into small “land description units” being areas over which there is a recognisable and consistent landscape character and degree of exposure to views. These units are numbered and can be seen on the maps and table attached to this document. Each unit has then been assessed for visual sensitivity (being high, medium or low) and for landscape character sensitivity (again, high, medium or low). The ratings for visual sensitivity and landscape character sensitivity are then combined to give a rating of landscape sensitivity. Landscape sensitivity is therefore an overall rating that takes account of both visual issues and landscape character issues. When considering the visual or landscape character sensitivity of any given unit, it has been borne in mind that it is the entire Mackenzie Basin that is being assessed and mapped and it is in that context that each unit must be considered (despite the fact that for this particular exercise we are only looking at the units that make up Pukaki Downs Station). It has also been borne in mind that, while the exact type of change to the landscape we are considering is not known, the most relevant changes to be considered are likely to be those brought by rural living subdivision and buildings or pastoral intensification.

- 7 When considering visual sensitivity, account is taken of the general visual exposure of the relevant land description unit, the numbers and types of viewers that the unit is exposed to, and the potential to effectively mitigate the visual effects of changes to the landscape within the unit. General visual exposure is a function of landform and aspect. Digital view-shed mapping was used at a rough scale using 20 metre contour interval data. Also, many observations were made in the field in addition to the examination of photographs. In relation to the numbers and types of viewers of any given unit, broadly speaking, viewers are either on neighbouring private land, elevated private land on the eastern side of Lake Pukaki, the surface of Lake Pukaki, State Highway 80 (Mount Cook Road; SH80), State Highway 8 (SH8), Tekapo Canal Road, Pukaki Canal Road and Rhoboro Downs Road. More weight was given to closer views compared to very distant views and more weight was given to views from the State Highways since they are

by far the most frequented viewing locations and users of these roads are often particularly involved in the scenic appreciation of landscapes. Regarding the potential to mitigate the visual effects of changes to a particular landscape description unit, this is generally a function of the complexity of visual patterns within that unit. A unit that is visually complex, perhaps with varying colours and textures of vegetation, offers more potential to mitigate the visual effects of a new element being added when compared to a unit that is very visually simple such as an area of open tussock land. All of these factors are taken account of when arriving at a visual sensitivity rating.

- 8 When considering landscape character sensitivity, account is taken of natural patterns (geomorphology, hydrology, vegetation patterns and processes), cultural patterns (land use, settlement/paddock patterns, roads and tracks, buildings and structures), landscape condition (the intactness and representativeness of the identified patterns), aesthetic factors (scale, openness, diversity, complexity, texture, colours, line/form, movement) and perceptual or associative factors (historical importance/associations, naturalness, wildness, remoteness, tranquillity, memorability). All of these factors are considered together to arrive at a picture of the landscape character of any given unit.
- 9 The overall landscape character of the Mackenzie Basin is described in the work of Mr Densem and summarised by the first interim Court decision⁸. The Court found that the District Plan should protect and enhance the following attributes of the Mackenzie Basin:
- its unspoiled openness and vastness;
 - the sense of naturalness given by the golden-brown vegetation;
 - the sense of landscape continuity;
 - relative lack of trees, especially windbreaks and plantations;
 - lack of structures with unobtrusive development and isolated contained settlement;
 - the high apparent naturalness and spectacular nature of the views from State Highway 8⁹.
- 10 Given that these attributes of the Mackenzie Basin are what must be protected in terms of landscape character, the relevant questions to be considered when arriving at a rating for the

⁸ Decision of the Environment Court [2011]NZEnvC 387, High Country Rosehip Orchards Ltd and others vs. Mackenzie District Council, 14 December 2011, paragraphs 33, 34 and 146.

⁹ Ibid, paragraph 146.

landscape character sensitivity of any land description unit are; would introducing change to the unit adversely alter its character? Is the existing character of the unit robust in relation to potential change? Are significant elements of character within the unit liable to loss or irreversible damage? Would the overall landscape character of the Mackenzie Basin be adversely impacted if change was introduced to the unit? All of these factors and questions regarding landscape character sensitivity that are set out in the preceding paragraphs are considered when arriving at a landscape character sensitivity rating for any given unit.

- 11 In terms of the value that the community place on any landscape unit or units, it is acknowledged that the entire Mackenzie Basin is an outstanding natural landscape and is therefore valued as a whole.
- 12 When combining the visual sensitivity rating and the landscape character sensitivity rating for a unit to arrive at a rating for landscape sensitivity there is room for some judgement. The table below illustrates this.

TABLE: COMBINING LANDSCAPE CHARACTER SENSITIVITY AND VISUAL SENSITIVITY RATINGS TO ARRIVE AT A RATING FOR LANDSCAPE SENSITIVITY:

LANDSCAPE CHARACTER SENSITIVITY	High	Medium	Medium or high – judgement made	High
	Medium	Medium or Low – judgement made	Medium	Medium or high – judgement made
	Low	Low	Medium or low – judgement made	Medium
		Low	Medium	High

VISUAL SENSITIVITY

- 13 In the instances when a judgement must be made, the relative importance of visual sensitivity compared to landscape character sensitivity is considered in regard to the particular unit being assessed and an overall rating for landscape sensitivity is arrived at. Again, when arriving at any

rating, it has been borne in mind that it is the entire Mackenzie Basin that is being assessed and mapped and it is in that context that each unit must be considered.

- 14 Once landscape sensitivity ratings were arrived at for each land description unit within Pukaki Downs Station, these were then mapped as can be seen on the plans attached to this document. The plan entitled *Land Description Units and Visibility Plan – Pukaki Downs Station* shows each land description unit and identifies which ones are exposed to views from the surrounding landscape. The plan entitled and *Landscape Sensitivity Plan – Pukaki Downs Station* shows the areas that are rated high, medium or low in relation to landscape sensitivity. Effectively, the *Landscape Sensitivity Plan – Pukaki Downs Station* could be slotted into an overall map for the Mackenzie Basin if one was produced using the same methodology.

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January 2016.

References:

- G Densem, *The Mackenzie Basin Landscape: Character and Capacities*, prepared for Mackenzie District Council, November 2007.
- G Densem, *Mackenzie District Plan Change 13, Intensification and Outstanding Landscape: Landscape Management of the Mackenzie Basin in Light of Court Decisions*, prepared for the Mackenzie District Council, November 2015.
- Decision of the Environment Court [2011]NZEvc 387, High Country Rosehip Orchards Ltd and others vs. Mackenzie District Council, 14 December 2011.
- The Countryside Commission and Scottish Natural Heritage, *Landscape Character Assessment: Guidance for England and Scotland*, the Countryside Commission and Scottish Natural Heritage, 2002. This document is available free online at <http://www.snh.gov.uk/publications-data-and-research/publications/search-the-catalogue/publication-detail?id=295>
- The Countryside Commission and Scottish Natural Heritage, *Landscape Character Assessment: Guidance for England and Scotland, Topic Paper 6: Techniques and Criteria for Judging Capacity and Sensitivity*, the Countryside Commission and Scottish Natural Heritage, 2004. This document is available free online at <http://publications.naturalengland.org.uk/publication/5601625141936128>
- C Tudor, *An Approach to Landscape Character Assessment*, Natural England, October 2014. This document is available free online at <https://www.gov.uk/government/publications/landscape-character-assessments-identify-and-describe-landscape-types>
- A Grant in association with P Clarke and S Lynch, *Landscape Capacity Studies in Scotland – A Review and Guide to Good Practice*, Scottish National Heritage Commissioned Report No 385, 2010. This document is available free online at <http://www.snh.gov.uk/publications-data-and-research/publications/search-the-catalogue/publication-detail?id=1689>
- Boffa Miskell Partners Ltd, *Te Anau Basin Growth Planning – Landscape Capacity Study*, a report prepared for Environment Southland, April 2006.