

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

UNDER the Resource Management 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)

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**STATEMENT OF REBUTTAL EVIDENCE OF CLAIRE JORDAN ON
BEHALF OF ARATIATIA LIVESTOCK LIMITED**

22 February 2022

Judicial Officer: Judge Borthwick

**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 Act 1991
(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, SOUTHLAND
PLANTATION FOREST COMPANY OF NZ,
SOUTHWOOD EXPORT LIMITED**
(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

One-page summary

- 1 My full name is Claire Louise Marshall Jordan.
- 2 This statement of rebuttal evidence responds to evidence on behalf of other parties regarding:
 - a High risk winter grazing on pasture; and
 - b Controls relating to ephemeral rivers and critical source areas
- 3 I agree with the suggestions outlined in the Planning JWS in relation to “*high risk winter grazing*” on pasture. I consider that this term needs to be clearly defined if the rule is to be effective. I suggest the following definition:

High risk winter grazing is break-feeding stock on fodder or pasture between 1 May and 30 September inclusive, where the post-grazing residual is less than 1000 kgDM/ha.
- 4 I continue to support the proposed approach to regulating ephemeral rivers and critical source areas outlined in the Planning JWS. However, agree that the deletion of *ephemeral rivers* results in lesser protection for roosting and nesting areas of the black fronted tern, black billed gull, banded dotterel or black fronted dotterel within Rule 70, and that this protection would ideally be retained.

Introduction

- 5 My full name is Claire Louise Marshall Jordan. My qualifications and experience and the basis on which I am giving evidence are set out in my statements of evidence in chief in this matter.
- 6 I have prepared evidence for these proceedings on behalf of Aratiatia and am authorised to give evidence on Aratiatia's behalf.

Scope

- 7 This rebuttal evidence addresses the evidence in chief other witnesses have provided on the provisions that fall within Topic B5 which Aratiatia has appealed, or which are covered by Aratiatia's s274 notices.
- 8 This evidence does not address provisions Aratiatia has appealed that I understand fall outside the matters to be dealt with in 'Tranche 1', namely Policy 26, Rule 52A and the exemption of the Waiau River from water quality standards in Appendix E.
- 9 The matters this evidence addresses is:
- a High risk wintering on grass
 - b Ephemeral rivers and critical source areas
- 10 In preparing this evidence, I have read and considered the following documents:
- a The pSWLP Decisions Version 1 March 2021 (Decisions Version);
 - b Section 42A Hearing Report and Reply Report;
 - c The Council's Decision Report;
 - d Aratiatia's Appeal;
 - e The Topic A Interim Decisions;
 - f Topic B Overview Evidence from the Regional Council, 22 October 2021

- g The Joint Witness Statements of the Farms Systems Experts, 22 November and 6 December 2021;
- h The Joint Witness Statement of the Water Quality Experts, 24-26 November 2021;
- i The Joint Witness Statement of the Planning Experts, 10 December 2021;
- j S274 parties' Evidence in Chief, 4 February 2022 and in particular the statements of Mr Willis, Mr Farrell, Ms Kirk and Dr Dalley;
- k Environment Southland Evidence, 11 February 2022;
- l The National Policy Statement for Freshwater Management 2020 (**NPSFM**)
- m The National Environmental Standard for Freshwater Management 2020 (**NESFM**)
- n The Southland Regional Policy Statement 2017 (**RPS**).

Planning JWS

- 11 All of Aratiatia's outstanding issues which fall within Topic B5 were addressed in the Planning Expert Conferencing in late 2021. I continue to support the conclusions reached in the Planning JWS in relation to these issues.
- 12 Since the Planning JWS was circulated, several other planners have made alternative and/or additional suggestions after considering the evidence of other witnesses. Of these suggestions, I address those that relate to Aratiatia's appeal and s274 notices below.

High risk winter grazing on pasture

Context – the Fish and Game Appeal and Aratiatia's S274 notice

- 13 The relevant concerns raised in Aratiatia's S274 notice in relation to Fish and Game's appeal on intensive winter grazing is that the relief sought will:

- a generate unnecessary and inappropriate adverse effects on the environment and in particular on land management practices within the Waiau River catchment; and
 - b create uncertainty in the implementation of the plan.
- 14 Fish and Game proposes to expand the applicability of Rule 20(a)(iii) (or Rule 20A – Intensive winter grazing, in the Planning JWS) so that it applies to winter grazing on pasture (as a consequence of modifying the definition of *intensive winter grazing*). My concerns with this approach are:
- a Whether regulation of this activity is necessary;
 - b The confusion that may arise from having a different definition of *intensive winter grazing* in the pSWLP than in the NESFM;
 - c That the proposed change to the definition would make it unclear whether an activity is subject to the rule or not; and
 - d The unintended adverse effects of having a land area limit on pasture-based winter grazing.
- 15 However, I understand that **Mr Farrell**, planning witness for Fish and Game/Forest and Bird is comfortable with the proposal in the Planning JWS that pasture-based wintering be managed as a different activity from intensive winter grazing on forage crop under new Rule 20B, subject to an appropriate definition¹. Put another way, a proposal to regulate winter grazing on pasture without including pasture within the definition of *intensive winter grazing* or placing a limit on land area for pasture-based winter grazing. This approach addresses Aratiatia’s key concerns 14(b) and 14(d) above, and I support this approach.
- 16 In my opinion, this leaves the following outstanding issues, which are addressed in the following sub-sections:
- a Whether regulation of this activity is necessary; and

¹ Paragraph 94(b) of Mr Farrell’s appellant evidence in chief.

b The wording of the definition of *high risk intensive winter grazing*, and ensuring it is sufficiently clear.

17 I note that **Mr Willis**, planning witness for the Dairy Interests, proposes to address *high risk winter grazing* through the FEMP rather than Rule 20B². In my opinion that approach could also work, although I consider that addressing pasture-based winter grazing through Rule 20B would be clearer and easier to assess compliance with than within the FEMP framework, provided 16(b) above can be addressed. However, including it within the FEMP is beyond the scope of Aratiatia's S274 notice on this point.

Whether regulation of pasture-based winter grazing is necessary

18 Both **Dr Dalley** and **Dr Monaghan**, farm systems witnesses for the Dairy Interests and the Regional Council respectively, have contributed farm systems expert evidence on high risk wintering on grass in their S274 evidence. While both are familiar with the practice of high risk winter grazing on pasture that results in significant devegetation, their evidence suggests that neither are in a position to provide a clear indication of the prevalence of the activity. **Dr Dalley** does suggest that its prevalence has increased in the last 2-3 years³.

19 **Dr Dalley** identifies a spectrum of winter grazing activities on pasture in S274 evidence⁴. Of these, in my opinion only one has a similar risk profile to intensive winter grazing on forage crops, which **Dr Dalley** terms *baleage wintering*. The other types of pasture-based winter grazing (with the exception of sacrifice paddocks, which I understand are dealt with elsewhere in the regulatory framework) leave substantial vegetation post-grazing (i.e. are not substantially devegetated), and so do not create the same level of risk to water quality.

20 In my S274 evidence I suggested that it is unclear whether the activity of high risk winter grazing on pasture is being undertaken at a scale that justifies regulatory intervention. I consider that uncertainty still exists on

² Beginning at paragraph 6.13 of Mr Willis' S274 evidence.

³ Paragraph 31 of Dr Dalley's S274 evidence.

⁴ Beginning at paragraph 28 of Dr Dalley's S274 evidence.

this point, but it is my opinion that, given its prevalence appears to be increasing, and baleage wintering (as identified by **Dr Dalley**⁵) seems to pose a similar risk to water quality, the risk of not acting is sufficient to justify regulation, subject to an appropriate definition of *high risk winter grazing*.

Definition of high risk winter grazing

- 21 In my opinion the definition of *high risk winter grazing* should meet the following requirements to prevent perverse consequences:
- a The definition of "*high risk winter grazing*" should capture the types of wintering on pasture/fodder that have a similar risk to water quality as intensive winter grazing on forage crops, i.e. result in significant devegetation.
 - b The definition should not capture those types of winter grazing on pasture/fodder that do not have the same risk to water quality as intensive winter grazing on forage crops – particularly lactating cows in a milking herd.
 - c Winter grazing on pasture that is captured by the definition should not be restricted in land area (achieved through Rule 20B).
 - d It must be clear whether an activity falls within the definition or not.
- 22 In my S274 evidence I proposed a definition where pasture based grazing, with the exception of lactating cows and springing (about to calve) cows, would be subject to the controls in proposed new Rule 20B unless a certifier certifies that these controls are unnecessary for a particular instance of high risk winter grazing on pasture.
- 23 I acknowledge the concerns raised by **Mr McCallum-Clark**, planner for the Regional Council⁶, and **Mr Farrell**⁷ about including a certifier in the definition. Other suggestions for a trigger for wintering grazing on pasture/fodder include references to pugging, exposure of soil, 50% of the diet from supplement, or 50% of the paddock requiring regrassing. I

⁵ Paragraph 31 to 36 of Dr Dalley's S274 evidence.

⁶ At paragraph 134 of Mr McCallum Clark's evidence in chief.

⁷ At paragraph 27 of Mr Farrell's S274 evidence.

consider that these measures are all difficult to measure compliance against (i.e. it is not clear whether an activity falls within the definition or not).

- 24 On reflection, I consider that, provided it can be implemented, the best option would be to link the definition to the adverse effects that the rule is trying to avoid, or at least the risk of such effects. The benefit of this approach is that it sets up a behavioural incentive to avoid the risk so you can avoid the restrictions (i.e. not completely devegetating the paddock, so you can avoid becoming subject to the rule) rather than creating an incentive to operate just outside the definition, such as using 45% supplement or 45% of the paddock requiring regressing, which may result in a similar risk to water quality.
- 25 Accordingly, I propose the following definition, which is based on the amount of pasture remaining in the paddock after grazing:

High risk winter grazing is break-feeding stock on fodder or pasture between 1 May and 30 September inclusive, where the post-grazing residual is less than 1000 kgDM/ha.

- 26 The reference to break-feeding is designed to exclude sacrifice paddocks from falling within the definition, as I understand sacrifice paddocks are dealt with elsewhere in the regulatory framework. Break-feeding is where stock are allowed access to graze only part of a paddock at a time, normally through use of an electrified temporary fence.
- 27 The trigger of 1000 kgDM/ha is a measure of the amount of feed present once stock have finished grazing. The figure is based on my understanding of the approximate pasture cover required to retain its 'armouring' of the soil. 1000 kgDM/ha should also avoid the need to resow, as I understand that a grass plant can be expected to recover from being grazed to approximately 500 kgDM/ha. In my opinion, a trigger based on post-grazing residual needs to maintain soil armouring and enable plant recovery. In doing so it would address paragraph 21(a) above.
- 28 A limit of 1000 kgDM/ha is below the expected post-grazing residual **Dr Dalley** lists in her evidence for grazing by lactating cows or under a

traditional or regenerative grass-based wintering system⁸. Consequently, those activities, all of which leave more grass in the paddock than 1000 kgDM/ha, would not be captured by this definition. On this basis, I consider my proposed definition addresses paragraph 21(b) above.

29 My understanding is that measuring the post-grazing residual is common practice across the farming community, and so I anticipate that it will be a reasonably implementable measure compared to some of the other measures which have been proposed.

30 However, I acknowledge that there may be some variation in measurements between operators, and a standardised measurement technique would likely be required. With this support, I consider that the definition I propose should be able to address paragraph 21(d) above.

31 With that definition in place I consider that Rule 20B in the Planning JWS would be effective and appropriate.

Ephemeral rivers

32 **Mr Farrell** has proposed retaining the definition of *ephemeral rivers* in the pSWLP, but renaming the definition *ephemeral waterbodies*⁹.

33 I agree with the concerns raised by **Mr Willis** that incorporating a new definition of *ephemeral waterbodies* into the pSWLP would create further confusion and be impractical to implement¹⁰.

34 In my opinion, defining ephemeral rivers/waterbodies would undo the progress made in the Planning JWS on this point, and fails to address the clarity concern Aratiatia had with the definition of *ephemeral rivers* in the decisions version.

35 I also agree with **Ms Kirk**, planning witness for the Director General of Conservation, that with the changes suggested in the Planning JWS, ephemeral rivers/waterbodies provides for the management of effects throughout the pSWLP¹¹.

⁸ Table 1 in Dr Dalley's S274 evidence.

⁹ In Appendix BF1 paragraph 2 and 3 of Mr Farrell's S274 evidence.

¹⁰ Beginning at paragraph 7.20 of Mr Willis' S274 evidence.

¹¹ Ms Kirk's S274 evidence, paragraph 12.

36 **Ms Kirk** notes one exception to this, which I agree was an unintended consequence of the Planning JWS proposals¹². The Planning JWS inadvertently removed protection of ephemeral waterbodies/rivers as nesting and roosting sites of black fronted tern, black billed gull, banded dotterel and black fronted dotterel. I support **Ms Kirk's** suggestion that this protection be retained.¹³

DATED this 22nd day of February 2022
Claire Jordan

¹² Ms Kirk's S274 evidence, paragraph 11.

¹³ Ms Kirk's S274 evidence, paragraph 11.