

**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)

(Continued next page)

**WILL SAY STATEMENT OF DR GREGORY BURRELL ON BEHALF OF
SOUTHLAND REGIONAL COUNCIL IN ANTICIPATION OF EXPERT
CONFERENCING**

FRESHWATER ECOLOGY

11 November 2021

Judicial Officer: Judge Borthwick

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

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

**GORE DISTRICT COUNCIL, SOUTHLAND DISTRICT
COUNCIL & INVERCARGILL DISTRICT 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)

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

Introduction, qualifications and experience

- 1 My name is Gregory Peter Burrell. My qualifications will be set out in full in my evidence in chief, however, in brief: I am a freshwater ecologist with over 20 years of professional experience in freshwater management, aquatic resource surveys, restoration, and applied research. I hold the following university qualifications: Bachelor of Science, Post Graduate Diploma of Science, and Doctor of Philosophy (PhD) in science, all majoring in ecology and all obtained from Canterbury University. I am the owner and director of Instream Consulting and have been since 2014. Prior to that I worked at Golder Associates in New Zealand and Canada for 10 years, and prior to that I worked at other consultancies and NIWA.
- 2 In relation to the various appeals to the proposed Southland Water and Land Plan (**pSWLP** or **Plan**), I previously attended expert caucusing for Topic A in relation to defining degradation and identifying degraded waterbodies.

Code of conduct

- 3 I have read the Code of Conduct for Expert Witnesses in the Environment Court Practice Note 2014 and agree to comply with it. The contents of this statement 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 expressed in this statement.

Scope of will say statement

- 4 I have prepared this will say statement in anticipation of facilitated expert conferencing.
- 5 This statement addresses:
 - (a) Drain maintenance;
 - (b) Degraded waterbodies;
 - (c) Stock exclusion rules and waterway setbacks;
 - (d) Ephemeral rivers/flow paths;
 - (e) Sediment control.

Drain Maintenance

6 In my evidence, I intend to:

- (a) Say I support the Council's proposed changes to Rule 78 that primarily restrict sediment removal to fine sediments (<2 mm) and that add protection to threatened non-diadromous galaxiids (a group of native freshwater fish that do not migrate to the sea).
- (b) Discuss the merits of alternative rules suggested by Appellants.

Degraded Waterbodies

7 In my evidence, I intend to say:

- (a) I support the addition of a 'Schedule X' of degraded waterbodies to the Plan and the addition of various policies that require identification and improvement to degraded areas.

Stock Exclusion Rules and Waterbody Setbacks

8 In my evidence, I intend to:

- (a) Discuss the ecological implications of proposals by Appellants to have either wider or narrower waterbody setbacks than those provided in the pSWLP. In brief, I will say that narrower waterway setbacks than those in the pSWLP are unlikely to support Plan objectives and policies around waterway protection and improvement of degraded waterways. Wider setbacks than those proposed in the Plan are likely to have beneficial ecological outcomes, depending on how they are managed.

Ephemeral Rivers/Flow Paths

9 In my evidence, I intend to:

- (a) Say I support the Council's suggested change of wording from 'ephemeral river' to 'ephemeral flow path' throughout the Plan, and the proposed definition of an ephemeral flow path. That is because I consider that 'ephemeral flow path' better describes the landscape feature and associated land management and water quality issues.

- (b) Discuss the ecological implications of proposals by Appellants to change rules relating to ephemeral and intermittent flow paths/waterbodies/rivers.

Sediment Control

10 In my evidence, I intend to:

- (a) Discuss the importance of minimising erosion and sediment loss from forestry and agricultural land uses, in terms of avoiding adverse effects on water quality and ecology. I anticipate this will relate to other issues, including waterbody setbacks, variable setbacks depending on slope, ephemeral and intermittent watercourses, and 'good practice' mitigation measures.



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Gregory Peter Burrell

11 November 2021