

**IN THE ENVIRONMENT COURT OF NEW ZEALAND
I MUA I TE KOOTI TAIAO O AOTEAROA**

ENV-2018-CHC-000040

IN THE MATTER

of the Resource Management Act 1991

AND

IN THE MATTER

of appeals under clause 14 of Schedule 1 of the
RMA relating to the proposed Southland Water
and Land Plan (**pSWLP**)

BETWEEN

**FEDERATED FARMERS OF NEW ZEALAND
INC**

Appellant and s274 Party

AND

SOUTHLAND REGIONAL COUNCIL

Respondent

**STATEMENT OF EVIDENCE OF
PETER GORDON WILSON
ON BEHALF OF FEDERATED FARMERS**

20 December 2021



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1. **INTRODUCTION**

1.1. My full name is Peter Gordon Wilson

1.2. I hold a Bachelor of Physical Geography and Master of Planning degree from the University of Otago.

1.3. I have practised as a planner and resource management specialist for the past 15 years. I have worked as a senior regional policy adviser for Federated Farmers of New Zealand Inc since February 2021.

1.4. My previous experience includes working in policy and regulatory roles for the Department of Conservation, the Waitaki District Council, various regional Fish and Game Councils and the New Zealand Fish and Game Council, and the Federated Mountain Clubs of New Zealand.

1.5. I have worked on, and contributed to, the development of many regional plans across New Zealand over the past decade, including:

- a) Otago's plan changes 2 (regionally significant wetlands), 3B,3C (Pomahaka and Waiwera catchment minimum flow) & 6A (water quality)
- b) Canterbury Land and Water Regional Plan's variation 2 (Hinds/Hekeao catchment)
- c) Northland Regional Plan
- d) Wellington Natural Resources Regional Plan
- e) Horizons One Plan and plan change 2;
- f) Hawkes Bay Regional Resource Management Plan
- g) West Coast Regional Land and Water Plan
- h) Marlborough Environment Plan.

1.6. I have worked for environmental, agricultural, and recreational interests, as well as for central and local government.

2. BACKGROUND

Code of conduct

- 2.1. I have read the Environment Court's Code of Conduct for Expert Witnesses, and I agree to comply with it. My qualifications as an expert witness are set out above. I confirm that the issues addressed in this brief of evidence are within my area of expertise, except where I state I am relying on the evidence of another person. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

Scope of evidence and preliminaries

- 2.2. This planning evidence addresses the matters raised in the appeal of Federated Farmers of New Zealand Incorporated (**Federated Farmers**) that have not been already resolved by the Court decisions on Topic A, the mediations on Topic B or agreed by planners through expert conferencing as recorded in the Planning Joint Witness statement of 10 December 2021 (**planning JWS**).
- 2.3. My evidence covers the following B5 (Farming) topics, as set out in my Will Say Statements of 29 October and 4 November 2021 that remain at issue. I have done so by reference to the version of the provisions attached to the planning JWS. I acknowledge that it would be more correct to reference the decision version of the pSWLP. However, the Council appears to be working from its "Draft Relief" circulated on 11 November 2021, and now the attachment to the planning JWS so I have anticipated it may be more useful to the Court for the evidence to also respond to that latest document.
- 2.4. The planning JWS proposes the deletion of Rules 20(a)(iii)(3)(D) and (E) which proposed various limitations on intensive winter grazing under the permitted activity rule. The farm systems JWS did not support these limitations, noting that the mob size limitation in particular would have a detrimental effect on water quality, and that trampling of supplementary feed into the soil would also improve environmental outcomes. I support the proposed deletion of Rules 20(a)(iii)(3)(D) and (E) in the planning JWS and consider that removing (3)(D) and (E) would better implement Objective 6 (water quality). I make no further comment on that agreed change in this evidence.

2.5. There are six unresolved issues for Federated Farmers in the provisions attached to the planning JWS:

- a) **Rule 20A Intensive Winter Grazing on forage crops.** The planning JWS version records a disagreement over the area limit on intensive winter grazing (**IWG**). The Council is proposing to reduce the 15% control to 10%. In my opinion this does not give effect to clause 26 of the National Environmental Standard for Freshwater (**NES:F**), which provides for exceptions to the area limits for intensive winter grazing on forage crops provided that a certified freshwater farm plan can show that the effects of a different intensive winter grazing on forage crop regime can show that the effects are the same as with the area limit. I consider that the proposed amendment shown in the planning JWS has strengthened the farm environmental planning regime to something more stringent than the NES:F, as the flexibility for farm design for intensive winter grazing on forage crops enabled in the NES:F and tuned to the Southland environment has not been incorporated. I propose changes to Rule 20 to reflect the NES:F and provide a pathway for alternative winter grazing regimes other than the area limit to be considered.
- b) The planning JWS introduces a new rule covering IWG on pasture. I support the intent of this rule but discuss the challenges of achieving an effective definition of the activity. I propose a definition which, in my opinion, is clear and workable.
- c) **Rule 25 Cultivation.** The pSWLP and subsequent agreed changes from the planning JWS have introduced a substantial and comprehensive regulatory system for avoiding, remedying, or mitigating the effects of farming in Southland through regulation and control of potentially risky farming activities, such as IWG (of all types, not just forage crops as per the NES:F), substantial buffers between land and water for farming activities, and other controls through farm environmental plans written and processed under Appendix N. However, Rule 25 currently restricts all cultivation activities, including minimum and no till cultivation activities on land with a slope of above 20 degrees to a restricted discretionary consent regardless of the activity and site-specific impact or effects of that type of cultivation. I propose that Rule 25 is amended to enable minimum and no till cultivation activities to occur on land above 20 degrees, along with subsequent changes to the definitions of cultivation.
- d) **Rule 51 and Rule 74 natural wetlands.** The Rule currently fails to provide clarity on how the provisions in clause 51 of the NES:F that enable **natural hazard works** to be undertaken in natural wetlands are provided for in this plan. The planning JWS version of Rule 51 sets a non-complying activity status for all land drainage activities within natural wetlands, which could inadvertently prevent the prevention of, and recovery from natural hazards. I propose that

Rule 51 is amended to reflect the NES:F provisions, whilst still retaining the non-complying activity status for land drainage within natural wetlands.

- e) **Policy 18(2) stock exclusion and subsequent changes to Rule 70.** There are inconsistencies between the pSWLP and the national instruments (NES:F and the stock exclusion regulations) on the treatment of sheep at low densities within natural wetlands. The national instruments recognise the value of sheep in natural wetlands at low densities, along with the practical difficulties of excluding them in all instances. The national instruments also recognise the differences between hill slope and low slope wetlands. The amendments attached to the planning JWS version makes all sheep access to natural wetlands a non-complying activity.
- f) **Waterbodies that need improvement/Schedule X.** The planning JWS proposes a list or map of waterbodies across Southland that need water quality improvement. I understand that this is to be an interim list ahead of the full implementation of the NPS-FM 2020 through plan change Tuatahi. I support the proposal from the dairy interests (DairyNZ and Fonterra) to base this schedule or maps on the macroinvertebrate community index (**MCI**).

3. RELEVANT PLANNING INSTRUMENTS

- 3.1. The relevant planning instruments as I see them and the documents I have read are set out in Appendix 1.

4. TREATY MATTERS

- 4.1. Section 8 RMA requires all those exercising functions under it to take into account the principles of the Treaty of Waitangi. I also note the requirement at paragraph 18 in interim judgement 3 for all parties participating future processes on this plan to be cognizant of it.
- 4.2. For me, the critical s8 aspects are the Te Mana o Te Wai policies in the NPS-FM:2020, and the requirement to achieve hauora – a state of health – in Southland’s waterways. Nga Runanga’s advice to the planning expert conference is that the pSWLP does not meet those requirements, and whilst modifications have been suggested in the planning JWS, most notably, the list of waterways that require improvement, achieving the various aspects of Te Mana o Te Wai (outcome, content, process) will be through plan change tuatahi.

5. POLICY AND RULE FRAMEWORK

General discussion

- 5.1. I consider that over the development cycle of the pSWLP that there has been a substantial paradigm shift in farmer understanding and acceptance of regulation and control of farming activities. This is part of an ongoing nationwide shift, but I consider that Southland is further along that path than most regions I have worked in. The breakthrough in achieving this has been the introduction of the farm environmental plan (**FEP**) concept, which is a regulatory design that fits farmer psychology and practice, providing for a continuous cycle of improvement in farm practice through the certification and auditing process. There will be central government regulation and associated support on the operation of the freshwater farm planning regime, through regulations under Part 9A of the RMA and an ongoing programme of central government support. In the meantime, the planning JWS has recommended changes to Appendix N of the pSWLP to implement the core features of the freshwater farm planning regime in the Southland region now (and to ensure that they are amended accordingly for future consistency with the Part 9A regulations). I understand Appendix N is agreed as among the planning experts.
- 5.2. There is still a substantial work programme to ensure that the farm planning regime becomes operational in Southland, but I note, and take heart from the observation in the farm systems JWS, that the resourcing level amongst farm systems consultants and experts is considered 'adequate'. This indicates that the FEP regime as specified in Appendix N is able to begin once the pSWLP becomes operative.
- 5.3. However, I consider that a FEP regime cannot stand alone, and in order to be effective, requires a rational and objective link to the physical environment itself, along with limits, targets and timeframes. The link to the physical environment is provided in this plan through the concept of physiographic environments, which I consider to be a substantial advance on the earlier NZ Land Resources Inventory or LUC scheme as it has better linkages to water and physical processes. I consider that the pSWLP has a strong linkage between the characteristics, risks, and contaminant pathways associated with each physiographic zone and farm environment planning, and farming activities, through the farm environment planning regime. This is achieved through changes to Policy 16, Rule 20, and Appendix N in the planning JWS. In my opinion, these changes resolve the concerns with the previously overly prescriptive nature of the physiographic zones in the rule framework of this plan. Whilst physiographic zones describe aspects of the underlying physical environment, farm

management practice also has a substantial influence on the environmental outcome, and can adapt and respond to physical limitations and challenges. Provided there is a clear linkage and focus on the physiographic predictors of risk in the regime, I consider that the FEP is the appropriate mechanism to assess farm management practices against physiographic risks. I believe that the changes to Policy 16, Rule 20, and Appendix N in the planning JWS represent an appropriate regime which now considers both.

- 5.4. The specific limits, targets, and timeframes are still to come from plan change Tuatahi, but I note this Court's interim decisions have changed the focus of this plan from 'holding the line' to 'starting the improvement'. As a result, the planning JWS recommends a map or schedule of 'waterbodies where improvement is required', formerly referred to as 'degraded waterbodies'. I understand that this schedule or map will likely cover almost all catchments in Southland outside of Fiordland National Park. I note that the acceptance that catchments in Southland need improvement and the agreement amongst planners working for all parties is a further sign of the shift in farming attitudes and opinion in Southland.
- 5.5. I do not think that the FEP regime on its own will achieve the required trajectory of improvement in Southland. A regulatory 'floor' of policies and rules is required to determine the limits of the permitted activity framework that the FEP regime (largely) operates under, with potentially riskier activities requiring resource consent, with escalating activity status. Some inherently risky activities are outright prohibited, such as IWG on slopes above 800m, and others are set at non-complying. Other rules have been introduced through national instruments, such as controls on the practice of IWG on forage crops, default provisions for natural wetlands, feedlots, and stock exclusion. An extension of the IWG provisions to cover wintering on pasture has been proposed by planners.
- 5.6. I consider that there has been a shift from regulating some of the activities of farming to regulating farming as a whole, primarily through the FEP, and the proposed new rules on other winter grazing. I believe that the planning JWS has strengthened this approach. However, some rules, notably Rule 25 (cultivation), still appear to act as pseudo general farming rules, in how it restricts all types of cultivation including the maintenance of existing pasture above 20 degrees regardless of the effect of that cultivation activity. The not-stated intent of the rule may be to place a restricted discretionary control on farming activities in the hill country in order to prevent or minimise sedimentation. However, to me this now makes limited sense in the context of the other plan changes that have increased the general regulatory regime on farming and thus, the controls on

sedimentation, and I consider that cultivation activities should be assessed on their actual and specific risk, and not used as a proxy land use control.

- 5.7. The planners were not able to fully agree on the rule framework as outlined in the planning JWS, but I consider that the matters of disagreement are relatively narrow. However, in my opinion ‘narrow’ in the scheme of this plan does not mean minor in the effect the disagreed rules have on farming activities and businesses, as I will shortly outline.
- 5.8. Apart from that stated above, my disagreements with the planning JWS are around consistency with and application of national instruments, in particular, the NES:F and stock exclusion regulations. I do not consider that full consistency between the national instruments and the pSWLP is possible, given that this plan was written before the gazettal of the current regulations, but I do think that greater effort could have been made to achieve consistency where possible, such as the flexibility provided in the NES:F on intensive winter grazing (forage crops) where certified freshwater farm plans exist which has not been followed through by this plan. There are some other areas, such as stock exclusion for low-density farming in the hill country where consistency with the s360 stock exclusion regulations is also not possible.

6. **RULE 20A**

- 6.1. I consider that the planning JWS version of Rule 20A currently fails to give effect to the NES:F provisions which enable IWG across more than 10% of a landholding as a permitted activity. The following are the relevant clauses from the NES:F:

26 Permitted activities

- (1) The use of land on a farm for intensive winter grazing is a permitted activity if it complies with the applicable condition or conditions.
- (2) The following discharge of a contaminant is a permitted activity if it complies with the applicable condition or conditions:
 - (a) the discharge is associated with the use of land on a farm for intensive winter grazing; and
 - (b) the discharge is into or onto land, including in circumstances that may result in the contaminant (or any other contaminant emanating as a result of natural processes from the contaminant) entering water.

Conditions

- (3) The condition is that the intensive winter grazing must be undertaken in accordance with the farm’s certified freshwater farm plan if—

- (a) the farm has a certified freshwater farm plan that applies to the intensive winter grazing; and
 - (b) a certifier has certified that the adverse effects (if any) allowed for by the plan in relation to the intensive winter grazing are no greater than those allowed for by the conditions in subclause (4).
- (4) In any other case, the conditions are that -
- (a) at all times, the area of the farm that is used for intensive winter grazing must be no greater than 50 ha or 10% of the area of the farm, whichever is greater; and
 - (b) the mean slope of a paddock that is used for intensive winter grazing must be 10 degrees or less; and
 - (c) on a paddock that is used for intensive winter grazing,—
 - (i) pugging at any one point must not be deeper than 20 cm, other than in an area that is within 10 m of an entrance gate or a fixed water trough; and
 - (ii) pugging of any depth must not cover more than 50% of the paddock; and
 - (d) livestock must be kept at least 5 m away from the bed of any river, lake, wetland, or drain (regardless of whether there is any water in it at the time); and
 - (e) the land that is used for intensive winter grazing must be replanted as soon as practicable after livestock have grazed the land's annual forage crop (but no later than 1 October of the same year).

6.2. I consider that with the exception of the pugging rules (4(c)), which have proven to be problematic to apply in the field, and are now subject to Ministry of Environment consultation ahead of revision, that the planning JWS version of the pSWLP intensive winter grazing provisions for forage crop grazing are equally or more stringent than the NES:F provisions, having a 10% or 50 ha restriction (whichever is the greater). The decisions version had a 15% area limit, however the Council's preferred relief dropped it to 10%. However, the pSWLP fails to provide a pathway for farmers who can demonstrate that their effects are the same as that permitted. The NES:F anticipated that a certified freshwater farm plan would undertake this assessment of effects against the permitted baseline of explicit area (50ha) or property size limits (10%) and then to either approve or decline the particular part of the farm plan that applies to that activity if the effects cannot be proven to be the same (or less). The NES:F aimed to apply farmer psychology in incentivising the design of farm activities by having this pathway, whilst still having the backstop of area limits. The NES:F also had direct consideration of the Southland situation when it was drafted, as Southland has the largest concentration of IWG on forage crops in the country.

- 6.3. I note that alternative options for IWG are still available through a resource consent process, but I consider that given the strict requirements of the FEP regime in Appendix N, as well as the ability of farm certifiers to decline to certify all or part of a farm plan, that there is no additional risk to the environment in enabling flexibility for the size and design of winter grazing operations to be considered in the context of the permitted activity rule 20A.
- 6.4. I proposed (in expert conferencing) the following additional wording to Rule 20A, to be inserted below the planning JWS Rule 20A (a). I note that the operation of this clause is dependent on a certifier choosing to certify this particular part of the farm environment plan (or the farm plan in general). A certifier may decline if she/he is not certain that the effects will be the same (or less) than that allowed in Rule 20A(i)-(v).
- (aa) Intensive winter grazing is a permitted activity if it occurs on more than 50 ha and on more than 10% of the landholding and a certifier certifies, in accordance with Appendix N Part C, that the adverse effects (if any) allowed by the winter grazing plan in a Farm Environment Management Plan are no greater than those allowed by 20A(i)-(v).
- 6.5. Ms Bernadette Hunt, a farmer and rural contractor, outlines in her evidence the likely perverse effects of retaining the area limits for intensive winter grazing without having an ability for an alternative regime provided the environmental effects are the same or less.
- 6.6. I could support the change from 15% of the area of a farm (as in the decisions version) to 10% (as in the planning JWS version) but only if the alternative pathway provided in clause 26 of the NES:F is also adopted (see above). If not, then I can only support the existing 15% limit.
- 6.7. Rule 20A introduces buffer and setback limits. The planning JWS has increased the setback requirement (in (iii)(3)) for intensive winter grazing adjacent to lakes and waterways from 5m to 10m. I note that in the current incarnation of the Rule, that this is limited to land with a slope of less than 10 degrees, where expert evidence (JWS science) indicates that the velocity of sediment flowing from that land may not need a full 10m buffer to capture or attenuate that sediment.
- 6.8. I indicated in the planning JWS that I had concerns with the lack of consistency between the buffer and setback requirements between Rule 20A and Rule 25. Upon looking at the matter further during the preparation of this evidence, I accept that the buffers and setbacks are managing different activities, and whilst consistency would be nice, it is not easily possible.

7. **RULE 20B - OTHER WINTER GRAZING**

7.1. The appeal by Fish and Game seeks to expand the definition of intensive winter grazing. It states:

“Grazing of stock at any time between 1 May and 30 September of the same year inclusive on fodder crops or pasture to the extent that the grazing results in the exposure of soil and / or pugging of the soil.”

7.2. There are two parts to the request:

- a) Capturing the grazing of stock on pasture
- b) Using the test of the exposure of soil or pugging.

7.3. I consider this request to be problematic in that it relies on the subjective test of pugging, and does not capture the distinction between intensive winter grazing on pasture and general grazing on pasture. One commonly accepted distinction is the use of break feeding as a practice to manage stock. Stock that are intensively grazed in winter are managed in paddocks using temporary fencing. General grazing does not usually use temporary fencing.

7.4. I note that the current NES:F definition of intensive winter grazing also uses an activity – forage crops – and the introduction of another activity based definition would be consistent. I also note that the planning JWS has also asked questions of technical experts in an attempt to try to better define this activity. In the meantime I suggest the following new definition for the parties to consider:

“High risk winter grazing” is the break-feeding of stock on fodder crops or pasture (where the farm environment plan certifier has determined the farm activity to be of the same risk as intensive winter forage crop grazing) between 1 May and 30 September of the same year. It excludes dairy cows in a springer mob prior to calving, and dairy cows in the milking herd after calving.

7.5. I consider that this definition, or something similar to it as may be suggested by other experts, would enable the proposed new IWG Rule 20B contained within the planning JWS to operate alongside the revised Rule 20A.

- 7.6. I considered if there needed to be a carve out for activities that did not directly meet the permitted standard like for Rule 20A but concluded it was not needed because there is no proposed area restriction on other types of winter grazing. I believe that the environmental controls, such as identification of critical source areas, buffers, setbacks, and grazing methodology contained in Appendix N are more than sufficient to avoid, remedy, or mitigate the environmental effects from such activities, and their management through the FEP regime is appealing to farmers.
- 7.7. One of the difficulties with writing the definition is the complexity of farm systems, and any definition risks capturing activities that are not high risk or winter grazing related. Examples are calves being fed on grass in spring but managed with break fencing, dairy cows in a springer mob prior to calving, and dairy cows back on pasture in late spring as part of the milking herd (after fodder crop grazing and calving). These would be inadvertently captured by the above definition I have written, even with the exceptions for certain dairy activities. However, exceptions such as this would happen with any definition, there needs to be an element of practicality and on-farm assessment. I have thus written the definition to provide some ability for a farm environment planner and certifier to determine if an activity is high risk and/or intensive winter grazing of the same level as the currently defined (NES:F and the pSWLP) intensive winter forage crop grazing.
- 7.8. I believe that if parties to these proceedings provide evidence and rebuttal on this matter with an eye to resolving it, that it could be sorted by the time of hearing.

8. **RULE 25 CULTIVATION**

- 8.1. The pSWLP introduces slope-based controls on cultivation, along with a wide definition of cultivation that includes mechanical and non-mechanical means. At first, I considered that the aim of Rule 25 was to control sediment, flowing from disturbed and bare soil with no vegetative cover on steeper ground, particularly on land above 20 degrees. However, upon discussing the Rule in expert conferencing with a desire to resolve Federated Farmers appeal point, I now believe that the original intent of the rule was as a proxy to control and manage farming in general, in particular, to tightly control the development of and replacement of pasture in the hill country (land with a slope above 20 degrees). I believe that the rule also shows signs of being a proxy IWG rule as well. I consider this understandable, as the pSWLP was developed before the introduction of the NES:F controls on IWG, and before controls on farming and land use in general entered the planning conversation. Because of this, I consider that Rule 25 currently duplicates provisions and environmental protections for

farming activities found in other Rules, and as such, is trying to manage the effects of farming and land use in general, rather than the specific effects of cultivation activities.

- 8.2. I note that new land is not being brought into production in Southland, as the Southland District Plan requires discretionary resource consent for the removal of all native vegetation older than 20 years, thus effectively restricting farming to its current footprint (Rule Bio.3, Southland District Plan).
- 8.3. On steeper land, minimum and no till cultivation is commonly used to maintain or replace pasture. Minimum and no till cultivation techniques include the use of:
- a) Direct-drilling, whereby a tractor pulls a plough like device that inserts new plant seed into the soil using a long needle like device. This is to minimise disturbance to the soil, and thus, prevent sedimentation. The old pasture remains intact until the new pasture is established. There are practical and safety limitations to direct drilling on steeper land, as it requires the use of heavy machinery.
 - b) Spray and pray on very steep slopes, which I currently define as above about 25-30 degrees. With spray and pray, the old pasture in a paddock is sprayed off using an appropriate herbicide, and then new seed is immediately introduced by air, sometimes with fertilizer. The new pasture is established and growing before the root structure of the old pasture decays, which keeps the soil and sub-soil structures intact, avoiding the loss of sediment.
 - c) A variant of spray and pray, called hoof and tooth, uses the weight of animals, usually sheep, to push the newly dropped seeds into the soil.
- 8.4. Farmers refer to spray and pray and hoof and tooth as no-till cultivation, as the soil is not disturbed or exposed at any stage.
- 8.5. Ms Bernadette Hunt and Mr Geoffrey Young have both provided evidence on the specific details and environmental effects of these practices.
- 8.6. Pasture replacement is an essential activity, as even perennial grasses require maintenance or replacement over their lifecycle – usually a minimum of 5 years or in some cases, 10 years or greater. The Rule acknowledges this, providing for the maintenance of pasture on a 5 year or longer cycle as a permitted activity, but it then requires restricted discretionary consent for any pasture replacement above 20 degrees. I consider that in the current form, this rule will have a detrimental effect on relatively low intensity farming operations, as farmers no longer have certainty about their

ability to undertake the most basic and vital of farming functions – the ability to maintain and produce pasture. They will require resource consent to be obtained for each and every pasture maintenance activity, regardless of the effects.

- 8.7. I have requested spatial (GIS) analysis to understand the nature of agricultural land in Southland, and the particular type of land use on sloping terrain. This is provided in Table 1 of Appendix 2.
- 8.8. Within the margin of error of the spatial databases used, the above table does not show a increase in land use on steeper country (above 20 degrees). From 1996-2018 only an extra 1.9% of additional farmland has entered production, and this is likely within the margin of error. Table 1 shows a shift from low producing grassland on steeper country to high producing grassland, which is indicative of the introduction of direct drilling and spray and pray practices. This is agricultural efficiency in evidence. It also indicates the increasing practice on larger hill country operations to fatten and finish their stock on property, rather than sending off to lowland blocks which may be now used for dairy support.
- 8.9. The planning JWS proposes the following version of the Rule:

Rule 25 - Cultivation

- (a) The use of land for cultivation is a permitted activity provided the following conditions are met:
- (i) cultivation does not take place within the bed of a lake, river ~~(excluding ephemeral rivers where cultivation is permitted under Rule 20(aa))~~, artificial watercourse, modified watercourse or natural wetland;
 - (ii) cultivation does not take place within a distance of: ~~5 metres from the outer edge of the bed of a lake, river (excluding ephemeral rivers where cultivation is permitted under Rule 20(aa)) artificial watercourse, modified watercourse or natural wetland;~~
 - (1) 5 metres from the outer edge of the bed of a lake, or river, or modified watercourse or the edge of the a natural wetland on land with a slope of less than 10 degrees; and
 - (2) 10 metres from the outer edge of the bed of a lake, or river, or modified watercourse or the edge of the a natural wetland on land with a slope between 10 and 20 degrees;

~~(iii)(iv)~~ cultivation does not occur on land with a slope greater than 20 degrees; and

~~(iv)(iii)~~ cultivation does not occur at an altitude greater than 800 metres above mean sea level; and

(v) critical source areas are not cultivated when forage crops used for intensive wintergrazing are established and sediment detention is established when cultivating critical source areas for any other purpose; and

(b) The use of land for cultivation that does not meet the setback distance of Rule 25(a)(ii)(2) is a permitted activity provided the following conditions are met:

(i) cultivation does not take place within ~~the bed of a lake, river (excluding ephemeral rivers where cultivation is permitted under Rule 20(aa)), artificial watercourse, modified watercourse or natural wetland~~ and a distance of ~~5~~ 3 metres from the outer edge of the bed ~~of a lake, river, or modified watercourse or the edge of the natural wetland~~;

(ii) cultivation does not take place more than once in any 5-year period;

(iii) cultivation is for the purpose of renewing or establishing pasture and is not undertaken to establish a crop used for intensive winter grazing, even as part of a pasture renewal cycle; and

(iv) all other conditions of Rule 25(a) are complied with ~~cultivation does not occur at an altitude greater than 800 metres above mean sea level.~~

(c) The use of land for cultivation, which does not meet one or more of the conditions of Rule 25(a) or Rule 25(b) is a restricted discretionary activity.

The Southland Regional Council will restrict its discretion to the following matters:

1. potential adverse effects of discharges of sediment and other contaminants from the area being cultivated on water quality and biodiversity;

1a. potential adverse effects on the preservation of the natural character of wetlands, lakes, rivers and their margins.

2a. mitigation measures for addressing adverse effects identified in 1 and 1a.; and

2a. the management of critical source areas in the area being cultivated.

3. monitoring and reporting undertaken to assess the effectiveness of any mitigation implemented.

- (d) Despite any other rule in this Plan, the use of land for cultivation at an altitude greater than 800 metres above mean sea level is a non-complying activity.

Slope in Rule 25(a) ~~(ii) and (iii) (iv)~~ is the average slope over any 20 metre distance.

Definition - Cultivation

Preparing land for growing pasture or a crop by mechanical tillage, direct drilling, herbicide spraying, or herbicide spraying followed by over-sowing for pasture or forage crops (colloquially referred to as 'spray and pray'), but excludes: excluding any

- a. herbicide spraying undertaken solely for the control of pest plant species;
- b. herbicide spraying for the establishment or maintenance of plantation forestry; and

- c. stick raking or slash raking associated with a plantation forest, provided that the resulting windrows follow the contour of the land where the slope of the land is greater than 10 degrees.

Definition (new) – Stick raking

Stick raking or slash raking means the use of machinery to clear slash from harvested plantation forest to enable the replanting of trees. It does not include breaking up of the soil profile or the disturbance of the stumps of the harvested plantation forest trees.

- 8.10. This version of the rule includes 5m buffers on waterbodies and wetlands on all cultivation activities on land with a slope of 10 degrees or less, and 10m buffers on land with a slope between 10 and 20 degrees. When cultivation is for the purposes of pasture replacement, and only occurs once in a 5 year period, the buffers are relaxed to 5 metres.
- 8.11. To me, this indicates that the Southland Regional Council undertook some considerations of the differences in the types of cultivation and their respective effects when initially writing the rule. When replacing pasture, mechanical cultivation which exposes the soil is more likely to occur on lower sloped land (below 10 degrees) because of the ease of using machinery, and on steeper ground (above 10 degrees) direct drilling is more likely to occur, thus, the relaxation in buffer size commensurate with the effects.

- 8.12. I now extend the argument to slopes above 20 degrees undergoing pasture replacement by minimum and no till cultivation techniques. If the slope is far away from a waterbody, I cannot see the need for a restriction at all, apart from the general controls that will arise from the FEP, such as the identification of critical source areas (and the requirement to protect them), and general buffers and setbacks around streams. If a steeper slope subject to cultivation is adjacent to a waterbody, then whilst sedimentation effects from the cultivation activity are minimal or non-existent, for the sake of pure precaution, I cannot see why a 10 metre buffer (or greater as determined by the FEP writer and certifier) could not be applied to that slope during cultivation.
- 8.13. I believe that the primary difficulty with the rule is because it is treating mechanical and non-mechanical cultivation as the same activity with the same effects, acting as a quasi land use control rule, and not having been updated or reconsidered in light of the substantial new regulatory controls now placed on farming in the pSWLP.
- 8.14. I propose the following amendments to the planning JWS version of Rule 25:
- a) Rule 25(a)(ii)(2) - 10 metres from the outer edge of the bed of a lake, ~~or~~ river, or modified watercourse or the edge of ~~the~~ a natural wetland on land with a slope of greater than 10 degrees;
 - b) Rule 25(b) - The use of land for cultivation that does not meet the setback distance of Rule 25(a)(ii)(2) or Rule 25(a)(iii) is a permitted activity provided the following conditions are met:
 - c) Rule 25(c)(new iv) - cultivation is by spray and pray and direct drilling methods only on land with a slope greater than 20 degrees.
 - d) Insert new definitions of no till and minimum till cultivation:

No till cultivation:

Spray and pray – where existing pasture is sprayed off and replacement seed is introduced before vegetative cover is lost.

Hoof and tooth – a variation of spray and pray whereby pasture height is reduced through grazing, replacement seed introduced, and pushed into the soil by the weight of the animals.

Minimum till cultivation:

Direct drilling – where soil is minimally disturbed by a needle shaped mechanical device to plant or place seed.

- 8.15. This introduces a minimum buffer of 10m for cultivation activities on land with a slope above 20 degrees, and restricts any permitted activity cultivation on that land to direct drilling and spray and pray/hoof and tooth techniques only, and only for pasture replacement or maintenance on a greater than 5 year cycle. Combined with the FEP regime in Appendix N, the potential sediment effects from hill country farming will be effectively managed.

9. **RULE 51 AND 74 NATURAL WETLANDS**

- 9.1. The NES:F introduces the concept of 'natural hazard works' in clause 51. The natural hazard works are intended to allow landowners to clean up after natural hazards, usually floods, and to also protect their property against immediate hazards. These natural hazard works could include activities that would otherwise trigger the undefined activity of 'land drainage'. I believe the definition of 'drainage' in practice relies either on its plain English or engineering meaning. However, the version of Rule 51 in the planning JWS makes all land drainage activities a non-complying activity, thus effectively preventing the natural hazard works as anticipated by the NES:F.

- 9.2. Clause 51 of the NES:F reads:

Clause 51 Permitted activities

Meaning of natural hazard works

- (1) In this regulation, **natural hazard works** means works for the purpose of removing material, such as trees, debris, and sediment, that—
- (a) is deposited as the result of a natural hazard; and
 - (b) is causing, or is likely to cause, an immediate hazard to people or property.

Permitted activities for purpose of natural hazard works

- (2) Vegetation clearance within, or within a 10 m setback from, a natural wetland is a permitted activity if it—
- (a) is for the purpose of natural hazard works; and
 - (b) complies with the conditions.
- (3) Earthworks or land disturbance within, or within a 10 m setback from, a natural wetland is a permitted activity if it—
- (a) is for the purpose of natural hazard works; and
 - (b) complies with the conditions.

- (4) The taking, use, damming, diversion, or discharge of water within, or within a 100 m setback from, a natural wetland is a permitted activity if it—
 - (a) is for the purpose of natural hazard works; and
 - (b) complies with the conditions.

Conditions

- (5) The conditions are that—
 - (a) the activity must not—
 - (i) result in land becoming unstable; or
 - (ii) result in, or involve, debris or other materials being deposited in the natural wetland; and
 - (b) the activity must be undertaken only to the extent necessary to achieve the purpose of the natural hazard works; and
 - (c) if the activity changes the profile of the bed of the natural wetland, the profile must be restored so that it does not inhibit the passage of fish; and
 - (d) if the activity is earthworks or land disturbance, erosion and sediment control measures must,—
 - (i) during and after the earthworks, be applied and maintained at the site of the activity to minimise adverse effects of sediment on the natural wetland; and
 - (ii) include stabilising or containing soil that is exposed or disturbed by the activity as soon as practicable after the activity ends; and
 - (e) as soon as practicable (but no later than 3 months) after the activity ends,—
 - (i) debris, materials, and equipment relating to the activity must be removed from the site; and
 - (ii) the site must be free from litter.

9.3. Rule 51 in the planning JWS reads:

...

(e) The diversion of water from a natural wetland for the purpose of land drainage is a non-complying activity.

...

9.4. I believe that the planning JWS version of Rule 51 has not considered the consequences of preventing natural hazards from being managed in and around natural wetlands. I cannot find any

evaluation, s32 or otherwise, scientific report, or spatial analysis that indicates the amount of land affected, the likely impact on farming systems, or the potential effect on the wetlands themselves. I also do not believe that the appellants on this rule – namely Forest and Bird and Fish and Game – wanted to prevent landholders from responding to or preventing natural hazards on their properties, or for that matter, potentially preventing the Southland Regional Council in its flood management jurisdiction from doing the same.

- 9.5. Many natural wetlands are fed by up-slope drains, where a mole or tile drain on a property feeds into a wetland, providing it with water. In order to sustain the wetland, the drain requires maintenance, and if it blocks, the wetland will dry up. For these types of wetlands, maintenance of natural hazards that might result in a blockage of the water supply to the wetland is essential. I consider this another example of the complexity of natural wetlands, which is not reflected in the blunt non-complying rule.
- 9.6. Rule 51 predates the NES:F. However, I consider that this also makes it easily resolvable, as the NES:F also places a non-complying activity status on drainage within natural wetlands, apart from the natural hazard works provisions. A direct reference to the NES:F may resolve this issue:
- (e) Apart from natural hazard works as defined in clause 51 of the National Environmental Standard for Freshwater Management, the diversion of water from a natural wetland for the purpose of land drainage is a non-complying activity.
- 9.7. My comments in the planning JWS stated at the time of writing that I was not sure of Federated Farmers' scope on the matter. I have since had the opportunity to review scope and confirm that scope for the matter comes from Federated Farmers s274 notice on Nga Runanga's appeal. I have elected to address it now in the "appeal" evidence as I consider it best to address all natural wetland matters in one statement of evidence.

10. **POLICY 18(2) AND RULE 70**

- 10.1. The version of Rule 70 with the addition of clause (cb) in the planning JWS makes the grazing of sheep within natural wetlands a non-complying activity. If accepted, I consider that this will have a substantial and detrimental effect on farming operations for no measurable environmental improvement, and also that it introduces unnecessary and unproven stringency over the top of the national instrument guidance for stock exclusion within natural wetlands.

10.2. For clarity, the planning JWS version of Rule 70 with clause (cb) is as follows:

- (ca) The disturbance of the bed of a lake, river or modified watercourse by sheep, other than as regulated by Rule 70(a) and 70(b), is a permitted activity, provided the following conditions are met:
 - (i) the waterbody is not already fenced to prevent stock sheep access;
 - (ii) (the sheep are not being break fed or intensively winter grazed;
 - (iii) there is no significant de-vegetation leading to exposure of soil of the bed and banks, pugging or alteration to the profile of the bed and banks, other than at fords or stock crossings; and
 - (iv) a Farm Environmental Management Plan for the landholding is prepared, certified, and implemented and audited in accordance with Appendix N, and shows how access by sheep will be managed;

- (cb) The use of land within a natural wetland or the disturbance of the bed of a water body within a natural wetland for access or grazing by stock is a non-complying activity.

10.3. In the first instance, achieving a workable definition of a ‘natural wetland’ is challenging. It currently encompasses everything from nationally and internationally significant and protected wetlands on public conservation land through to damp corners of paddocks with a few intact rushes. The science JWS acknowledges this definition issue, as does the Ministry for the Environment, which is currently analysing submissions on possible changes to the definition of natural wetland in the NPS-FM 2020 (which is referenced in the NES:F). I also consider that some participants in this process may have been thinking of the environmental needs of regionally significant wetlands when writing rules, rather than the wider definition of natural wetlands, of which Southland’s identified regionally significant wetlands are a subset.

10.4. Stocking in wetlands is also a complex matter, perhaps more complex than the definition itself. I consider that stocking in wetlands, particularly light stocking in dry conditions, can be beneficial for wetlands, in reducing light competition for native plants through stock eating exotic pasture or pest plants, and through enhanced nutrient cycling from animal waste. Grazing of wetlands is a common conservation management tool used overseas¹, and whilst New Zealand studies are sparse, some New Zealand studies in wetlands I am familiar with show an increase in native species density under

¹ Legendijk, D. D. G., Howison, R. A., Esselink, P., Ubels, R., & Smit, C. (2017). Rotation grazing as a conservation management tool: Vegetation changes after six years of application in a salt marsh ecosystem. *Agriculture, Ecosystems & Environment*, 246, 361–366.

grazing regimes when compared to the removal of stock.² I am not an ecological expert, but I can consider the matter from a planning perspective invoking the precautionary principle, by saying that where grazing is present in wetlands, and no clear damage to wetland values is occurring, it would make sense to at least leave the grazing regime in place with the current stock management practices and levels until it can be further assessed, such as part of a farm environmental management plan. I find it odd that such an assessment of risks and benefits has been recommended (in the planning JWS version) for sheep on the banks of rivers and lakes, but yet has been ruled out for natural wetlands.

- 10.5. Before I discuss my proposed solution for the matter, I will outline the national instrument direction.
- 10.6. Clauses 16-18 of the stock exclusion regulations only require the exclusion of beef, deer, dairy cattle from:
 - a) Natural wetlands identified in operative regional or district plans (i.e. regionally significant wetlands as defined in the pSWLP);
 - b) Natural wetlands that support populations of threatened species (using the NPS-FM compulsory values of threatened species); and
 - c) Wetlands on low slope land (as defined in the low slope map, which is also under review) of 0.05 ha or more (200 square metres).
- 10.7. Natural wetlands can occur on sloping land.
- 10.8. Sheep are exempt from all national exclusion requirements, with the caveat of the non-complying activity status for vegetation clearance within natural wetlands.
- 10.9. However, I consider the definition of vegetation clearance in the NES:F to be problematic in itself, as it does not directly refer to stock, except it uses 'mob-stocking' as an example of what might lead to vegetation clearance. I read the definition as potentially allowing light stocking or low intensity stock, such as sheep, or sheep-equivalency, subject to an assessment. For clarity, the full definition is below:

² Daley, C. (2021). *The effects of varying grazing livestock pressures at the Upper Taieri Scroll Plains* [Unpublished post graduate diploma thesis]. University of Otago.

vegetation clearance—

- (a) means the disturbance, damage, destruction, or removal of vegetation by any means (for example, by cutting, crushing, application of chemicals, or burning); and
- (b) includes activities that result in the disturbance, damage, destruction, or removal of vegetation (for example, over-planting, applying the seed of exotic pasture species, mob-stocking, or draining away water); but
- (c) does not include—
 - (i) the removal of sphagnum moss for the purpose of a harvest in accordance with [regulation 48](#) or [49](#); or
 - (ii) the crushing of other vegetation for the purpose of maintaining the dominance of sphagnum moss, if the crushing is carried out during a harvest of sphagnum moss or to rehabilitate the moss after it is harvested; or
 - (iii) an activity described in paragraph (a) or (b) that is for the maintenance or construction of fencing for the purpose of excluding stock or marking property boundaries; or
 - (iv) an activity described in paragraph (a) or (b) that is for the maintenance of shelter belts; or
 - (v) the grazing of improved pasture within the relevant setback from a natural wetland.

10.10. The definition of natural wetland includes a 50% exemption for improved pasture species, but, to me unhelpfully fails to then define what that improved pasture is, as the definition for improved pasture in the NPS-FM is self-recursive and fails to give the necessary clarity. Furthermore, there is no defined scale on which to assess the 50% coverage exemption. Instead, this can fall to the non-statutory Ministry for Environment ‘Wetland delineation protocol’, and the supporting ‘Wetland delineation hydrology tool’. The latter references 2m x 2m quadrats as a sample size for scientific survey, reflecting longstanding ecological practice. However, in the absence of policy direction on what scale to start looking, 2m x 2m has been used to define ‘natural wetlands’, and thus stock exclusion, in other regions. I consider this problematic, especially as at the moment, this assessment can occur without a defined process – such as the farm environment planning regime in Appendix N.

10.11. The national instrument guidance does not relate well to the pSWLP, probably because most of the latter was written before the regulations were developed. For the most part, I consider the pSWLP to be more stringent than the national regulations, but in one critical exception, Table 1 of Rule 70 (the Southland stock exclusion requirements) introduces a low intensity stocking exemption for sloping

land in the hill country, whereas the s360 stock exclusion regulations require all stock (apart from sheep) to be excluded from lakes and wide rivers on that type of country from 1 July 2025, and there is no ability for a regional plan to deviate from regulations written under s360 of the Act (unlike an NES or NPS). This introduces a major issue for farmers, but not immediately.

- 10.12. I cannot recommend a fix for the consistency and stringency issues at the plan scale. However, just because a solution cannot easily be found does not mean that the issue should be ignored.
- 10.13. Instead, the best way forward I see is by better defining a process to work out what natural wetlands are, and if they can support light stocking, then for this to be assessed through the farm environmental management plan process. At the moment, Appendix N anticipates this, providing for the identification of natural wetlands on farm, and then, considers their management requirements in order to protect their values. Appendix N states:

(5d) Waterways and wetland management: To manage activities within waterways, critical source areas, natural wetlands, and their margins, by avoiding stock damage, and avoiding where practicable, or otherwise minimising inputs of nutrients, sediment and faecal contaminants to ground and surface water

- 10.14. These management requirements will include the acceptability of stocking in those areas or not. I note that the test is an 'avoid' in relation to stock damage, which means that not all stocking will be appropriate in natural wetlands. I have indicated that above, based on my reading of the national instruments, that it will likely be light stocking usually with sheep or the equivalent.
- 10.15. I also note that farm planners, certifiers, and auditors may not be wetland experts, but they will likely be the people on the spot who will be undertaking assessments or be asked for advice. To me, it seems the most efficient way to achieve the objectives of this plan for there to be suitably qualified wetland experts that they can seek advice from to assist them in this complex and challenging areas.
- 10.16. I also consider that the pSWLP should define a scale at which wetland identification begins – and the paddock scale makes some sense in most contexts (extensive hill country with light stocking is the exception), noting that farmers have traditionally divided paddocks based on soil/land type, with wetter areas partitioned off. Given these two settings (an outer bound on scale to start assessments,

and a definition of improved pasture), the wetland delineation tool would be better operationalised.

10.17. I recommend the following changes to Rule 70 to give effect to this:

- ca) The disturbance of the bed of a lake, river or modified watercourse by sheep, other than as regulated by Rule 70(a) and 70(b), is a permitted activity, provided the following conditions are met:
 - (i) the waterbody is not already fenced to prevent stock sheep access;
 - (ii) (the sheep are not being break fed or intensively winter grazed;
 - (iii) there is no significant de-vegetation leading to exposure of soil of the bed and banks, pugging or alteration to the profile of the bed and banks, other than at fords or stock crossings; and
 - (iv) a Farm Environmental Management Plan for the landholding is prepared, certified, and implemented and audited in accordance with Appendix N, and shows how access by sheep will be managed;

- (cb) The use of land within a natural wetland or the disturbance of the bed of a water body within a natural wetland for access or grazing by stock is a permitted activity, provided the following conditions are met:
 - (i) That the stock are at low intensities (defined as 6 stock units per hectare or less using the definition in Rule 70 Table 1) and;
 - (ii) a Farm Environmental Management Plan for the landholding is prepared, certified, and implemented and audited in accordance with Appendix N, and shows how stock damage to the values of the wetland will be avoided.

- (cc) Except for the above conditions, the use of land within a natural wetland or the disturbance of the bed of a waterbody within a natural wetland for access or grazing by stock is a non-complying activity.

10.18. It may be of interest to the Court to know the area of land that may be defined as natural wetland. I have provided that to resolution of the best current datasets in Appendix 2. , Using the Southland Regional Council supplied shapefiles, there is currently about 8200 ha of natural wetlands classed as regionally significant wetland. If the wider definition of natural wetlands is used, that area nearly doubles to just over 16,000 ha. I do not consider this extra 8000 ha as a small area of land in the context of Southland, and thus, I think nuance should be put into its management regime, as I have

recommended above.

10.19. I support the amendments made to Rule 70 (ca) to manage sheep access to waterbodies, and this also addresses the Federated Farmers appeal on Policy 18.

Peter Gordon Wilson

A handwritten signature in black ink, appearing to read 'Peter Gordon Wilson', written in a cursive style.

20 December 2021

APPENDIX 1 – Relevant Planning Instruments

In preparing this evidence, I have read the:

- a) pSWLP (notification and decisions report);
- b) Section 32 Report;
- c) Section 42A Hearing Report and Reply Report;
- d) Council's Decision Report;
- e) Appeals and Section 274 Notices
- f) National Instruments, including the National Environmental Standard for Freshwater 2020 (**NES:F**), the National Environment (Stock Exclusion) Regulations (**stock exclusion regulations**).
- g) The joint witness statements from expert conferencing (**relevant JWS**)

APPENDIX 2 – SPATIAL ANALYSIS OF SOUTHLAND LAND

Table 1 Low and High producing exotic grassland changes across slope type from 1996 to 2018

Low producing exotic grassland					High producing exotic grassland & crop				
Slope (deg)	1996	2018	Change	% change	Slope (deg)	1996	2018	Change	% change
10	56,647.5	51,700.8	-4,946.7	-8.7	10	751,611.5	761,479.0	9,867.5	1.3
20	45,160.1	38,043.8	-7,116.4	-15.8	20	72,935.9	77,511.5	4,575.6	6.3
25	19,127.9	17,075.6	-2,052.4	-10.7	25	10,233.5	11,385.8	1,152.3	11.3
30	13,951.9	13,031.3	-920.6	-6.6	30	3,607.5	4,064.4	456.9	12.7
30+	11,202.7	10,834.1	-368.6	-3.3	30+	1,216.8	1,345.1	128.3	10.5
Total	146,090.1	130,685.4	-15,404.7	-10.5	Total	839,605.2	855,785.8	16,180.6	1.9

Change in slope of Land Use Classification Database (LCDB) classes from 1996 to 2018

Low producing exotic grassland

High producing exotic grassland & crop

Using the "Current Wetlands" and "Swamps" layer to get agri land currently classed as a swamp

	Area Ha	5m buffer	10m buffer
Arable	62	64.03	65.77
Dairy	2,652	2805.87	2961.11
Dry	12,829	13784.55	14738.23
For	565	589.38	613.23
	16,109		

Table 2 Land likely to be defined as natural wetland

Regionally
Significant
Wetlands-
layer
supplied

	Area Ha	5m buffer	10m buffer
Arable	24.25	25.43	26.59
Dairy	1276.02	1320.34	1367.33
Dry	6657.69	7106.00	7562.71
For	294.18	302.60	310.88
	8252.16		