

**BEFORE THE ENVIRONMENT COURT
I MUA I TE KOOTI TAIAO O AOTEAROA**

UNDER the Resource Management Act 1991

IN THE MATTER of appeals under Clause 14 of the First Schedule of the Act

BETWEEN

TRANSPower NEW ZEALAND LIMITED
(ENV-2018-CHC-26)

FONterra CO-OPERATIVE GROUP
(ENV-2018-CHC-27)

HORTICULTURE NEW ZEALAND
(ENV-2018-CHC-28)

ARATIATIA LIVESTOCK LIMITED
(ENV-2018-CHC-29)

WILKINS FARMING CO
(ENV-2018-CHC-30)

(Continued next page)

AFFIDAVIT OF ROGER HODSON
RELATING TO APPENDIX E (TOPIC B2 ISSUE 22)

25 February 2022

Judicial Officer: Judge Borthwick

Respondent's Solicitor
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**GORE DISTRICT COUNCIL, SOUTHLAND DISTRICT
COUNCIL & INVERCARGILL CITY COUNCIL**
(ENV-2018-CHC-31)

DAIRYNZ LIMITED
(ENV-2018-CHC-32)

H W RICHARDSON GROUP
(ENV-2018-CHC-33)

BEEF + LAMB NEW ZEALAND
(ENV-2018-CHC-34 & 35)

DIRECTOR-GENERAL OF CONSERVATION
(ENV-2018-CHC-36)

SOUTHLAND FISH AND GAME COUNCIL
(ENV-2018-CHC-37)

MERIDIAN ENERGY LIMITED
(ENV-2018-CHC-38)

ALLIANCE GROUP LIMITED
(ENV-2018-CHC-39)

FEDERATED FARMERS OF NEW ZEALAND
(ENV-2018-CHC-40)

HERITAGE NEW ZEALAND POUHERE TAONGA
(ENV-2018-CHC-41)

STONEY CREEK STATION LIMITED
(ENV-2018-CHC-42)

THE TERRACES LIMITED
(ENV-2018-CHC-43)

CAMPBELL'S BLOCK LIMITED
(ENV-2018-CHC-44)

ROBERT GRANT
(ENV-2018-CHC-45)

**SOUTHWOOD EXPORT LIMITED, KODANSHA
TREEFARM NEW ZEALAND LIMITED, SOUTHLAND
PLANTATION FOREST COMPANY OF NEW ZEALAND**
(ENV-2018-CHC-46)

**TE RUNANGA O NGAI TAHU, HOKONUI RUNAKA,
WAIHOPAI RUNAKA, TE RUNANGA O AWARUA & TE
RUNANGA O ORAKA APARIMA**
(ENV-2018-CHC-47)

RR
JCH

PETER CHARTRES
(ENV-2018-CHC-48)

RAYONIER NEW ZEALAND LIMITED
(ENV-2018-CHC-49)

**ROYAL FOREST AND BIRD PROTECTION SOCIETY
OF NEW ZEALAND**
(ENV-2018-CHC-50)

Appellants

AND

SOUTHLAND REGIONAL COUNCIL

Respondent

RR
RA

I, Roger John William Hodson, of Invercargill, Environmental Scientist, solemnly and sincerely affirm:

- 1 My qualifications and experience are set out in my Statement of Evidence in Chief dated 14 December 2018.
- 2 I currently am employed by the Southland Regional Council (Environment Southland) in the position of "Acting Team Leader, Ecosystem Response" and have been in the position since the 4th of October 2021.
- 3 I confirm that I have read and am familiar with the Code of Conduct for expert witnesses contained in the Environment Court Practice Note 2014. I agree to comply with that Code. Other than where I state that I am relying on the evidence of another person, my opinions 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.

Introduction

- 4 I was consulted during the preparation for the Topic B2 mediation. I provided advice to Mathew McCallum-Clark on multiple occasions and was asked to attend mediation related to Topic B2 Issue 22.
- 5 This affidavit provides technical evidence in support of the parties' agreed amendments to Appendix E (Topic B2 Issue 22). Specifically, I address:
 - (a) The reason for changing the MCI and QMCI numbers for lowland soft-bed class;
 - (b) The reason for adding MCI and QMCI number for the Mataura river class;
 - (c) The reasons for changing from semi-QMCI to QMCI; and
 - (d) The purpose of the clarity/colour change control and criteria for change in fine sediment.

The reason for changing the MCI and QMCI standards for lowland soft-bed class

- 6 In the Proposed Southland Water and Land Plan (**pSWLP**), the lowland soft-bed water body class included a standard for MCI and QMCI of 80 and 3.5 respectively.

RR
RD

- 7 These standards were unchanged from the previous Regional Water Plan. However, a revised version of the National Policy Statement for Freshwater Management (**NPS-FM (2020)**)¹ was promulgated on the 3rd of September 2020. This included a “national bottom line” for MCI and QMCI of 90 and 4.5 respectively.
- 8 The agreed change to the MCI and QMCI standards for the lowland soft-bed water body class in Appendix E was to achieve consistency with the NPS-FM (2020) national bottom line for MCI and QMCI of 90 and 4.5 respectively. This ensures that the pSWLP does not set standards which are below the national bottom line from MCI and QMCI.

The reason for adding MCI and QMCI number for the Mataura river class(s)

- 9 MCI and QMCI standards were added to the Mataura river class to provide consistency with the use of MCI and QMCI in all other fresh water management units within Southland and to reflect the NPS-FM (2020)'s inclusion of a national bottom line for MCI and QMCI.
- 10 The MCI and QMCI standards added to the Mataura river class(s) are consistent with the mountain, hill and lowland-hard bed water body classes.

The reasons for changing from semi-QMCI to QMCI

- 11 Throughout Appendix E, reference to the “Semi-Quantitative Macroinvertebrate Community Index” has been replaced by the “Quantitative Macroinvertebrate Community index. This is changed to achieve consistency with the NPS-FM (2020).
- 12 There is no practical difference from a long term environmental monitoring perspective associated with the change on state of environment monitoring because fixed count data are available to calculate the QMCI.

¹ <https://environment.govt.nz/acts-and-regulations/national-policy-statements/national-policy-statement-freshwater-management/>

- 13 The QMCI is suited to compliance type monitoring where changes to invertebrate community composition may be anticipated as a consequence of a consented activity occurring².

The purpose of the clarity/colour change control and criteria for change in fine sediment

- 14 Changes to the clarity/colour change control provide explicit definition of the previous reference to "conspicuous change" (33% for lowland soft bed and 20% for other water body classes). The values of 20% and 33% are drawn from MfE (1994)³ where conspicuous was defined as "detectable by most of the population". For the assessment of acceptable change in visual clarity the first guideline in MfE (1994) states: "For Class A waters (where visual clarity is an important characteristic of the waterbody): The visual clarity should not be changed by more than 20%". "For other waters: The visual clarity should not be changed by more than 33-50% depending onsite conditions".
- 15 I consider that visual clarity is an important characteristic of the Mountain, Hill, Lowland Hard-bed, and Lake Fed water body classes.
- 16 The inclusion of criteria around the change in fine sediment cover of 10% provides a mechanism which can be used to illustrate effects

² <https://environment.govt.nz/publications/a-user-guide-for-the-macroinvertebrate-community-index/part-2-guidelines-for-using-the-mci-qmci-and-sqmci/>

³ Ministry for the Environment (1994). *Water quality guidelines No 2. Guidelines for the management of water colour and clarity*. Wellington, Ministry for the Environment, 1994. 60 p.

occurring as a result of a consented activity or discharge. The level of 10% was recommended by Clapcott and Hay (2014)⁴.



.....
Roger Hodson

Affirmed at Invercargill)
this 24th day of February)
2022, before me:)



**Roosje Aryan Rabusa
Solicitor
Invercargill**

.....
A Solicitor/Deputy Registrar of the High Court of New Zealand/
Justice of the Peace

⁴ Clapcott, J. and Hay, J. 2014. Recommended water quality standards for review of Marlborough's Resource Management Plans. Report No. 2522 prepared for Marlborough District Council. Cawthron Institute, Nelson, New Zealand.