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)

STATEMENT OF EVIDENCE OF MATTHEW MCCALLUM-CLARK ON BEHALF OF SOUTHLAND REGIONAL COUNCIL

PLANNING

11 February 2022 (amended 25 February 2022)

Judicial Officer: Judge Borthwick

Respondent's Solicitor
PO Box 4341 CHRISTCHURCH 8140
DX WX11179
Tel +64 3 379 7622
Fax +64 379 2467

Solicitor: P A C Maw
(philip.maw@wynnwilliams.co.nz)

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

Contents

Executive Summary

1. This planning evidence primarily addresses the issues in Topic B that were not agreed through mediation or related negotiations.
2. This evidence is arranged by sub-topic, and addresses sub-topics B2, B4 and B5. Sub-topic B3 is addressed in the evidence of Lauren Maciaszek. All matters have been resolved for sub-topic B6 and an affidavit of Hannah Goslin has been filed. For each sub-topic, the evidence is arranged under the following headings:
    a. Issues agreed through mediation and negotiation;
    b. Issues agreed between the planners through conferencing;
    c. Issues remaining in dispute.
3. This evidence has been prepared following receipt of the appellants and s274 party evidence in chief. There are many parts of that evidence that I agree with, and in those cases I have tended to refer to that evidence rather than to repeat the assessments here.
4. A large proportion of issues were agreed by the planners through the Court facilitated expert witness conferencing. In the main, these agreements are reflected in the evidence in chief of the planners for the appellants and s274 parties. Overall, the expert witness conferencing was a very useful exercise and has enabled the focusing of this evidence on the matters that remain in dispute.
5. The Planning Joint Witness Statement (Planning JWS) that resulted from the expert conferencing appended a rather complicated set of tracked changes to the provisions addressed in the conferencing. Appendix 1 to this evidence includes a cleaned-up version of those tracked changes, so that they are an accurate representation of the actual changes from the Decisions Version of the pSWLP, with any further changes that I consider are appropriate clearly identified in red.
6. This evidence also includes some assessments of the recommended changes against higher order planning documents, the objectives of the pSWLP and s32AA assessment, which at times groups several provisions. For many provisions, I have instead relied on the assessments completed by other planners where I agree with them.

Introduction, qualifications and experience

7. My name is Matthew Eaton Arthur McCallum-Clark. My qualifications and experience are set out in full in my statement of evidence dated 22 October 2021.

8. Appendix 3 to this evidence contains a list of the information and documents I have read and considered.

9. I also refer to my earlier Statement of Evidence in Chief: Topic B Overview for the Southland Regional Council (dated 22 October 2021) and Supplementary Statement (dated 28 October 2021).

Code of conduct

10. I confirm that I have read the Code of Conduct for expert witnesses as contained in the Environment Court Practice Note 2014. I have complied with the Code of Conduct when preparing my written statement of evidence and will do so when I give oral evidence.

11. The data, information, facts, and assumptions I have considered in forming my opinions are set out in my evidence. The reasons for the opinions expressed are also set out in my evidence.

12. Other than where I state I am relying on the evidence of another person, my evidence is 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.

Scope

13. I participated in expert witness conferencing in relation to these proceedings, and signed the resulting Planning Joint Witness Statements dated 17-18 November 2021, 17-19 November 2021, and 10 December 2021.

14. I have been asked by the Council to provide evidence in relation to those Joint Witness Statements and the remaining matters in contention between the parties.

15. This evidence addresses the overall statutory and Topic A Interim decision framework, then each of the sub-topics in Topic B.

16. For the seven sub-topics, this evidence addresses sub-topics B2 (General Discharges), B4 (Beds of Lakes and Rivers) and B5 (Farming)[1]. Sub-topic B3 (Wetlands) is addressed in the evidence of Lauren Maciaszek, and sub-topic B6 (Infrastructure) is the subject of an affidavit from Hannah Goslin. For each sub-topic, I have endeavoured to arrange the evidence under the following headings:

    a. Issues agreed through mediation and negotiation - these issues are addressed only superficially, generally in the context of other issues being addressed. The analysis for these issues is included within the consent orders and affidavits already submitted to the Court;

    b. Issues agreed between the planners through conferencing - a large proportion of the appeal points were agreed between the planners during the conferencing sessions and are recorded in the Joint Witness Statements. Where appropriate, I have relied on the assessment and reasoning contained in the evidence of other planners;

    c. Issues remaining in dispute - for the relatively few issues that remain in dispute, this evidence is more thorough, and relies on the assessment and reasoning contained in the evidence of other planners where I agree with that evidence. There are also a relatively small number of issues that were not agreed by the planners, and for which the appellants and section 274 parties have not provided evidence. My evidence on these issues is brief, as I assume that they are no longer in dispute.

17. There are some policies or rules where the majority of the issues have been agreed, with only one or two clauses in dispute. This means the evidence structure is, at times, not as precise as indicated in the paragraph above.

---

[1] One element, relating to stock access to wetlands, is addressed in the evidence of Lauren Maciaszek for the Council.

Statutory Framework and Topic A Interim Decision Context

18. I refer to my Topic B Overview evidence of 22 October 2021, which set out:

    a. an outline of the key findings from the Topic A Interim Decisions[2];

    b. updates to superior planning documents (e.g. the National Policy Statement for Freshwater Management 2020 (NPSFM 2020)) since the Topic A Interim Decisions;

    c. an outline of other new regulations (e.g. the national Environmental Standards for Freshwater (NES Freshwater), and the Stock Exclusion Regulations) released since the Topic A Environment Court Hearings;

    d. an outline of the Council's Freshwater Planning Process; and

    e. an outline of the fundamental issues raised in Topic B appeals.

19. While it will be set out in the Council's legal submissions, I have also read and agree with Mr Willis' outline of the relevant statutory framework in paragraph [4.1] and Attachment 1 to his evidence in chief.

20. Finally, and for completeness, I am aware that the Topic A Interim Decisions addressed the Treaty of Waitangi, and I, along with others, provided evidence on that topic. In approaching the expert witness conferencing for Topic B and before undertaking assessments in this evidence, I have re-read that material and kept it in mind throughout this process. I have also read and reflected on the evidence in chief and s274 evidence of Ms Cain, Dr Kitson and Ms Davidson.

The JWS – Planning

21. Appended to the JWS - Planning is a "tracked changed" version of the policies and rules that were discussed during the expert conferencing. Those tracked changes were based on the Council's preferred version, previously circulated to the Court on 1 November 2022. During the expert conferencing, adjustments to that base document were made in different

---

[2] Being [2019] NZEnvC 208 (the "First Interim Decision"), [2020] NZEnvC 93 (the "Second Interim Decision"), [2020] NZEnvC 110 (the "Third Interim Decision"), and [2020] NZEnvC 191 (the "Fourth Interim Decision").

colours, often across different days. This aided the planners in identifying the timing and source of different changes made. However, the different colours and tracking leads in the final version to a level of confusion. Within this evidence, and produced in full in Appendix 1, are more simplified versions of those tracked changes, based on the decisions version of the pSWLP, with simple black ~~strike out~~ and underline. If any substantive errors crept into the Planning JWS version, I have clearly identified these. I have made minor corrections, such as adding semi-colons and shifting the "and" to the end of relevant provisions if an additional clause was added. In all other respects the simple black version included in this evidence reflects the wording of the Planning JWS.

22. If I have made recommended changes to the Planning JWS version, or recommended wording for unresolved issues, this is recorded in red text.

Subtopic B2 - General Discharges

23. The majority of the issues in this subtopic were agreed through the Court facilitated mediation sessions, or direct negotiation.

(a) ***Issues agreed through mediation and negotiation***

24. A draft consent order and supporting affidavit has been lodged with the Court and accordingly those issues are not addressed further here.

(b) ***Issues agreed between the planners through conferencing***

Policy 15 and 15C

25. In the appeal of Ngā Rūnanga[3], Policy 15, as recommended in the s42A Report for the pSWLP, was sought to be retained in favour of Policies 15A, 15B and 15C of the Decisions Version.

26. Ms Davidson (on behalf of Ngā Rūnanga) considers the amendments that were agreed in the Planning JWS address the key concerns in the Ngā Rūnanga appeal. Ms Davidson notes that Policy 15C has now been deleted entirely, removing the uncertainty surrounding how this provision

[3] Te Rūnanga o Ngāi Tahu, Hokonui Rūnaka, Waihōpai Rūnaka, Te Rūnanga o Awarua & Te Rūnanga o Ōraka Aparima

would apply when the FMU process was established. She also states that Policy 15A and 15B now clearly set out the priorities to firstly “avoid” and secondly “mitigate”. This better provides for maintaining water quality where standards are met (Policy 15A) and improving water quality where standards are not met (Policy 15B).

27. I note that Policies 15A and 15B are subject to consent orders and affidavits, meaning that the remaining issues relate to the inclusion of Policies 15 and 15C. I agree with the reasoning of Ms Davidson, and confirm that in my opinion Policy 15 is no longer required, given the greater specificity in Policies 15A and 15B. I also agree that Policy 15C is no longer required and is potentially confusing given the detailed freshwater planning process set out in the NPSFM, and which is in part at odds with the description in Policy 15C.

Rule 13

28. Rule 13 controls discharges from subsurface drainage systems. A number of changes to the Rule were negotiated following the Court assisted mediation. Agreement was reached on all components, except a relatively minor clarification with respect to sedimentation. While not discussed in detail during the planning expert conference, the Council’s preferred tracked changes version of the Rule was agreed.

29. The subsurface drainage network in Southland is extensive and I understand that it is a relatively direct conduit for diffuse discharges to surface water bodies. The agreed changes represent a significant clarification and strengthening of the conditions of the Rule, noting that several conditions in the Decisions Version were based on section 70 requirements. The parties considered that these lacked some specificity and would be difficult to objectively assess.

30. In my opinion, the adjustments recognise both that discharges from sub-surface drainage networks inevitably contain other contaminants, and that the application of some practical water quality standards ensure those other contaminants are appropriately managed. This was confirmed during the mediation discussion where clarity and sedimentation standards were seen as essential if the entrained contaminants were to be managed.

31. Overall, the parties considered that the changes would recognise the reality of the operation of sub-surface drainage systems, while managing the more common adverse effects. The parties considered this would better achieve Objectives 1, 2, 3, 6 and 13 of the pSWLP.

32. With respect to the detailed assessment of benefits, costs and risks set out in section 32(2), I am of the opinion that including more precision in the water quality standards will result in a more efficient outcome. Environmental improvement can be driven by the application of these standards, which are less reliant on subjective judgements. It is highly likely that some existing sub-surface drainage systems will not be able to meet these more specific standards, and will require improvement, which will have environmental, cultural and social benefits, but at a short to medium term cost primarily to farmers. These benefits and costs will likely occur in any event, as the timeframes and outcomes for water quality improvement are refined under the NPSFM freshwater planning process.

(c) ***Issues remaining in dispute***

~~*Rule 5*~~[4]

~~33. Two substantive changes to Rule 5 have been discussed between the parties. The first, to condition 3, is a change that is associated with adjustments to rules for community stormwater and wastewater systems. This is addressed in a consent order and associated affidavit lodged with the Court. The second, to condition 4 is a change sought by Fish and Game, and agreement was not reached at the mediation, nor through subsequent discussion. Although only briefly discussed, it was also not agreed at the Planning expert conference.~~

~~34. The change to Rule 5, and the additional condition 4, as per the attachment to the Planning JWS, is set out below:~~

> ~~*(a) Except as provided for elsewhere in this Plan the discharge of any:*~~
>
> ~~*(i) contaminant, or water, into a lake, river, artificial watercourse, modified watercourse or natural wetland; or*~~

---

4 Note that Southland Fish and Game Council has now withdrawn its appeal on Rule 5. Accordingly, the only change proposed to Rule 5 is that sought by consent order.

(ii) contaminant onto or into land in circumstances where it may enter a lake, river, artificial watercourse, modified watercourse or natural wetland;

is a discretionary activity provided the following conditions are met:

1. where the water quality upstream of the discharge meets the standards set for the relevant water body in Appendix E "Water Quality Standards", the discharge does not reduce the water quality below those standards at the downstream edge of the reasonable mixing zone; or

2. where the water quality upstream of the discharge does not meet the standards set for the relevant water body in Appendix E "Water Quality Standards", the discharge must not further reduce the water quality below those standards at the downstream edge of the reasonable mixing zone; and

3. except for discharges from a territorial authority reticulated stormwater or wastewater system, the discharge does not contain any raw sewage; and

4. the discharge is not into any Regionally Significant Wetland or Sensitive Waterbodies listed in Appendix A.

35. The primary reason for Council not agreeing to this change is uncertainty in the scope of the submission and appeal points to the Rule. I understand this will be further addressed in Council's legal submissions.

36. I note Mr Farrell's evidence for Fish and Game and Forest and Bird does not address Rule 5, and no change is included in his consolidated track changes in Appendix 1 to his Evidence in Chief. On that basis, it is unclear whether this change to Rule 5 is still sought.

37. Despite its merits, I am concerned that the additional condition 4 has the effect of making a number of ostensibly innocuous discharges, non-complying activities. Those discharges, given conditions 1 and 2 of the Rule will still need to meet water quality standards. I note that discharges to a wetland are likely to trigger a non-complying activity status under the NES-F. However, the sensitive water bodies listed in Appendix A of the pSWLP, comprise a number of significant water bodies in the region that

~~are not wetlands. In short, I am unable to clearly identify what problem the additional condition 4 is intended to remedy.~~

Ephemeral Rivers/Waterbodies/Flow paths

38. In the Report of the Hearing Commissioners in the pSWLP, the issue of 'ephemeral rivers' was clearly considered and dealt with, as set out in the following paragraphs from the stock exclusion discussion:

> *[257] Our consideration of the above matters led us to conclude that the Plan needs to be very clear on how farming activities in ephemeral rivers are dealt with in the rules. Rivers can be permanently flowing, intermittently flowing or ephemeral. In some cases, farming activities in ephemeral river beds (including stock access) should be permitted 'as of right', in other cases farming activities in ephemeral river beds should only be permitted subject to conditions, and some cases those activities should require a resource consent or be prohibited. Accordingly, we recommend new permitted activity Rule 20(aa) dealing with farming activities. Rule 20(aa) makes farming activities (intensive winter grazing, cultivation and stock access) in ephemeral rivers an unconditional permitted activity unless Rules 20, 25 or 70 or any other rule in the Plan states otherwise.*
>
> *[258] We have also reviewed the Plan more generally to assess how ephemeral rivers should be treated in each rule and recommend amendments accordingly.*

39. This resulted in a specific rule in the farming provisions[5] excluding the application of the stock exclusion rules to 'ephemeral rivers'. Similarly, these rivers have been excluded from a number of other provisions in the pSWLP, including Rule 14, which is part of sub-topic B2. The definitions of "ephemeral waterbodies" and "intermittent waterbodies" were adjusted to:

> *Ephemeral rivers*
>
> *Rivers which only contain flowing or standing water following rainfall events or extended periods of above average rainfall.*

---

5 Rule 20(aa)

Intermittent river

A river which does not contain permanently flowing or standing water and where the bed is predominantly devoid of terrestrial vegetation and comprises sand, gravel, boulders, or similar material or aquatic vegetation.

40. A number of appeals were lodged regarding the exclusion of 'ephemeral rivers', including the appeal of Ngā Rūnanga which sought removal of all exclusions[6].

41. In my opinion, ephemeral flow paths are an on-the-ground part of ki uta ki tai. They represent the interface between land and water, meaning their management is integral to the integrated management of both land and water.

42. I am of the opinion, in this context, that words like "water body" and "river" are unhelpful. In my experience there is often no water present, the areas can be difficult to distinguish from the surrounding land, and their management in this state is important. It is also apparent that when members of the general public consider swales, depressions in paddocks and minor gullies, "river" is not a term that would commonly be used.

43. Therefore, I support the phrase "ephemeral flow path" and their treatment within the pSWLP as critical source areas.

44. I have read and considered the evidence of Mr Farrell with respect to ephemeral rivers or ephemeral water bodies[7]. At the outset I confirm that I prefer the Planning JWS agreed wording on this issue. Mr Farrell's evidence has, in reliance on Ms McArthur, sets out the ecological value of intermittent rivers as compared to ephemeral flow paths. I accept that these features in the landscape occur on something of a continuum, from dryland through to permanently flowing rivers. I also accept that it is difficult to include firm definitions that would provide clarity in every circumstance. Therefore, I prefer terminology which is more likely to resonate with users of the pSWLP, and the treatment of ephemeral flow

---

6 The Ngā Rūnanga appeal sought to delete the text "excluding ephemeral rivers" wherever it occurs in the proposed plan.

7 Evidence in chief of Mr Farrell at paragraph [55]

paths as critical source areas, which will enable a more nuanced level of management.

45. I have also read and considered the evidence of Dr Burrell, who has considered and supports the wording amendments set out in the Planning JWS version.

46. While it is not especially clear in the Planning JWS, the planners' discussion considered the use of ephemeral rivers/flow paths throughout the pSWLP, but most specifically in relation to the farming rules. There was discussion of some non-farming rules, such as Rule 14. However, it is my recollection that Objective 16 was not directly discussed.

47. In my opinion, the changes to the pSWLP in relation to ephemeral rivers/flow paths introduces a level of clarity and certainty. They provide an appropriate level of risk management, and better recognise the need to manage ephemeral flow paths as critical source areas. By treating them as a critical source area, a number of provisions are triggered, including those related to cultivation and intensive winter grazing. It also raises them to a more prominent role in the revised Appendix N (Farm Environmental Management Plans).

48. In my opinion, this is an appropriate way to manage ephemeral flow paths even though it will impose a range of costs on landowners, particularly with respect to intensive winter grazing and cultivation. I note that Farm Environmental Management Plans will also introduce both management costs and some constraints on farming operations. However, from an environmental, cultural and social perspective, the benefits of better management of ephemeral flow paths are clear, as it is my understanding that they are generally accepted as a primary conduit for contaminants from the land surface to water bodies.

49. I have read the s274 evidence of Ms Kirk and note her limited support for Mr Farrell's position, based on the potential for Rule 70(a) to produce unintended consequences of removing protection for nesting birds[8]. It would be my preference that the wording in Rule 70(a) is changed to "(including ephemeral flow paths)". This avoids the unintended

---

[8] S274 evidence of Ms Kirk at paragraph [35].

consequence of disturbance of roosting and nesting areas of the listed bird species becoming permitted rather than a prohibited activity, as Ms Kirk identifies.

50. For completeness, I note that the Decisions Version of Objective 16 reads:

> *Public access to, and along, river (excluding ephemeral rivers) and lake beds is maintained and enhanced, except in circumstances where public health and safety or significant indigenous biodiversity values are at risk.*

51. As stated above, the Ngā Rūnanga appeal sought to delete the text "excluding ephemeral rivers" wherever it occurs in the pSWLP. Also as noted above, I do not recall this being discussed between the parties at any point with respect to Objective 16.

52. It is my understanding that no evidence has been lodged by Ngā Rūnanga in pursuit of this appeal point, or by any other party in respect of Objective 16. In my opinion, the resolution of this issue is linked to the treatment of the term "ephemeral rivers" throughout the pSWLP.

53. In the context of public access to water bodies, it is my opinion that public access can be beneficial where a water body enables recreation, mahinga kai or appreciation of its amenity values and natural character. It may also be beneficial if it provides linkage to another, more substantial body. However, I am aware that for much of the year it is likely that an ephemeral water body will be indistinguishable from any other dryland area, and thus is unlikely to have particular characteristics that would justify a need for public access.

54. For the reasons set out above, I agree with the majority of other planners that the term "ephemeral river" is not particularly helpful. The general public do not consider such a feature as being a "river". On this basis, it would be my preference that either the words in brackets be deleted or, if the Court considered it preferable to retain this part of Objective 16, that the words be changed to "ephemeral flow paths".

Subtopic B4 – Beds of Lakes and Rivers

55. Subtopic B4 relates to a relatively small number of appeal points, with all issues agreed except those that relate to Rule 78 (drainage maintenance) and associated definitions. These were discussed briefly at the expert witness conferencing and have been further clarified with the relevant planners. While agreement on several elements has been reached, there remains a dispute about how best to manage the effects on threatened fish and taonga species.

(d) ***Issues agreed through mediation and negotiation***

56. The majority of issues in Subtopic B4 (Beds of Lakes and Rivers) were resolved through mediation and subsequent negotiation. A draft consent order and supporting affidavit, that reflect the outcomes of the mediation agreement and subsequent negotiations, have been lodged with the Court.

57. While those issues where agreement has been reached are set out in the documentation, I note the agreed version of Policy 30 is relevant for the discussion below relating to Rule 78 and associated definitions. The agreed wording of Policy 30 is:

(e) ***Policy 30 – Drainage maintenance***[9]

In recognition of the community benefits of maintaining flood conveyance capacity and land drainage, ensure that drainage maintenance activities within artificial watercourses and the beds of modified watercourses and their margins are managed in a way that either:

1. avoids, where reasonably practicable, or otherwise remedies or mitigates significant adverse effects on the aquatic environment, and riparian habitat in modified watercourses and significant adverse effects on aquatic and riparian habitat in artificial watercourses; or

2. maintains or enhances habitat value, including fish passage, gravel spawning habitat and bank stability; and

---

9 Retrieved from "Topic B4 Issues 6,7 and 8 - Affidavit – Policy 30"

3. in addition to 1 or 2, minimises the quantity of sediment released from drainage maintenance activities.

(f) ***Issues remaining in dispute***

58. Following discussions between the planners for the parties[10], I understand there is largely agreement[11] on all except one condition of the Rule. The version of the rule that has been discussed states:

Rule 78

(a) The removal of aquatic weeds and plants and sediment from any modified watercourse for the purpose of maintaining or restoring drainage outfall, and any associated bed disturbance and discharge resulting from carrying out the activity, is a permitted activity provided the following conditions are met:

(ai) general conditions (e), (f), (g), (h) and (l) set out in Rule 55A;

(i) the activity is undertaken solely to maintain or restore the drainage capacity of a modified watercourse that has previously been modified or maintained for drainage maintenance or restoration purposes at that location;

(ii) the activity is restricted to the removal of aquatic weeds and plants or sediment deposits, provided that at least 95% of the sediment removed shall have a grain size of less than 2mm;

~~(iia) the removal of river bed material, other than aquatic weeds, plants, mud or silt is avoided as far as practicable;~~

(iii) any incidental bed disturbance is only to the extent necessary to undertake the activity and must not result in lowering of the bed below previously modified levels;

---

10 Linda Kirk on behalf of Director-General of Conservation; Ben Farrell on behalf of Royal Forest and Bird Protection Society of New Zealand Incorporated and Southland Fish and Game Council; and Treena Davidson on behalf of Ngā Rūnanga.

11 With the recent receipt of Mr Farrell's s274 evidence that suggests this permitted activity rule be deleted in its entirety, my understanding of the prior level of agreement may be mis-placed.

(iv) upon completion of the activity, fish passage is not impeded as a result of the activity;

(v) the operator takes all reasonable steps to return any fish captured or stranded by the activity to water immediately preferably to a location upstream of the activity;

(vi) between the beginning of June and the end of October, there is no disturbance of the spawning habitat of trout; ~~and~~

(xiii) where the modified watercourse is spring-fed, removal of aquatic weeds and plants is only to the extent that is necessary to undertake the activity and is kept to the absolute minimum; and

(xiv) the modified watercourse is not shown in Map Series 8 as a habitat of threatened non-diadromous galaxias.

Note: *In addition to the provisions of this Plan and any relevant district plan, any activity which may modify, damage or destroy pre-1900 archaeological sites is subject to* the *archaeological authority process under the Heritage New Zealand Pouhere Taonga Act 2014. The responsibilities regarding archaeological sites are set out in Appendix S.*

(b) The removal of aquatic weeds and plants and sediment from any modified watercourse for the purpose of maintaining or restoring *drainage outfall and any associated bed disturbance and discharge resulting from the carrying out of the activity that cannot meet one or more of the conditions of Rule 78(a) is a discretionary activity.*

[Insert Maps based on mapping provided by the Director-General]

59. The planners identified that changing conditions (ii) and (iia) would manage the issue of course sediment being removed from these water bodies, without needing to introduce new definitions to the pSWLP or make changes to the chapeau of the rule. These changes avoid creating difficulties with the rule cascade and avoid the requirement to amend other terms such as “gravel”.

60. I understand the remaining dispute centres on condition (xiv). The question that remains, is how threatened and taonga species can be protected within modified watercourses that are maintained for drainage purposes.

61. The Director-General of Conservation appealed this rule, seeking to include mapping of non-migratory galaxiids habitat in the Planning Maps and to insert, *(xiv) the modified watercourse is not a habitat of non-migratory galaxiids*.[12] In her Evidence in Chief[13] submitted on behalf of the Director-General of Conservation, Ms Kirk discusses the requirement to include the identification of habitats of other threatened species to better give effect to the NPSFM. Ms Kirk considers that the identification of habitats of non-diadromous galaxias provides only a starting point for the protection of habitat of threatened species as required under Policy 1 and Policy 9 of the NPSFM. In Ms Kirk's opinion, the inclusion of habitat identification of non-diadromous galaxias provides a clear indication of the required behaviour change in the practice of weed and sediment removal for drainage maintenance.

62. Ngā Rūnanga appealed this Rule and sought to add a new clause:

> *(xv) No activity in relation to drainage maintenance shall significantly adversely affect the habitat or health of any taonga species as identified in Appendix M.*[14]

63. Ms Davison, on behalf of Ngā Rūnanga, discusses in her evidence in chief[15] the lack of protection of taonga species. She does not consider that alternate drafting or providing for additional clauses to protect taonga species' habitat is possible given the current permissive nature of the rule. She states that the mapping and reliance on known distribution of species is inadequate, given the paucity of information.

64. Forest and Bird appealed this Rule and sought the following amendment:

> *(iii) any incidental bed disturbance and removal of gravel shall be only to the extent that it is necessary to undertake the activity*

---

12 Director-General of Conservation Notice of Appeal 17th May 2018, p.11

13 See the Evidence in Chief of Linda Kirk, 20 December 2021, at paragraph [18]

14 Ngāi Tahu Notice of Appeal 17th May 2018, p.12

15 Evidence in Chief of Ms Davidson, 20 December 2021, at paragraph [23]

and shall be kept to the absolute minimum and the gravel removed shall comprise not more than 5% of the total sediment removed;

65. Additionally, they consider the addition of a new clause as follows:

(xiv) the modified watercourse is not a habitat of threatened native fish and to add schedule to identify habitats of threatened native fish.[16]

66. Mr Farrell on behalf of Forest and Bird, discusses in his evidence in chief[17] lack of protection of habitats of native fish. He recommends the insertion of a new condition to Rule 78(a):

(xiv) the modified watercourse is not a habitat of threatened native fish.[18]

67. In Mr Farrell's opinion, this would be more appropriate than the Decisions Version. Mr Farrell considers that weed and sediment removal for drainage maintenance purposes should not be permitted within habitats of threatened native fish. In Mr Farrell's s274 evidence, he has modified his views, and now seeks a discretionary or restricted discretionary activity status for all drainage maintenance in modified watercourses throughout the region.[19]

68. From undertaking my own assessment of the technical evidence with respect to drainage maintenance in modified watercourses, I understand mechanical drainage maintenance to be relatively destructive, unnatural and likely have an adverse effect on aquatic ecosystems and both threatened indigenous fish and taonga species.[20]

69. Furthermore, I note the drainage network in Southland is a substantial public infrastructure asset, as well as there being many kilometres of connected water bodies on private land. I have considered the Science JWS, and it is my impression that changing the drainage management of

---

16 Royal Forest and Bird Protection Society of New Zealand Incorporated Notice of Appeal "Rule 78", 22 May 2018

17 Evidence in chief of Mr Farrell, 20 December 2021, at paragraph [67].

18 Evidence in chief of Mr Farrell, 20 December 2021, at Appendix 1.

19 S274 evidence of Mr Farrell at paragraph [22]

20 As set out in the Ecology JWS

modified watercourses is not a "quick fix". It is my opinion that a systems approach to land and drainage management is required, including consideration of the integrated function of surface and sub-surface drains, riparian areas, wetlands and flood and drainage infrastructure. Given the importance of this public infrastructure asset and the extent of changed land uses rely on the land drainage network, it is realistic to assume that mechanical clearance of modified watercourses will continue in the short to medium term. However, I also accept that the Decisions Version of the pSWLP is too permissive in this regard.

70. I am conscious of the hierarchy in Objective 1 of the NPSFM, which sets the "health and well-being of water bodies and freshwater ecosystems" as a first priority. I also note the six principles outlined in the Te Mana o te Wai framework in the NPSFM.[21] I believe it is difficult to reconcile the expectations of some parts of the community with respect to continuing similar to current maintenance of land drainage networks that include modified watercourses with Objective 1 of the NPSFM and the principles of Te Mana o te Wai.

71. In my opinion, it is likely that where possible, there will need to be a transition to a more naturalised river form, rather than the typically deeply incised straightened watercourses that are currently common. It is my understanding that such a transition would take a relatively long time, is expensive, and can be difficult to implement.

72. How the pSWLP responds most appropriately to this issue remains under consideration. Ms Kirk's suggestion of mapping non-diadromous galaxias is comparatively simple and appears to be within the scope of submissions. However, Mr Farrell's reliance on technical evidence highlights that the mapping of the extent of these fish is incomplete and the proposal put forward by Ms Kirk does not address a range of other species and habitats.[22]

73. Ms Davidson has raised a range of issues and supported revisions to the Rule and actions to be undertaken outside of the pSWLP framework.

---

21 At 1.3(4) of the NPSFM.

22 S274 evidence of Mr Farrell at paragraph [14]

74. In my opinion, the suggestion put forward in Mr Farrell's evidence in chief is too broad, meaning very little, if any, maintenance of modified watercourses could occur as a permitted activity. I believe it would be difficult to ascertain if this condition could be complied with, making the permitted activity rule permissive in name only. While I note from reading his s274 evidence[23] that he has suggested deletion of the permitted rule and replacement with a rule which makes all drainage maintenance in modified watercourses a restricted discretionary or discretionary activity, I consider this approach too blunt. In my view this would shift the issue to a resource consent decision making framework which would be similarly problematic, particularly when applying it to global or region-wide consent applications, as he suggests. I also question whether deletion of the whole rule is a reasonably foreseeable outcome of the submission and appeal lodged.

75. As stated above, I am struggling to reconcile mechanical maintenance of modified watercourses with Te Mana o te Wai, the prioritisation of the health and well-being of water bodies, and the significance of these waterbodies to tangata whenua.[24] In my opinion, the relatively permissive regime discussed by the planners, including Ms Kirk's protection for non-diadromous galaxias, could be considered appropriate if it led to associated nonregulatory change in the management of drainage maintenance by way of best-practice guidance, appropriate recognition of the issue in Farm Environmental Management Plans and on-the-ground taonga species recovery.

76. A further option could be implementing more practical measures, such as enabling only one side of a drain to be cleared at a time or limiting the frequency of mechanical maintenance. However, there is likely to be a range of technical issues and uncertainty surrounding what thresholds to include in the rule[25].

77. Overall, I still support Ms Kirk's framework, as I consider it to be sufficiently certain and capable of implementation. Non-regulatory approaches and on-farm practices also need to be improved, and there

---

23 S274 evidence of Mr Farrell at paragraph [22]

24 See evidence in chief of Ms Cain.

25 See Table 1 of the Ecology JWS

are active discussions about how Council can lead this and involve rūnanga.

78. Finally, I note that in Appendix 1 to both Mr Farrell's evidence in chief and his s274 evidence, which contains his consolidated tracked changes, there is a suggested definition of "drain". It is unclear to me what the purpose is for this addition, as it has not been included in his evidence and I was unaware this was an issue in dispute. Regardless, I do not support the addition of his recommended definition as I do not consider it necessary. It should be noted that the decisions version of the pSWLP does not have a definition of "drain" and the definition recommended by Mr Farrell is different to that in the Definitions Standard of the National Planning Standards 2019.

Subtopic B5 - Farming

79. Subtopic B5 is the largest subtopic, with more appeal points than all of the other subtopics combined. However, the number of provisions addressed within the subtopic is generally no greater than the other subtopics. Due to weather conditions in Invercargill and then a Covid-19 lockdown, mediation on sub-topic B5 did not occur. Some direct negotiation and informal meetings occurred between some of the parties late in 2021. This was followed by the expert witness conferencing process set down by the Court, during which the majority of the provisions were agreed between the planners, as recorded in the Planning JWS.

(g) ***Issues agreed through mediation and negotiation***

80. As mediation did not occur, and negotiations did not result in much agreement, only one relatively minor issue was resolved with respect to heritage resources. A draft consent order and affidavit have been lodged with the Court on this issue.

(h) ***Issues agreed between the planners through conferencing***

Policy 16

81. Policy 16, as agreed in the Planning JWS, (with corrections only to show the correct tracked changes from the Decisions Version, relocation of ";

and" to the correct position, and to numbering) is set out in full in Appendix 1 to this evidence.

82. In order to prevent a future debate about what "minimise" means, the planners also agreed to include a further definition in the pSWLP:

> *Minimise means to reduce to the smallest amount reasonably practicable.*

83. Policy 16, in combination with the physiographic zone policies, is one of the more important policies of the pSWLP, given its implications for farming activities. In my opinion, the revisions to the Policy arrived at through the planning expert conferencing are a substantial improvement to the Policy, set out clear expectations and appropriately reflects the outcomes, and direction of travel, indicated by Objectives 1, 2, 6 and 13 of the pSWLP.

84. It is clear that the changes to Policy 16 are substantive, with respect to structure and wording, as well as outcomes. I note the discussion of these changes in a number of briefs of evidence of planners, particularly those of Mr Willis[26], Ms Kirk[27], and Ms Ruston[28]. Other than as specifically discussed below, I agree with those assessments and do not further assess the changes.

85. In particular, I agree with the assessment of Ms Taylor where she outlines what the Policy is seeking to achieve[29], the assessment against the objectives of the pSWLP included in the evidence of Ms Ruston[30] and the s 32AA assessment in the evidence of Ms Taylor[31].

86. Mr Willis has suggested a small number of grammatical improvements, which therefore differ from the agreed wording in the Planning JWS. I agree that his suggestions would be grammatical improvements, and they do not appear to change the meaning or interpretation of the Policy. On

---

26 Evidence in chief of Mr Willis at paragraphs [5.1-5.17]

27 Evidence in chief of Ms Kirk at Appendix 1

28 S274 evidence of Ms Ruston at paragraphs [53-56]

29 See S274 evidence of Ms Taylor at paragraph [22]

30 See S274 evidence of Ms Ruston at paragraph [56]

31 See S274 evidence of Ms Taylor at Appendix A

balance, I agree with the wording refinements he has suggested, and record them in red in the version included in Appendix 1.

87. Mr Farrell wishes to introduce the word "degraded" into the Planning JWS version of Policy 16, along with several other rules. Several planners, in their s274 evidence[32], have responded to this, generally in opposition. This is not something that I have a strong opinion on. However, my general preference is for the Planning JWS wording. In my opinion, referring to water bodies in need of improvement essentially conveys the same message, but makes it clear that positive action is required. While including the word degraded may have a better linkage to Objective 6, the framework of identification and mapping of the catchments where improvement is required and the policy and rule framework that has been arrived at, in my opinion, gives effect to Objective 6 whether or not the word "degraded" is used.

88. Policy 16 and Appendix N rely on the identification of the catchments of degraded water bodies, which consequently require improvement. During the planning expert conferencing, the planners requested that Dr Snelder, the appropriate Council expert witness, produce maps showing the catchments with degraded water bodies, based on the 2019 Science JWS. Dr Snelder has produced this in his evidence in chief, and explained the methodology he has used. I note that Dr Depree for the Dairy Interests has produced a similar set of maps in his evidence in chief, and while based on a slightly different methodology it would appear there is a very high correlation in the areas identified in the mapping.

89. In Dr Snelder's evidence in chief, a range of water quality attributes[33] are individually mapped, and a single summary map produced that identifies any area with one or more of those attributes in a degraded state. In my opinion, the maps of individual contaminants will be useful to the Council and applicants, and I would expect would be made available through non-regulatory methods, so that on-farm actions and resource consent conditions can be targeted more towards the particular contaminants of concern. In my opinion, this would improve the efficiency and

---

32 S274 evidence of Ms Ruston at paragraph [58]. S274 evidence of Mr Willis at paragraph [8.3]. S274 evidence of Ms Taylor at paragraph [3.1] and [24].

33 "Attribute" is used here, as it is the word Dr Snelder has used.

effectiveness of the pSWLP policy and rule regime, as expenditure and constraints on farming activities would primarily be directed to reduction of the contaminants causing the degraded state.

Critical Source Area Definition

90. While I have included this definition in the issues agreed between the planners, whether ephemeral flow paths or ephemeral waterbodies are included is subject to the outcome on which of these terms to use.

91. The planners have recommended adjustments to the definition of critical source area, largely to reflect the new way that the definition is used. In the Decisions Version, the definition identified both land features as well as broadscale farming activities that were recognised as having a higher risk of loss, such as intensive winter grazing.

92. In the Planning JWS version, the definition identifies land features and specific on-farm infrastructure, and was informed by the Farm Systems JWS recommendations. This adjustment to the definition is necessary, given the more prescriptive way that critical source areas are managed, particularly for intensive winter grazing and in Appendix N (Farm Environmental Management Plans).

Rule 20

93. In the Decisions Version of the pSWLP, Rule 20 manages the full range of farming activities, with a particular focus on new or increased dairy farming and intensive winter grazing. A very large number of appeal points relate to this Rule.

94. Given its significance in the appeals on the pSWLP, it was gratifying that the planners were able to reach agreement in the planning conferencing with respect to revised wording of the Rule. While this has largely been well addressed in the s274 evidence of Ms Taylor[34] in my opinion there are three substantive changes to this Rule:

    a. First, the removal of the general exclusion of ephemeral rivers from the Rule framework. While there is still some debate as to the

---

[34] S274 evidence of Ms Taylor at paragraph [38]

phrasing to be used around ephemeral water bodies or flow paths, the general exclusion from control has been removed.

b. Second, the provisions relating to intensive winter grazing have been separated into a separate rule (Rule 20A) to improve readability and functionality of the pSWLP.

c. Third, the activity status for new or increased dairy farming that results in increased losses of contaminants is now specified as a non-complying activity, rather than a discretionary activity.

95. I agree with the evidence of Ms Taylor, and her assessment of the changes to Rule 20, and I consider that it will result in better management of diffuse discharges, better gives effect to Objectives 1, 2, 6 and 13 in particular, as well as the revised Policy 16 and physiographic zone policies. In my opinion, the non-complying activity status sends a clear signal that increased losses of contaminants is not appropriate.

Physiographic Zone Policies

96. Paragraph 4 of the Minute of October 1 2020, notes that the Court tentatively confirmed the Physiographic Zone Policies, being Policies 4 to 12 of the pSWLP, and that finalisation would depend on the outcomes of Topic B. It is my understanding that no party has lodged evidence seeking further change to these policies, and I am of the opinion that no issue has arisen, particularly with respect to Policy 16, that would indicate that the wording of the Physiographic Zone policies needs to be revisited.

Rule 25 – Cultivation (forestry)

97. Rule 25 manages cultivation, and a moderate number of appeals were lodged to the decision on it. As not all of those issues are were agreed through the expert conferencing of planners, they are addressed further below. However, a separate and distinct issue in relation to forestry was resolved.

98. At issue was, in light of the NES - Plantation Forestry, whether the pSWLP should control mechanical land preparation for forestry planting and herbicide spraying for both plantation forest establishment and forest maintenance. The planners' conferencing on this narrower topic was

informed by the conferencing of forestry experts and the resulting Forestry JWS.

99. To resolve this issue, the planners considered that changes to the definition of cultivation would be most efficient, with additional exclusions included in the definition and a new definition of "stick raking" added to the pSWLP. The assessment of these changes is comprehensively covered in the evidence in chief of Mr Wyeth for Rayonier. I agree with his assessments and conclusions.

Policy 18 and Rule 70 – Stock exclusion from waterbodies

100. Policy 18 sets the framework for managing the exclusion of stock from water bodies and wetlands, and Rule 70 is the associated rule that sets out the stock exclusion requirements.

101. Both Policy 18 and Rule 70 were discussed at some length at the expert conferencing of planners, and outcomes are included in the Planning JWS. From that process there remained a single part of Rule 70 relating to wetlands, where agreement was unable to be reached. This issue is addressed in the evidence of Ms Maciaszek.

102. Since the decisions on the pSWLP were issued, and appeals lodged, the s360 Stock Exclusion Regulations[35] have been promulgated. These Regulations add a layer of complexity to the management of stock and water bodies, and it is not possible to reconcile the pSWLP provisions with those Regulations, especially given the scope of submissions and appeals.

103. The Planning JWS records relatively minor changes to Policy 18, and more significant changes to parts of Rule 70, especially in relation to the management of sheep. These changes are described, with an associated assessment of higher order provisions and section 32AA requirements in relation to the changes to part (ca) of the Rule in the evidence of Ms Foster. I have reviewed that evidence and agree with it. The majority of other changes to Policy 18 and Rule 70, other than as discussed by Ms

---

35 Resource Management (Stock Exclusion) Regulations 2020

Maciaszek, are associated with changes occurring throughout the pSWLP and are discussed elsewhere.

104. The evidence of Ms Foster for Beef and Lamb identifies that Ms Foster supports the Planning JWS version of Rule 70[36], but also goes on to suggest that at least one provision is superfluous and ought to be deleted[37]. Ultimately, it is unclear if a further change to the Planning JWS version of Rule 70 is sought. For the avoidance of doubt, I confirm that I support the Planning JWS version of Rule 70.

(i) ***Issues remaining in dispute***

105. As I understand it, the issues remaining in dispute for sub-topic B5 are:

a. Rule 20A – Intensive Winter Grazing – the majority of the rule is agreed, however there remains two unresolved issues – the area constraint for permitted activity, and whether to specifically manage wintering of cattle on pasture.

b. Rule 25 – Cultivation and associated definitions – the majority of the rule is agreed, however the issue of permitted activity cultivation on land with a slope greater than 20 degrees remains unresolved.

c. Rule 35A – Feedpads/lots and associated definitions – the inclusion of sacrifice paddocks is the main issue unresolved

d. Appendix N – Farm Environmental Management Plans – the unresolved issue relates to the inclusion of additional objectives primarily relating to ki uta ki tai and haoura.

Intensive Winter Grazing (Rule 20A)

106. I support the agreed position of the planners with respect to a separate rule for intensive winter grazing, as outlined in the Planning JWS. A separate rule is, in my opinion, a better approach, as it produces a level of clarity and simplicity. A number of briefs of evidence from planning witnesses discuss changes to this rule particularly in terms of size limits for mobs of cattle, practical requirements such as back fencing and water trough location. Broadly, I agree with the assessment and conclusion of

---

36 Evidence in Chief of Ms Foster at paragraphs [13-14]

37 Evidence in Chief of Ms Foster at paragraphs [21-23]

those planners supporting those individual changes and do not further address those changes here.

107. There are two issues that remain in contention for intensive winter grazing:

a. what percentage of farm area can be used for intensive winter grazing as a permitted activity; and

b. whether to apply particular management to 'pasture wintering', the feeding of mainly cattle in a similar manner to intensive winter grazing, but on pasture rather than a winter grazing crop.

Intensive Winter Grazing Area Constraints

108. The Planning JWS records that some of the planners agreed to a condition specifying the greater of 10% of the area of the landholding or 50 hectares. For context, the Decisions Version of the pSWLP sets this at the lesser of 15% or 100 hectares, the NES-F sets this at the greater of 10% or 50 hectares with an ability to undertake more through a certification process, Mr Wilson for Federated Farmers seeks the greater of 10% or 50 hectares, also with a certification process, and Ms Dines for Wilkins seeks 15% of the area of the land holding or, as a less preferred alternative, the same certification process as Mr Wilson.

109. The additional condition sought by Mr Wilson is:

(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).

110. I have some concerns about the practical application of the certification condition suggested by Mr Wilson and Ms Dines. This certification condition appears to be based on the wording from the NES-F, with a different assessment basis. From the wording of the NES-F and the consultation material regarding Farm Freshwater Farm Plans that has

emanated from the Ministry for the Environment,[38] it is clear that there is an additional level of detail required before the certification process as set out in the NES-F can be undertaken. In the absence of any certainty as to what the NES-F process and Freshwater Farm Plan process may entail, or its functionality, it is in my opinion, a risky oversimplification to import similar words from the NES-F into the pSWLP.

111. I have read the s274 evidence of Mr Farrell and Ms Davidson. Broadly, I agree with their comments on this issue, particularly Mr Farrell's[39] rebuttal of many of Mr Wilson's concerns and Ms Davidson's simple explanation of the acknowledged risk of intensive winter grazing and the need for improvement in water quality[40].

112. Dr Monaghan has identified in his evidence in chief the practical difficulty with estimating the losses of contaminants from an intensive winter grazing operation, such that the differences between 10% and 15% of a property could be accurately ascertained. Dr Monaghan has also identified that while there are some tools available to undertake this assessment it would not be a simple task and would require considerable expertise. Dr Burrell, in his evidence in chief, has identified that from an ecological perspective, there is a level of complexity with assessing the effects of diffuse discharges on aquatic ecosystems.

113. The evidence of Mr Wilson, Ms Dines, Mr English and Mr Wilkins seem to imply that they consider it will be a reasonably simple exercise to obtain a certification. Given the statement of the experts in the Farm Systems JWS that losses could be expected to increase, alongside the evidence of Dr Monaghan and Dr Burrell, this assumption may be misplaced.

114. I note that Appendix N, as agreed by the planners, includes certification of Farm Environmental Management Plans by a suitably qualified person who is approved by the Chief Executive of the Regional Council. Both Dr Monaghan and Dr Burrell, both well qualified and experienced professionals, consider this kind of certification to be a complex exercise, and may indeed be impossible in some circumstances. In my opinion, it

---

38 Ministry for the Environment and Ministry for Primary Industries. 2021. *Freshwater farm plan regulations: Discussion document.* Wellington: Ministry for the Environment.

39 S274 evidence of Mr Farrell at paragraphs [25(c), (d) and (e)]

40 S274 evidence of Ms Davidson at paragraph [13]

would be inappropriate to enable a person who has extensive experience in farming and Farm Environmental Management Plans to also be able to certify no difference in effects, without certainty as to their ability to accurately compare the effects of different scenarios on at least groundwater and surface water quality, ecosystem health, effects on taonga species and cultural health.

115. Even if a certification process could be arrived at, a suitably qualified person found, and a certification provided, the risks, uncertainties, evidence and assumptions are unlikely to be available for scrutiny. If the assumptions or evidential basis for the certification were wrong, the environment bears the risk under this framework. As a permitted activity, there is little that could be done. In my opinion, this seems incongruous with Te Mana o te Wai, the NPS-FM, and (in particular) Objectives 2, 6 and 13 of the pSWLP.

116. In short, in my opinion, the assessment process put forward would be more appropriate under a resource consent framework.

117. Given the uncertainties, it is difficult to clearly state whether the certification regime will result in the same water quality outcomes, improvement and water quality or further degradation. Ms Hunt for Federated Farmers considers that there may be better outcomes if the area restrictions were removed entirely[41]. Ms Dines considers that an area of 15% of the total landholding could be used for intensive winter grazing without increasing contaminant losses from the land[42].

118. These statements appear to be at odds with the Farm Systems JWS. In this JWS, mitigations are set out and this section concludes with a statement that, in my opinion, makes it clear that it would be unusual to expect that a larger area of intensive winter grazing area would not lead to increased contaminant losses: *And providing that an appropriate and robust assessment process can verify that these measures will at least*

---

41 See for example at paragraph [20]: 70. *My strong view regarding IWG regulation is that less is more. I believe that regulation in this area needs to focus solely on buffer zones adjacent to waterways, and management of critical source areas within IWG paddocks, irrespective of proximity to waterways. These two focus areas, if implemented appropriately, will effectively mitigate sediment run-off from winter grazing paddocks. Everything else is unnecessary prescription and has the potential to provide perverse outcomes that undermine the likely benefits.*

42 S274 evidence of Ms Dines at paragraph [43]

offset the (otherwise) expected increases in contaminant discharges if winter grazing areas are increased from 10 to 15%.

119. Enabling, across the region, up to 15% of the area of a landholding to be used for intensive winter grazing, or a permitted activity certification process that results in the same, is likely to lead to, all other things being equal, at least the same level of contaminants entering surface and groundwater.[43] I also note that Dr Snelder's evidence shows much of Southland has degraded water quality in need of improvement. I am unable to detect how much, if any, improvement of water quality will be achieved in the options put forward by Ms Dines and Mr Wilson.

120. In considering s32AA, I have addressed four options:

    1. The Decisions Version of the pSWLP – the lesser of 15% or 100 hectares

    2. The greater of 10% or 50 hectares

    3. The greater of 10% or 50 hectares, with a certification process

    4. 15% of landholding area.

121. I do note that this assessment has a complication, in the overlapping requirements of the NES-F, that, when they come into effect[44], disable some options that would be available under the above pSWLP options, and the Freshwater Farm Plan requirements of the NES-F and RMA are uncertain as they have not been promulgated.

122. Further, there are some residual uncertainties about how much and how quickly change will occur under the Appendix N (Farm Environmental Management Plan) framework proposed by the planners.

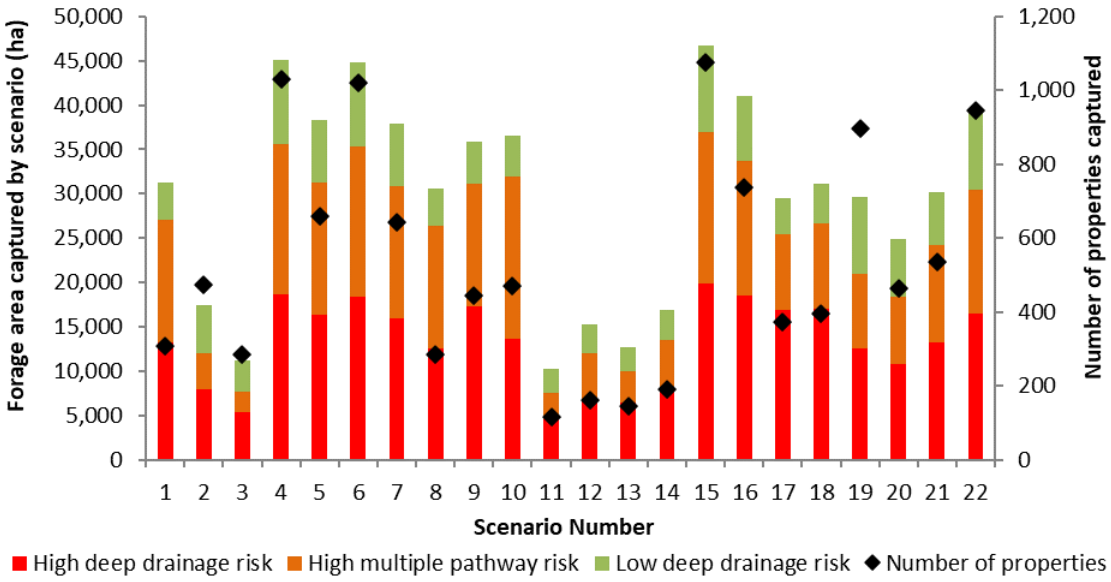
123. For the s42A report for the Council hearing, a very useful document was produced by one of Council's scientists that compared a wide range of rule scenarios in terms of how many resource consents would be triggered by different thresholds. Importantly, this also showed the percentage of the total area of intensive winter grazing land that would fall

---

43 In making this statement, I note clause 29 of the NES-F, which states that, among other things, there can be no increase in the area of intensive winter grazing on any farm, above the maximum that occurred from 2014-19.

44 1 May 2022.

under a resource consent regime for each threshold. This was updated to show some additional scenarios being considered by the Hearing Panel, and it is appended as Appendix 2 to this evidence. While much of the discussion in it is now less relevant, as parts relate to submissions on the pSWLP and options that are no longer being considered, it remains useful to compare different scenarios. To ease interpretation, a graph showing the results is included, and it shows:



124. At the time this analysis was undertaken, there was a total of around 68,000 hectares of land being used for intensive winter grazing, and more than 3000 properties undertaking at least some intensive winter grazing.

125. If it was reasonably assumed that intensive winter grazing undertaken under a resource consent framework, which would be subject to the Policy 16 requirement to reduce losses as well as better oversight and monitoring, is more likely to reduce losses than intensive winter grazing undertaken under a permitted activity with a Farm Environmental Management Plan, then managing a reasonable proportion of the intensive winter grazing land area in Southland under a resource consent framework is likely to be more effective in achieving the objectives of the pSWLP, particularly Objective 6.

126. It could also be assumed that it was more efficient to require fewer resource consents, and rely on the Farm Environmental Management Plan process for the remainder.

127. In looking at each of the options:

    a. the Decisions Version of the pSWLP equates to scenario 21, and manages just under half of the intensive winter grazing land area, and would result in around 500 resource consents. This would appear the most effective, but also with more considerable costs.

    b. The greater of 10% or 50 ha equates to scenario 12 and manages under quarter of intensive winter grazing land area and would result in around 150 resource consents. This would appear to be only moderately effective, but at lower cost.

    c. the certification option is not represented in the scenarios, and despite the uncertainties, it would result in presumably somewhat less land under a resource consent framework and fewer resource consents required than scenario 12. This option would appear to be least effective, but also at low cost.

    d. The 15% land area control is scenario 2 and manages just on a quarter of the intensive winter grazing land area and would result in just under 500 resource consents. This option would also appear to be moderately effective, but not particularly efficient.

128. Finally, with respect to risks and uncertainties, in my opinion these have been outlined above and relate primarily to some uncertainty around how much and how quickly the Farm Environmental Management Plan process will prompt improvement in water quality outcomes for intensive winter grazing managed under a permitted activity framework, and the uncertainties around the outcomes from the certification regime.

Pasture Wintering

129. The Planning JWS identified that intensive wintering of cattle on pasture may require specific management through the pSWLP.

130. The issue was discussed in the expert conferencing of planners and recorded in the Planning JWS, but agreement was unable to be reached on either the need for a rule or how the activity should be best managed. I

note that a number of parties have lodged evidence with respect to this issue, and these appear to fall into three broad categories:

a. First, those that seek a change to the intensive winter grazing definition so that wintering on pasture is treated in a similar manner to intensive winter grazing;[45]

b. Second, those that seek a bespoke rule and definition, similar in nature to the rule outlined as an option in the Planning JWS;[46] and

c. Third, those that seek that this activity be managed through the Appendix N (Farm Environmental Management Plan) framework, with or without changes to that Appendix.[47]

131. In my opinion, simply including this grazing practice within the definition of intensive winter grazing is a blunt response that will likely lead to significant difficulties in implementation, particularly as the definition proposed by Mr Farrell[48] would likely capture a majority of farms in Southland. There are also interpretation difficulties with the wording of the suggested definition, as any pugging or exposure of even a very small amount of soil would appear to trigger the definition. This would then lead to the treatment of an unspecified area of land as intensive winter grazing.[49]

132. I do not have a strong opinion on whether a bespoke rule, similar to the option in the Planning JWS is helpful. In some ways, I consider that this is a reaction to a relatively recent increase in intensity, about which there is limited information, and in these circumstances, I consider it likely that there will be unintended consequences, as the rule framework will not have been subject to testing by users of the pSWLP or submitters. In addition, the technical support and understanding of its effects is limited.

---

45 For example Mr Farrell

46 For example Ms Jordan

47 For example Mr Willis

48 *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.*

49 The land under a 'fodder crop' is reasonably easy to identify, and calculate the area of, for the purposes of Rule 20A. It would be unclear how much of the pasture area of the farm should be included if soil exposure or pugging occurred – just the area de-vegetated, or the whole paddock, or more?

133. In my opinion the definition of what pasture wintering, or "high risk winter grazing on grass" actually is, is a critical part of a workable rule. In this regard, I consider the s274 evidence of Ms Dalley for the Dairy Interests and the evidence in chief of Dr Monaghan to be helpful. Once an entry criterion has been established for the rule, it would then be open to including the activity as intensive winter grazing under Rule 20A or under a bespoke rule such as the Planning JWS Rule 20B. As I understood it, Ms Dalley did identify some characteristics of the higher risk activity, which was referred to as "Baleage wintering without pasture cover"[50].

134. If at all possible, my preference would be to have a clear definition that does not require (contrary to the suggestion of Mr Wilson) third-party assessment or certification. In this, I agree with the reasons set out by Ms Jordan[51]. In my opinion, if such a definition was required to commence management of this activity, a definition could be:

> *Stock being break-fed pasture and supplementary feed, such as baleage, during the months of June, July and August, with the result being that the pasture is de-vegetated or damaged to the extent that more than 50% of the paddock area requires the resowing of the pasture.*

Rule 25 Cultivation

135. As I understand it, the primary issue in dispute is whether what Mr Wilson considers to be low intensity forms of cultivation could be permitted on land with a slope of greater than 20°[52]. Mr Wilson has extensively discussed this in his evidence and that follows considerable discussion at the expert conferencing of planners. Mr Wilson has suggested changes to Rule 25 and associated additional definitions.

136. This is a long-standing issue, with hill country cultivation and development being one of the original topics that the Council identified for investigation of better control around 2014. The issue generated a significant number of submissions, and a very large number of submitters addressed the

---

50 S274 evidence of Dr Dalley at paragraphs [31-36]

51 S274 evidence of Ms Jordan at paragraphs [53-54]

52 Evidence in chief of Mr Wilson, paragraphs [8.1-8.15]

Hearing Panel on this issue. Indeed, the volume of this evidence warranted a specific comment in the Hearing Panel's Report:

> [210] We heard a great deal of evidence on these matters from submitters.

137. The Hearing Panel addressed the merits of this issue specifically and reached a clear conclusion at paragraphs [216] to [217]:

> *[216] A number of submitters sought an increase to the permitted activity threshold of 20 degrees, stating that they had historically cultivated slopes steeper than that (often in the order of 25 to 35 degrees) without taking health and safety risks or inducing soil erosion. We were not persuaded by those submissions. We are satisfied, for* the reasons set out by the section 42A authors, that cultivation on slopes in excess of 20 degrees should be scrutinized through a consent process, which we anticipate will be informed by a FEMP for the landholding concerned.
>
> [217] We recommend that cultivation by any method on slopes up to 20 degrees is permitted. Cultivation by any method on steeper land will require a restricted discretionary activity resource consent. That includes both non-tillage techniques (direct drilling) and herbicide spraying *followed by over sowing ('spray and pray'). We have recommended amendments to the Glossary definition of 'cultivation' accordingly. However, in response to numerous submissions, we consider that spraying for the sole purpose of controlling pest plants (including gorse and broom) should be allowed on land of any slope and also within the cultivation setback from water bodies. We therefore recommend that such spraying is excluded from the definition of 'cultivation'.*

138. I note that Federated Farmers have not introduced any technical evidence in support of the change sought, and nor has the evidence assessed the change against the objectives and policies of the pSWLP or the higher-order planning instruments. I note that technical evidence including that of Dr Monaghan and Ms McArthur[53] does identify an increase in risk of

[53] S274 evidence of Ms McArthur at paragraph [20]

sediment loss with increase in slope. While I accept that the 20° threshold is relatively arbitrary, I do not understand there to be any technical evidence that suggests sediment loss risk will be managed without such a threshold.

139. For completeness, I also highlight that the expert conferencing of the planners agreed a range of other changes to the Rule, mainly to improve its functionality and certainty, particularly in light of the clear statement from the Hearing Panel as to what the Rule was to achieve. In my opinion, those changes do not substantially change the way that the Rule operates.

Rule 35A

140. While it was relatively briefly discussed at the planning expert conferencing, changes to Rule 35A were agreed by the planners. I note that the definition of "feedpad/lot" and its inclusion of sacrifice paddocks was not specifically discussed and is not recorded in the Planning JWS. The other changes to Rule 35A are set out in the tracked changes policies and rules attached to the Planning JWS.

141. Mr Wilson has raised a concern in his s274 evidence in relation to Rule 35A and the definition of feedpad/lot. I understand from his evidence that this has arisen from recent processing of resource consents involving pasture by the Council.[54] As I am unaware of the specifics, I am unable to confirm whether or not I agree with Mr Wilson and his concerns about interpretation of the pSWLP provisions. Other changes suggested by Mr Wilson do not appear to be related to pasture renewal.

142. It is disappointing that these issues had not arisen for the expert conferencing, enabling discussion with the other planners, particularly as I consider that Mr Wilson's solution is unduly blunt and would, if I am interpreting it correctly, mean that some undoubtedly high-risk activities may have little or no control through the NES-F or the pSWLP.

143. I agree with Mr Wilson that there is a significant difference in the treatment of feedpads, feed lots, stockholding areas and sacrifice paddocks between the NES-F and the pSWLP. Through a process of considering

---

[54] S274 Evidence of Mr Wilson at paragraph [2.3].

stringency and duplication, I have spent many hours trying to create a sensible rule that aligns the two documents. In my opinion, that is not possible within the scope of appeals and it is difficult even with the opportunity to draft an entirely new rule.

144. Mr Wilson's suggestions attempt some alignment, but in my opinion has the effect of creating inappropriate gaps and inconsistencies in Rule 35A, and thereby is unlikely to give effect to Objectives 1, 2, 6 and 13. Taking his suggestions one by one, I note that:

    a. Some of Mr Wilson's suggestions, particularly including "exclusive feeding by hand or machine" in the definition, while attempting alignment with the NES-F, are a late and untested addition that may unintentionally narrow the application of the rule.

    b. Removing "self-feed silage storage facilities", in combination with adding "exclusive feeding by hand or machine" creates an uncertainty. Some poorly managed self-feed silage storage facilities have caused significant issues in Southland the past and these facilities were deliberately included in this definition. Under Mr Wilson's definition it is unclear whether these informal, self-feed facilities, where cattle have access to direct access to a silage stack, would be managed under the pSWLP.

    c. While I agree with Mr Wilson that the NES-F has a definition of "sacrifice paddock"[55] and that the NES-F specifically excludes sacrifice paddocks from controls on feedlots and stockholding areas, I note that sacrifice paddocks are not subject to any direct controls under the NES-F. Mr Wilson's suggestion is to remove them from direct control under the pSWLP as well. If I am understanding it correctly, his suggestion would mean that they would be treated as any other piece of pasture.

145. As I understand it, sacrifice paddocks are used, as their name implies, in a way and at an intensity that destroys the pasture on that paddock,

---

55 *Sacrifice paddock means an area on which—*

(a) cattle are repeatedly, but temporarily, contained (typically during extended periods of wet weather); and

(b) the resulting damage caused to the soil by pugging is so severe as to require resowing with pasture species

usually resulting in a significant degree of pugging and loss of soil structure. The stocking rate is at an intensity that pasture cannot be maintained, and supplementary feed is often brought to the animals. While I do not doubt that sacrifice paddocks have their uses, I also understand that given the loss of pasture, intensive stocking rate and need for rehabilitation after the winter, the risk of losses of contaminants is high.[56] In my opinion, sacrifice paddocks should, at the very least, have controls no less than that applying to intensive winter grazing.

146. Mr Wilson also seeks the removal of the duration constraint in condition a(ii) of Rule 35A. Given the controls in the NES-F, I do not have a particular concern with deletion of this for feedlots and feed pads. However, I do consider that it is useful to have a duration limit on the use of a sacrifice paddock, given the risks outlined above.

147. Overall, I am of the view that removing sacrifice paddocks from the definition of feedpads/lots and management under Rule 35A could be appropriate, if they were subject to a specific rule regime that appropriately manages the risk of elevated losses of contaminants. As there is significant potential for cross-over with pasture wintering discussed above, ensuring there were no unintended gaps or overlaps is important.

148. In order to address this issue, such a rule could be based in part on the NES-F and pSWLP requirements for intensive winter grazing. As I understand it, farmers often need to use a sacrifice paddock on short notice. Therefore, a rule that provides for an appropriate location and management of a sacrifice paddock as a permitted activity could enable this flexibility, while still managing adverse effects. Such a rule (with commensurate changes to the definitions) could be:

    (a) The use of land for a sacrifice paddock is a permitted activity provided the following conditions are met:

        (i) animals do not remain on the feed pad/lot for longer than 60 days in any six month period;

---

56 As discussed in the evidence in chief of Dr Monaghan.

(ii) the slope of land that is used for a sacrifice paddock must be 10 degrees or less; and

(iii) livestock must be kept at least 50 metres from:

(1) any nohoanga listed in Appendix B, mātaitai reserve, taiāpure, estuary or the coastal marine area; and

(2) the bed of any river, lake, artificial watercourse (regardless of whether there is any water in it at the time), modified water course or natural wetland; and

(iv) critical source areas within the area being used as a sacrifice paddock must:

(1) be identified in the Farm Environmental Management Plan; and

(2) have stock excluded from them; and

(v) the land that is used as a sacrifice paddock must be replanted as soon as practicable after livestock have been removed from the paddock; and

(vi) a Farm Environmental Management Plan for the landholding is prepared and implemented in accordance with Appendix N; and

(vii) no part of the sacrifice paddock is located on land with an altitude greater than 800 metres above mean sea level.

(b) The use of land for a sacrifice paddock that does not meet one or more of the conditions of Rule 35B(a) is a discretionary activity.

Appendix N

149. The planners' discussion of changes to Appendix N were helpfully assisted by a draft revision of the Appendix which was pre-circulated by Ms Taylor and Ms Wilkes of Ravensdown.

150. The farm systems experts and planners agreed that expectations, knowledge and processes had progressed considerably since the time the Decisions Version of Appendix N was produced. The planners agreed that the Farm Environmental Management Plan framework, as set out in

Appendix N required substantive change, and those changes have been described clearly in the evidence of Ms Taylor[57] and Ms Ruston[58] and valuable practical implications are described by Ms Wilkes[59] and Mr Duncan[60].

151. In summary, the planners' revised Appendix N is not at all similar to the Decisions Version of the pSWLP, and its method of use within the pSWLP framework can reasonably be expected to be far more effective at achieving on-the-ground change than the Decisions Version.

152. The content of the revised Appendix N, how it will function, and its effectiveness and efficiency have been assessed in some depth by Ms Wilkes and Ms Taylor. I agree with their assessments and do not repeat them here.

153. There is one outstanding issue of significance, and that relates to Mr Farrell's suggested additions to the Appendix[61], primarily relating to additional objectives relating to an understanding of ki uta ki tai and hauora.

154. I have read and considered the s274 evidence, primarily opposing these changes, filed by Mr Duncan[62], Ms Ruston[63] and Ms Wilkes[64]. They have expressed their views as to the merits of the change recommended by Mr Farrell.

155. While I am attracted to the idea of increased knowledge of ki uta ki tai and hauora by landowners and farm operators, my primary concern is in relation to practicalities of timely preparation of Farm Environment Management Plans, their certification and auditing. Effectively preparing and implementing the Farm Environmental Management Plan system is going to be a significant and resource hungry process across Southland.

---

57 S274 evidence of Ms Taylor from paragraph [46]
58 S274 evidence of Ms Ruston, at paragraph [70]
59 S274 evidence of Ms Wilkes
60 S274 evidence of Mr Duncan, paragraphs [65-75]
61 Evidence in chief of Mr Farrell at paragraph [91(b)]
62 S274 evidence of Mr Duncan, paragraphs [71-75]
63 S274 evidence of Ms Ruston, paragraphs [72-76]
64 See Ms Wilkes s274 evidence from paragraph [53]

There has been some evidence provided that the farm services industry is planning for this[65] and that the dairy sector is already underway[66]. However, I hold concerns as to whether the rural professionals who may be preparing, certifying and auditing these plans are sufficiently skilled such that they can certify and audit these elements of the Farm Environmental Management Plan. For example, in order to assess 'understanding', does the farm operator need to be interviewed by the certifier or auditor, and a judgment made as to the level of understanding?

156. In my opinion, speed is of the essence in making improvements through the Farm Environmental Management Plan process. Without some clarity as to how Mr Farrell's changes practically operate, and confirmation that they will not lead to further uncertainty and delay, I continue to support the Planning JWS version of Appendix N.

157. There are two more minor issues to address with respect to Appendix N.

    a. First, I have read Mr Willis' evidence[67] in relation to industrial wastewater discharges to land, where that land is also farmed. He explains that these activities operate under a discharge consent and have a farm environmental plan that has overlaps with the requirements in Appendix N. He is concerned that a land use consent being required under Rule 20 may be triggered in addition to the discharge permit. I note that the wording he addresses is included in the tracked changes version of Appendix N attached to the Planning JWS. I have read the S274 evidence of Mr Farrell[68] in response to this suggestion and note his concern that the addition may be unnecessary. It is unclear whether Mr Farrell is now seeking to depart from the Planning JWS version on this issue. For the record, I continue to support the Planning JWS version of Appendix N.

---

65 S274 evidence of Ms Wilkes at paragraph [39]

66 S274 evidence of Mr Duncan at paragraphs [69]

67 Evidence in chief of Mr Willis at paragraphs [8.1-8.16]

68 S274 evidence of Mr Farrell at paragraph [42]

b. Second, I note Mr Willis' suggested addition to clause 6(b) of Appendix N[69], to provide some clarity as to how ecosystem health degradation is to be addressed, and I also note the support of Ms Kirk[70] to that change. In my opinion, it provides some helpful clarity as to which contaminants to focus on. In supporting this, I also note that common mitigations to reduce sediment and phosphorous loss often also reduce microbial contaminants.

.....

Matthew McCallum-Clark

11 February 2022

---

69 *(b) where the farm is located within a catchment of a waterbody that requires improvement identified in Schedule X, the mitigations that will achieve a reduction in the discharge of the contaminants where relevant to the farming activity that trigger the requiring improvement status of the catchment (noting that in catchments of waterbodies where aquatic ecosystem health requires improvement, reductions and mitigation required will address nitrogen, phosphorus and sediment losses and the effect of those losses).* [underlining showing change from Planning JWS version]

70 S274 evidence of Ms Kirk at paragraph [64]

Appendix 1 – Planning JWS provisions and updated recommendations of Matthew McCallum-Clark

Key:

Black text = Decisions Version of pSWLP
Black underline and ~~strike-out~~ = changes agreed through the Planning JWS
Red underline and ~~strike-out~~ = changes suggested by Matthew McCallum-Clark

B2 – Discharges

[Note Policies 13, 15A and 15B and Rule 15 are not included here, as they are subject to an affidavit already lodged with the Court]

~~Policy 15C~~

~~Following the establishment of freshwater objectives and limits under Freshwater Management Unit processes, and including through implementation of non-regulatory methods, improve water quality where it is degraded to the point where freshwater objectives are not being met and otherwise maintain water quality where freshwater objectives are being met.~~

Rule 5

(a) Except as provided for elsewhere in this Plan the discharge of any:

(i) contaminant, or water, into a lake, river, artificial watercourse, modified watercourse or natural wetland; or

(ii) contaminant onto or into land in circumstances where it may enter a lake, river, artificial watercourse, modified watercourse or natural wetland;

is a discretionary activity provided the following conditions are met:

1. where the water quality upstream of the discharge meets the standards set for the relevant water body in Appendix E "Water Quality Standards", the discharge does not reduce the water quality below those standards at the downstream edge of the reasonable mixing zone; or
2. where the water quality upstream of the discharge does not meet the standards set for the relevant water body in Appendix E "Water Quality Standards", the discharge must not further reduce the water quality below those standards at the downstream edge of the reasonable mixing zone; and
3. ~~except for discharges from a territorial authority reticulated stormwater or wastewater system,~~ the discharge does not contain any raw sewage~~; and~~
4. ~~the discharge is not into any Regionally Significant Wetland or Sensitive Waterbodies listed in Appendix A~~.

Rule 13

(a) The discharge of land drainage water to water from an on-farm subsurface drainage system is a permitted activity, provided the following conditions are met:
  (i) the discharge does not cause:
    (1) a ~~conspicuous~~ change to the colour or clarity of the receiving waters beyond 20 metres from the point of discharge that exceeds the maximum percentage change specified for the relevant water body class in Appendix E; or
    (2) more than a 10% change in the sediment cover of the receiving waters beyond 20 metres from the point of discharge; or
    (3)~~(2)~~ conspicuous oil or grease films, scrums or foams, or floatable or suspended materials beyond 20 metres from the point of discharge;
  (ii) the discharge does not render freshwater unsuitable for consumption by farm animals;
  (iii) the discharge does not cause the flooding of any other landholding;
  (iv) the discharge does not cause any scouring or erosion of any land or bed of a water body beyond the point of discharge;
  (vi) the discharge does not cause any significant adverse effects on aquatic life;
  (vii) the subsurface drainage system does not drain a natural wetland; and
  (viii) for any known existing drains and for any new drains, the locations of the drain outlets are mapped and provided to the Southland Regional Council on request.

(b) The discharge of land drainage water to water from an on-farm subsurface drainage system that does not comply with Rule 13(a) is a discretionary activity.

Rule 14

(a) The discharge of fertiliser onto or into land in circumstances where contaminants may enter water is a permitted activity provided the following conditions are met:
  (i) other than for incidental discharges of windblown fertiliser dust, there is no direct discharge of fertiliser into a lake, river ~~(excluding ephemeral rivers)~~, artificial watercourse, modified watercourse, or natural wetland or into groundwater;
  (ii) there is no fertiliser discharged when the soil moisture exceeds field capacity;
  (iii) there is no fertiliser discharged directly into or within 3 metres of the boundary of any significant indigenous biodiversity site identified in a district plan that includes surface water; and
  (iv) where a lake, river ~~(excluding ephemeral rivers)~~, artificial watercourse, modified watercourse or wetland:
    (1) has riparian planting from which stock is excluded, fertiliser may be discharged up to the paddock-side edge of the riparian planting but not onto the riparian planting, except for fertiliser required to establish the planting; or

(2) does not have riparian planting from which stock is excluded, fertiliser is not discharged directly into or within 3 metres of the bed or within 3 metres of a wetland.

(b) The discharge of fertiliser onto or into land in circumstances where the fertiliser may enter water that does not meet the conditions of Rule 14(a) is a non-complying activity.

Rule 40 – Silage storage

(a) The use of land for a silage storage facility is a permitted activity provided the following conditions are met:

(ii) there is no overland flow of stormwater into the silage storage facility;

(v) no part of the silage storage facility is within:

(1) 50 metres of a lake, river ~~(excluding ephemeral rivers)~~, artificial watercourse, modified watercourse, natural wetland or any potable water abstraction point; or

(2) 100 metres of any dwelling or place of assembly, on another landholding constructed or in use prior to the silage storage facility being lawfully established; or

(3) the microbial health protection zone of a drinking water supply site identified in Appendix J, or where no such zone is identified, then within 250 metres of the abstraction point of a drinking water supply site identified in Appendix J; or

(4) a critical source area; and

[rest of rule unchanged]

Topic B5 - Farming

Policy 16

1. ~~Minimising~~ Avoid where practicable, or otherwise minimise, any ~~the~~ adverse environmental effects (including on the quality of water in lakes, rivers, artificial watercourses, modified watercourses, wetlands, tidal estuaries and salt marshes, and groundwater) from farming activities by:

~~(a) discouraging the establishment of new dairy farming of cows or new intensive winter grazing activities in close proximity to Regionally Significant Wetlands and Sensitive Water bodies identified in Appendix A; and~~

~~(b) ensuring that, in the interim period prior to the development of freshwater objectives under Freshwater Management Unit processes, applications to establish new, or further intensify existing, dairy farming of cows or intensive winter grazing activities will generally not be granted where:~~

~~(i) the adverse effects, including cumulatively, on the quality of groundwater, or water in lakes, rivers, artificial watercourses, modified watercourses, wetlands, tidal estuaries and salt marshes cannot be avoided or mitigated; or~~

~~(ii) existing water quality is already degraded to the point of being overallocated; or~~

~~(iii) water quality does not meet the Appendix E Water Quality Standards or bed sediments do not meet the Appendix C ANZECC sediment guidelines; and~~

~~(c) ensuring that, after the development of freshwater objectives under Freshwater Management Unit processes, applications to establish new, or further intensify existing, dairy farming of cows or intensive winter grazing activities:~~

~~(i) will generally not be granted where freshwater objectives are not being met; and~~

~~(ii) where freshwater objectives are being met, will generally not be granted unless the proposed activity (allowing for any offsetting effects) will maintain the overall quality of groundwater and water in lakes, rivers, artificial watercourses, modified watercourses, wetlands, tidal estuaries and salt marshes.~~

(b) ensuring that, ~~for~~ existing farming activities:

(i) minimise nitrogen, phosphorus, sediment and microbial contaminant discharges ~~are minimised~~;

(ii) reduce adverse effects on water quality where the farming activity occurs within the catchment of a waterbody that requires improvement identified in Schedule X; and

(iii) demonstrate how (i) and (ii) is being or will be achieved through the implementation of Farm Environmental Management Plans prepared in accordance with (c) below and in addition,

(ba) ensuring that ~~for~~ the establishment of new, or further intensification of existing, dairy farming of cows or intensive winter grazing activities:

(i) does not result in an increase in nitrogen, phosphorus, sediment and microbial contaminant discharges; and

(ii) minimises nitrogen, phosphorus, sediment or microbial contaminant discharges; and

(iii) reduces nitrogen, phosphorus, sediment or microbial contaminant discharges where it ~~the farming activity~~ occurs in a ~~within the~~ catchment of a waterbody that requires improvement identified in Schedule X; and

(iv) is avoided in close proximity to Regionally Significant Wetlands and Sensitive Water bodies identified in Appendix A; and

(c)~~2.~~ requiring all farming activities~~, including existing activities,~~ to~~:~~

~~(i)~~ be undertaken in accordance with ~~implement~~ a Farm Environmental Management Plan~~, as set out in Appendix N;~~ that ~~which~~:

(1) identifies whether the farming activity is occurring, or would occur, in a catchment of a waterbody that requires improvement identified in Schedule X;

(2) identifies and responds to the contaminant pathways (and variants) for the relevant Physiographic Zones;

(3) sets out how adverse effects on water quality from the discharge of contaminants from farming activities will be minimised or, where the farming activity is occurring in a catchment of a waterbody that requires improvement identified in Schedule X, reduced;

(4) is certified as meeting all relevant requirements of this plan and regulation ~~prepared~~ under Part 9A of the RMA; and

(5) is independently audited and reported on;

(ii) ~~(b) actively manage~~ avoid where practicable, otherwise minimise sediment run-off risk from farming and hill country development activities by identifying critical source areas and implementing actions and maintaining practices including setbacks from water bodies, sediment traps, riparian planting, limits on areas or duration of exposed soils and the prevention of stock entering the beds of surface water bodies; and

(iii) ~~(c) manage~~ avoid where practicable, otherwise minimise collected and diffuse run-off and leaching of nutrients, microbial contaminants and sediment through the identification and management of critical source areas and the contaminant pathways identified for the relevant Physiographic Zones (and variants) within individual properties.

2.~~3.~~ When considering a resource consent application for farming activities, consideration should be given to the following matters:

(a) whether multiple farming activities (such as cultivation, riparian setbacks, and winter grazing) can be addressed in a single resource consent; and

(b) granting a consent duration of at least 5 years where doing so is consistent with Policy 40.

Minimise means to reduce to the smallest amount reasonably practicable.

Policy 18

~~Reduce~~ Avoid where practicable, or otherwise remedy or mitigate, any adverse effects from the discharge of sediment~~ation~~ ~~and~~ or microbial ~~contamination of~~ contaminants to water bodies and improve river ~~(excluding ephemeral rivers)~~ and riparian ecosystems and habitats by:

1. requiring progressive exclusion of all stock, except sheep, from lakes, rivers ~~(excluding ephemeral rivers)~~, natural wetlands, artificial watercourses, and modified watercourses on land with a slope of less than 15 degrees by 2030;

2a. requiring the management of sheep in critical source areas and in those catchments where *E.coli* levels could preclude contact recreation;

3. encouraging the establishment, maintenance and enhancement of healthy vegetative cover in riparian areas, particularly through use of indigenous vegetation; and

4. ensuring that stock access to lakes, rivers ~~(excluding ephemeral rivers)~~, natural wetlands, artificial watercourses and modified watercourses is managed in a manner that avoids ~~significant~~ adverse effects on water quality, bed and bank integrity and stability, mahinga kai, and ~~river~~ aquatic and riparian ecosystems and habitats~~.~~; and

5. showing, in a Farm Environmental Management Plan prepared and implemented in accordance with Appendix N, how 1-4 will be achieved and by when.

Rule 20

~~(aa) Unless stated otherwise by Rules 20, 25, 70 or any other rule in this Plan:~~

~~(i) intensive winter grazing; or~~

~~(ii) cultivation; or~~

~~(iii) the disturbance by livestock including cattle, deer, pigs or sheep; in, on or over the bed of an ephemeral river is a permitted activity.~~

(a) The use of land for a farming activity, other than for intensive winter grazing, is a permitted activity provided the following conditions are met:

(i) the landholding is less than 20 hectares in area; or

(ii) where the farming activity includes a dairy platform on the landholding, the following conditions are met:

(1) the dairy platform has a maximum of 20 cows; or

(2) the dairy platform had a dairy effluent discharge permit on 3 June 2016 that specified a maximum number of cows; and

(3) cow numbers have not increased beyond the maximum number specified in the dairy effluent discharge permit that existed on 3 June 2016; and

(4) ~~from 1 May 2019,~~ a Farm Environmental Management Plan for the landholding is prepared, certified, ~~and~~ implemented and audited in accordance with Appendix N; and

~~(5) the landowner provides to the Southland Regional Council on request:~~

~~(A) a written record of the good management practices, including any newly instigated good management practices in the preceding 12 months, occurring on the landholding; and~~

~~(B) the Farm Environmental Management Plan prepared in accordance with Appendix N;~~

(6) the land area of the dairy platform is no greater than at 3 June 2016; and

~~(7) no part of the dairy platform is at an altitude greater than 800 metres above mean sea level; and~~

~~(iii) where the farming activity includes intensive winter grazing on the landholding, the following conditions are met:~~

~~(1) from 1 May 2019, intensive winter grazing does not occur on more than 15% of the area of the landholding or 100 hectares, whichever is the lesser area;~~

~~(2) from 1 May 2019, a Farm Environmental Management Plan for the landholding is prepared and implemented in accordance with Appendix N;~~

~~(3) from 1 May 2019, all of the following practices are implemented:~~

~~(A) if the area to be grazed is located on sloping ground, stock are progressively grazed (break-fed or block-fed) from the top of the slope to the bottom, or a 20 metre 'last-bite' strip is left at the base of the slope;~~

~~(B) when the area is being break-fed or block-fed, the stock (excluding sheep and deer) are back fenced to prevent stock entering previously grazed areas;~~

~~(C) transportable water trough(s) are provided in or near the area being grazed to prevent stock accessing a~~

~~lake, river (excluding ephemeral rivers), artificial watercourse, modified watercourse or natural wetland for drinking water;~~

~~(D) if supplementary feed (including baleage, straw or hay) is used in the area being grazed it is placed in portable feeders;~~

~~(E) if cattle or deer are being grazed the mob size being grazed is no more than 120 cattle or 250 deer; and~~

~~(F) critical source areas (including swales) within the area being grazed that accumulate runoff from adjacent flats and slopes are grazed last;~~

~~(4) from 1 May 2019, a vegetated strip is maintained in, and stock excluded from, the area between the outer edge of the bed of a lake, river (excluding ephemeral rivers where intensive winter grazing is permitted under Rule 20(aa)), artificial watercourse, modified watercourse or natural wetland for a distance of at least 5 metres;~~

~~(5) from 1 May 2019, intensive winter grazing does not occur within 20 metres of the outer edge of the bed of any Regionally Significant Wetland or Sensitive Water Bodies listed in Appendix A, estuary or the coastal marine area; and~~

~~(6) no intensive winter grazing occurs at an altitude greater than 800 metres above mean sea level; and~~

(iii)~~(iv)~~ for all other farming activities~~, from 1 May 2020~~ a Farm Environmental Management Plan is prepared, certified, ~~and~~ implemented and audited in accordance with Appendix N.

(iv) no part of the dairy platform occurs at an altitude greater than 800 metres above mean sea level.

~~(b) The use of land for a farming activity that includes intensive winter grazing on the landholding and which meets all conditions of Rule 20(a) other than condition (iii)(3) is a permitted activity, provided that:~~

~~(i) from 1 May 2019, a vegetated strip is maintained in, and stock excluded from, the area between the outer edge of the bed of a lake, river (excluding ephemeral rivers where intensive winter grazing is permitted under Rule 20(aa)), artificial watercourse, modified watercourse or natural wetland for a distance of at least 20 metres.~~

~~(b)~~(c) ~~Despite any other rule in this Plan, the use of land for a dairy platform or intensive winter grazing at an altitude greater than 800 metres above mean sea level is a prohibited activity.~~

~~(d)~~(c) The use of land for a farming activity, other than for intensive winter grazing, that ~~meets all conditions of Rule 20(a) other than (i), (ii), (iii)(1),(iii)(4) or (iii)(5) or~~ does not meet ~~condition (i) of Rule 20(b)~~ any one of conditions (ii)(1)-(6) or (iii) of Rule 20(a) is a restricted discretionary activity, provided the following conditions are met:

(i) a Farm Environmental Management Plan is prepared certified, ~~and~~ implemented and audited in accordance with Appendix N; and

(ii) the application includes the following material, prepared by a suitably qualified person:

(1) an assessment that shows that the ~~annual amount~~ risk of nitrogen, phosphorus, sediment and microbiological contaminants being discharged from the landholding will be no greater than the risk of contaminant discharge ~~that~~ which was lawfully discharged ~~annually~~ on average for the five years prior to the application being made; and

(2) for any mitigation proposed, a detailed mitigation plan (taking into account contaminant loss pathways) that identifies the mitigation or actions to be undertaken including any physical works to be completed, their timing, operation and their potential effectiveness.

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

1. the quality of and compliance with the Farm Environmental Management Plan for the landholding;
2. whether the assessment undertaken under Rule20~~(d)~~(c)(ii) above takes into account reasonable and appropriate mitigation actions ~~good management practices~~ to minimise the losses of contaminants from the existing farming activity;

2(a). whether the farming activity is being undertaken in a catchment of a waterbody that requires improvement identified in Schedule X, and if so, the mitigations actions to be implemented to reduce adverse effects on water quality;

3. mitigation actions ~~good management practices~~ to be undertaken, including those to minimise the discharge of nitrogen, phosphorus, sediment and microbiological contaminants to water from the use of land, taking into account contaminant loss pathways;
4. the potential benefits of the activity to the applicant, the community and the environment;
5. the potential effects of the farming activity on surface and groundwater quality and sources of drinking water; and
6. monitoring and reporting undertaken to assess the effectiveness of any mitigation implemented.

~~(e)~~(d) The use of land for a farming activity ~~that is not specified as a permitted, restricted discretionary or prohibited activity under~~ which is not a restricted discretionary activity under Rule 20(c) is a ~~discretionary~~ non-complying activity.

(e) The use of land for a farming activity that does not comply with Rule 20(a)(iv) is a prohibited activity

Rule 20A

(a) Intensive winter grazing is a permitted activity provided the following conditions are met:

(i) intensive winter grazing does not occur on more than 50ha or 10% of the area of the land holding, whichever is the greater; and

(ii) the slope of land that is used for intensive winter grazing must be 10 degrees or less; and

(iii) livestock must be kept at least:

(1) 20 metres from the bed of any Regionally Significant Wetland or Sensitive Water Bodies listed in Appendix A, nohoanga listed in Appendix B, mātaitai reserve, taiāpure, estuary or the coastal marine area; and

(2) 10 metres from the bed of any other river, lake, artificial watercourse (regardless of whether there is any water in it at the time), modified water course or natural wetland; and

(iv) critical source areas within the area being intensively winter grazed must:

(1) be identified in the Farm Environmental Management Plan; and

(2) have stock excluded from them; and

(3) not be cultivated into forage crops for intensive winter grazing; and

(v) 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; and

(vi) a Farm Environmental Management Plan for the landholding is prepared and implemented in accordance with Appendix N, that also includes a grazing plan that includes:

(1) downslope grazing or a 20 metre 'last-bite' strip at the base of the slope; and

(2) back fencing to prevent stock entering previously grazed areas; and

(3) transportable water troughs; and

(vii) no intensive winter grazing occurs at an altitude greater than 800 metres above mean sea level; and

(b) The use of land for intensive winter grazing that does not meet conditions (a)(i)-(vi) of Rule 20A is a restricted discretionary activity provided the following conditions are met:

(i) a Farm Environmental Management Plan is prepared and implemented in accordance with Appendix N; and

(ii) the area used for intensive winter grazing on the property is no greater than the average area used on the property for the five years prior to the application being made;

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

1. the quality of and compliance with Appendix N and the Farm Environmental Management Plan for the landholding;
2. whether the intensive winter grazing activity is being undertaken in a catchment of a waterbody that requires improvement identified in Schedule X, and if so, the mitigation actions to be implemented to improve water quality;
3. mitigation actions and good management practices to be undertaken, including those to minimise the discharge of nitrogen, phosphorus, sediment and microbiological contaminants to water from the use of land, taking into account contaminant loss pathways;
4. the potential benefits of the activity to the applicant, the community and the environment;
5. the potential effects of the farming activity on surface and groundwater quality and sources of drinking water;
6. monitoring and reporting undertaken to assess the effectiveness of any mitigation implemented.

(c) The use of land for intensive winter grazing that does not meet conditions of Rule 20A(b) is a non-complying activity.

(d) The use of land for intensive winter grazing that does not meet condition (vii) of Rule 20A(a) is a prohibited activity.

Slope in Rule 20A is the average slope over any 20-metre distance.

Rule 25

(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, river, or modified watercourse or the edge of 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, river, or modified watercourse or the edge of 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.~~[64]~~; 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 winter grazing 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 a 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.

2~~1a~~. 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.

Rule 35A

(a) The use of land for a feed pad/lot is a permitted activity provided the following conditions are met:

~~(i) if accommodating cattle or deer, each feed pad/lot services no more than 120 adult cattle, or 250 adult deer, or equivalent numbers of young stock at any one time;~~

~~(ii) animals do not remain on the feed pad/lot for longer than three continuous months;~~

(iii) the feed pad/lot is not located:

(1) within 50 metres from the nearest sub-surface drain, lake, river ~~(excluding ephemeral rivers),~~ artificial watercourse, modified watercourse, natural wetland, or the coastal marine area ~~or another feed pad/lot on the same landholding~~; or

(2) within a microbial health protection zone of a drinking water supply site identified in Appendix J, or where no such zone is identified, then within 250 metres of the abstraction point of a drinking water supply site identified in Appendix J; or

(3) within 200 metres of a place of general assembly or dwelling not located on the same landholding, or

(4) within 20 metres of the boundary of any other landholding; or

(5) within a critical source area;

(iv) the feed pad/lot is constructed with:

(1) a sealed and impermeable base and any liquid animal effluent or stormwater containing animal effluent discharging from the feed pad/lot is collected in a sealed animal effluent storage system authorised under Rule 32B or Rule 32D; or

(2) a minimum depth of 500 millimetres of wood-based material (bark, sawdust or chip) across the base of the feed pad/lot; and

(v) any material scraped from the feed pad/lot, including solid animal effluent, is collected and if applied to land is applied in accordance with Rule 38; and

(vi) the overland flow of stormwater or surface runoff from surrounding land is prevented from entering the feed pad/lot.

(b) The use of land for a feed pad/lot that does not meet one or more of the conditions of Rule 35A(a) is a discretionary activity.

Rule 35B

(a) The use of land for a sacrifice paddock is a permitted activity provided the following conditions are met:

(i) animals do not remain on the feed pad/lot for longer than 60 days in any six month period;
(ii) the slope of land that is used for a sacrifice paddock must be 10 degrees or less; and
(iii) livestock must be kept at least 50 metres from:
(1) any nohoanga listed in Appendix B, mātaitai reserve, taiāpure, estuary or the coastal marine area; and
(2) the bed of any river, lake, artificial watercourse (regardless of whether there is any water in it at the time), modified water course or natural wetland; and
(iv) critical source areas within the area being used as a sacrifice paddock must:
(1) be identified in the Farm Environmental Management Plan; and
(2) have stock excluded from them; and
(v) the land that is used as a sacrifice paddock must be replanted as soon as practicable after livestock have been removed from the paddock; and
(vi) a Farm Environmental Management Plan for the landholding is prepared and implemented in accordance with Appendix N; and
(vii) no part of the sacrifice paddock is located on land with an altitude greater than 800 metres above mean sea level.

(b) The use of land for a sacrifice paddock that does not meet one or more of the conditions of Rule 35B(a) is a discretionary activity.

Rule 70

(a) ~~From 1 July 2020,~~ The disturbance of roosting and nesting areas of the black fronted tern, black billed gull, banded dotterel or black fronted dotterel located in the bed of a lake, river (including ephemeral flow paths), ~~(including an ephemeral river)~~, modified watercourse, or ~~natural wetland~~ by stock including cattle, deer, pigs or sheep is a prohibited activity.

(b) ~~From 1 July 2020,~~ The disturbance of the bed of a Regionally Significant Wetland or Sensitive Water Body listed in Appendix A by stock including cattle, deer, pigs or sheep is a prohibited activity.

(c) The disturbance of the bed of a river ~~(excluding ephemeral rivers where stock access is permitted under Rule 20(aa))~~ or modified watercourse for the purposes of moving stock including cattle, deer, pigs or sheep (but excluding dairy cattle on a dairy platform or on land used for dairy support) is a permitted activity provided the stock are being supervised and are actively driven across the water body in one continuous movement.

(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 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, 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.

(d) Bed disturbance activities that do not comply with Rule 70(c) are a non-complying activity.

(e) Other than as provided for by Rules 70(c), 70(ca) and 70(d), the disturbance of the bed of a lake, river ~~(excluding ephemeral rivers where stock access is permitted under Rule 20(aa)),~~ modified watercourse, open drain, or ~~natural wetland~~ by cattle, deer or pigs is a permitted activity prior to the dates set out in Table 1 for the listed land slopes after which time it is respectively a discretionary activity on that land.

Table 1: Timetable for stock exclusion from water bodies

	Land slope (as classified by the LRI slope dataset)		
Farm/stock type	**Plains (0-3°)**	**Undulating/rolling land (>3-15°)**	**Steeper land (>15° and over)**
Dairy cattle (on dairy platforms) and pigs	All water bodies (including open drains) that are: • over 1 metre wide from 1 July 2017 on all slopes • less than 1 metre wide from 1 July 2020 on the plains and undulating/rolling land		
Dairy support ~~(on either land owned/leased by the dairy farmer or third party land)~~	All water bodies, and open drains from 1 July 2022	All water bodies, and open drains over 1 metre wide from 1 July 2022	All water bodies, and open drains where break feeding occurs from 1 July 2022
Beef cattle and deer	All water bodies (including open drains) from 1 July 2025	All water bodies (including open drains) over 1 metre wide from 1 July 2030, unless the average stocking rate on the land directly adjacent to the water body is less than 6 stock units per hectare	
	All water bodies (including open drains) where break feeding or supplementary feeding occurs from 1 July 2022.		

Stock Unit

Stock unit means the equivalent of one 55 kilogram breeding ewe, bearing a single lamb, consuming 550 kilograms DM average quality feed over a year.

Critical source area

(a) a landscape feature like a gully, swale or a depression (including ephemeral flow paths) that accumulates runoff (sediment and

nutrients) from adjacent flats and slopes, and delivers it to surface water bodies (including lakes, rivers, artificial watercourses and modified watercourses) or subsurface drainage systems.; and

(b) a non-landscape feature that has high levels of contaminant losses, such as; silage pits, fertiliser storage areas, stock camps and laneways.

(b) areas which arise through land use activities and management approaches (including cultivation and winter grazing) which result in contaminants being discharged from the activity and being delivered to surface water bodies.

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

Stick racking or slash racking

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.

~~Ephemeral rivers~~

~~Rivers which only contain flowing or standing water following rainfall events or extended periods of above average rainfall.~~

Feed pad/lot

A fenced in or enclosed area located on production land used for feeding or loafing of cattle or deer to avoid damage to pasture when soils are saturated, and which can be located either indoors or outdoors. It includes ~~'sacrifice paddocks'~~, wintering pads, stand-off pads, calving pads, loafing pads, and self-feed silage storage facilities.

[Note that this definition was not included in the Planning JWS]

Appendix N

A Farm Environmental Management Plan must be:

(1) A Freshwater Farm Plan prepared, implemented and audited in accordance with regulations prepared under Part 9A of the RMA and which apply within the Southland region, plus any additional information or components required by Parts B (3) and (6)(b) as below; or

(2) If Freshwater Farm Plans, under Part 9A of the RMA, are not yet required in the Southland region, a Farm Environmental Management Plan prepared and implemented in accordance with Parts A to C below.

Part A – Farm Environmental Management Plans

A Farm Environmental Management Plan (FEMP) can be based on either of:

1. the ~~material~~ default content set out in Part B below; or
2. industry prepared FEMP templates and guidance material, with Southland-specific supplementary material added where relevant, so that it includes the default ~~material~~ content set out in Part B below; or
3. A management plan and nutrient budget prepared in accordance with a condition of resource consent to discharge industrial wastewater onto land that is also used for farming activity, provided it includes the material set out in Part B below in relation to each farm receiving industrial wastewater.

Part B – Farm Environmental Management Plan Default Content

~~1. A written FEMP that is:~~

~~(a) prepared and retained, identifying the matters set out in clauses 2 to 5 below; and~~

~~(b) reviewed at least once every 12 months by the landholding owner or their agent and the outcome of the review documented; and~~

~~(c) provided to the Southland Regional Council upon request.~~

2. The FEMP contains the following landholding details:
   (a) physical address; and
   (b) description of the landholding ownership and the owner's contact details; and
   (c) legal description(s) of the landholding; and
   (d) a list of all resource consents held for the landholding and their expiry dates~~.~~; and
   (e) The type of farming activities being undertaken on the property, such as "dairy" or "sheep and beef with dairy support".

3. The FEMP contains a map(s) or aerial photograph(s) of the landholding at a scale that clearly shows the locations of:
   (a) the boundaries; and
   (b) the physiographic zones (and variants where applicable) and soil types (or Topoclimate South soil maps); and
   (c) all lakes, rivers~~,~~/streams (including intermittent rivers), springs, ponds, artificial watercourses, modified watercourses and natural wetlands; and
   (d) all existing and proposed riparian vegetation and fences (or other stock exclusion methods) adjacent to waterbodies; and
   (e) places where stock access or cross water bodies (including bridges, culverts and fords); and

(f) the location of all known subsurface drainage system(s) and the locations and depths of the drain outlets; and

(g) all land that may be cultivated and land to be cultivated over the next 12-month period; and

~~(h) all land that may be intensively winter grazed and the land to be planted for winter grazing for the next period 1 May to 30 September; and~~

(h) all critical source areas not already identified above; and

(i) ~~for~~ land to be cultivated or intensively winter grazed, or break fed on pasture between 1 June and 31 July, and the slope[1] of the land and intended setbacks from any lake, river, artificial watercourses, modified watercourse or natural wetland and any other critical source areas; and~~:~~

~~(i) critical source areas; and~~

~~(ii) intended setbacks from any lake, river (excluding ephemeral or intermittent rivers), artificial watercourses, modified watercourse or natural wetland; and~~

~~(iii) land with a slope greater 20[1] than degrees~~

(j) any areas of the land within a catchment of a waterbody that requires improvement identified in Schedule X; and

(k) any heritage site recorded in the relevant district plan, on the New Zealand Heritage List/Rārangi Kōrero or on the New Zealand Archaeological Association website; and

(l) the presence of taonga species listed in Appendix M within water bodies on the farm (if known); and

(m) other significant values and uses (if known) on nearby land and waters.

4. Nutrient Budget/Nutrient Loss Risk Assessment

For all landholdings over 20ha, the FEMP contains either:

(a) a nutrient budget (which includes nutrient losses to the environment) calculated, using a ~~the latest version of the OVERSEER~~ model ~~in accordance with the latest version of the OVERSEER Best Practice Data Input Standards (or an alternative model nutrient loss assessment tool~~ approved by the Chief Executive of Southland Regional Council); or

(b) a nutrient loss risk assessment undertaken using a nutrient loss risk assessment tool approved by the Chief Executive of Southland Regional Council~~)~~; and the Nutrient Budget or Nutrient Loss Risk Assessment is repeated: ~~which is repeated:~~

(~~a~~1) where a material change in land use associated with the farming activity occurs (including a change in crop area, crop rotation length, type of crops grown, stocking rate or stock type) at the end of the year in which the change occurs, and also every three years after the change occurs; and

(~~b~~2) each time the nutrient budget or nutrient loss risk assessment is repeated all the input data used to prepare it shall be reviewed by or on behalf of the landholding owner, for the purposes of ensuring the nutrient budget or nutrient loss risk assessment accurately reflects the farming system. A record of the input data review shall be kept by the landholding owner; and

(~~c~~3) the nutrient budget or nutrient loss risk assessment must be prepared by a suitably qualified person that has been

approved as such by the Chief Executive of Southland Regional Council.

5. Objectives of Farm Environmental Management Plans

A description of how each of the following objectives will, where relevant, be met:

(a) Irrigation system designs and installation: To ensure that all new irrigation systems and significant upgrades meet Industry best practice standards;

(b) Irrigation management: To ensure efficient on-farm water use that meets crop demands, including through upgrading existing systems to meet Industry best practice standards, and ensuring that water and contaminant losses to waterbodies are avoided where practicable or otherwise minimised;

(c) Nutrient and soil management: To avoid where practicable, or otherwise minimise, nutrient and sediment losses from farming activities to ground and surface water, to maintain or improve water quality;

(d) 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;

(e) Collected agricultural effluent management: To manage collected agricultural effluent in accordance with best industry practice, to ensure contaminants derived from collected agricultural effluent do not cause adverse effects on water quality.

(f) Drainage maintenance: To manage drainage maintenance activities to ensure contaminant losses to water bodies and damage to aquatic habitats are avoided where practicable, or otherwise minimised.

The FEMP must also identify additional objectives relevant to the farming activities and/or to address environmental risks associated with the land holding and the environment within which it is located.

6. The description for (5) above shall include, for each relevant objective in 5 above:

(a) an identification of the adverse environmental effects, and risks associated with the farming activities on the property, including, consideration of the risks associated with the relevant physiographic zone/s (and variants) and how the identified effects and risks will be managed ~~or~~ and mitigated; and

(b) where the farm is located within a catchment of a waterbody that requires improvement identified in Schedule X, the mitigations that will achieve a reduction in the discharge of the contaminants where relevant to the farming activity that trigger the requiring improvement status of the catchment (noting that in catchments of waterbodies where aquatic ecosystem health requires improvement, reductions and mitigation required will address nitrogen, phosphorus and sediment losses and the effect of those losses); and

(c) defined mitigations that clearly set a pathway and timeframe for achievement of the objectives; and

(d) the records to be kept for demonstrating mitigations have been actioned ~~measuring performance~~ and are achieving the objective; and

(e) identification of any specific mitigation required by a resource consent held for the property.

7. If any Intensive Winter Grazing is occurring on the landholding, the Farm Environmental Management Plan must also include an intensive winter grazing plan that takes into account and responds to the risk pathways for the relevant physiographic zones (and variants).

~~5. Good Management Practices~~

~~The FEMP contains a good management practices section which identifies:~~

~~(a) the good management practices implemented since 3 June 2016; and~~

~~(b) the good management practices which will be undertaken over the coming 12-month period. These must include practices for:~~

~~(i) the reduction of sediment and nutrient losses from critical source areas, particularly those associated with overland flow;~~

~~(ii) cultivation (including practices such as contour ploughing, strip cultivation or direct drilling);~~

~~(iii) the use of land for intensive winter grazing (including those practices specified in Rule 20(a)(iii);~~

~~(iv) riparian areas (including those from which stock are excluded under Rule 70) and the type of riparian vegetation to be planted, how it will be maintained and how weeds will be controlled;~~

~~(v) minimising of the discharge of contaminants to surface water or groundwater, with particular reference to the contaminant pathways identified for the landholding.~~

~~Examples of general good management practices are provided on the Southland Regional Council, Dairy NZ and Beef and Lamb New Zealand websites and in the document146 titled "Industry-agreed Good Management Practices relating to water quality, Version 2, 18 September 2015".~~

Part C – Farm Environmental Management Plan Certification, Auditing, Review and Amendment

1. Farm Environmental Management Plan Certification

(a) The FEMP must be certified, prior to implementation on the farm, by a Suitably Qualified Person (SQP) that has been approved as such by the Chief Executive of Southland Regional Council.

(b) The purpose of FEMP certification is to confirm that the farming activities on the farm will be carried out in a way that will achieve the Objectives in this Appendix and will comply with any resource consent for the property.

(c) The FEMP must be re-certified, prior to implementation, following any amendments to the FEMP carried out in accordance with Part C(3)(a) of this appendix.

(d) Within one month of a FEMP being certified, a copy of the certified FEMP must be provided to the Southland Regional Council.

2. Auditing of the certified Farm Environmental Management Plan

(a) Within 12 months of the landholding's first FEMP being certified, the landholding owner must arrange for an audit of the farming activities' compliance with the certified FEMP. Thereafter, the frequency of auditing will be in accordance with any conditions of consents held for the landholding, or alternatively, where there are no consent or consent conditions requiring auditing, auditing timeframes associated with the audit grade assigned. *Note: Southland Regional Council will provide, on its website, a schedule of the auditing frequency required for FEMP's based on the audit grade assigned to each landholding.*

(b) The auditor must be a Suitably Qualified Person (SQP) that has been approved as such by the Chief Executive of Southland Regional Council and must not be the same person or from the same organisation that prepared the FEMP.

(c) The auditor must prepare an audit report that:

(i) sets out the auditor's findings;

(ii) stating whether compliance has been achieved and the final compliance grade; and

(iii) any other recommendations from the auditor.

(d) Within one month, of the final audit report being prepared, the audit report must be provided to the Southland Regional Council by the auditor.

3. Review and Amendment of the Farm Environmental Management Plan

The FEMP must be reviewed, by the landholding owner, or their agent, as follows:

(a) when there is a material change to the nature of the farming activities occurring on the landholding, and where that material change is not provided for within the landholding's certified FEMP; and

(b) at least once every 12 months; and

(c) to respond to the outcome of an audit.

The outcome of the review is to be documented and amendments to the FEMP must be made where Part C(3)(a) applies and in circumstances where the annual review identifies that amendments are required.

[1.] Slope is the average slope over any 20 metre distance.

Appendix 2 – Intensive Winter Grazing Scenario Assessment

Percentage and Area Scenarios for Intensive Winter Grazing Rule (Rule23)

Dr. Lisa Pearson, Environmental Scientist – Soil and Freshwater

Summary points **Page**

Intensive winter grazing in Southland is a high risk activity for water and soil quality, and it is identified in the proposed Southland Water and Land Plan as an intensive land use. Specifically, *Policy 16: Farming activities that affect Water Quality* and *Rule 23: Intensive Winter Grazing* are proposed to more actively manage this activity through different activity statuses.

Overview of previous winter forage crop analysis

It is estimated that 68,280 hectares of winter forage crop were grown in 2014 on 3,364 properties across Southland[71] (Pearson et al., 2016). Analysis of Southland's 2014 winter forage crop area is shown by percentage in Figure 1 and number of properties in Figure 2. Overall, 45% of total winter crop area was grown on 285 properties with 50+ hectares of winter crop (9% of all properties in Southland). The remaining 55% of total winter crop area was grown on 2,859 properties with less than 50 hectares of winter crop.

In other words, a large amount of the winter crop area in Southland was grown on relatively few properties. These properties were usually large landholdings and their winter crop area tended to be a low percentage of total area. For example, 25% of total winter crop area was on 85 properties with 100+ ha of winter crop (less than 3% of all properties). These 100+ hectare winter crop properties grew just under 60% of their crop on less than 10% of the property's total area, and just over 75% of their crop on less than 15% of total area. See appendix for summary tables of Figure 1 and 2.

Of the 2,859 properties with winter crop areas under 50 ha (55% of total crop area), 618 properties grew winter forage crop where it covered more than 10% of total property area (21% of the total winter crop). Winter crop on these properties will have a shorter crop rotation than on other properties. A short rotation of winter crop is likely to be unsustainable. This analysis shows a rule with an area threshold of 50 hectares is likely to miss many of the properties with proportionally

[71] Proposed Rule 23 applies to 3,144 of these properties that have a total property area greater than 20 hectares.

large areas of their properties in winter crop within a consenting framework (Figure 1). However, a rule with a percentage threshold for a permitted activity of 10% or 15% is not likely to capture areas of winter crop on larger properties within a consent. For example a 15% of a land holding rule would only capture 5 of the 25 properties with over 200 ha of winter crop. A combination of the two approaches (area and percentage threshold) is needed to manage both situations.

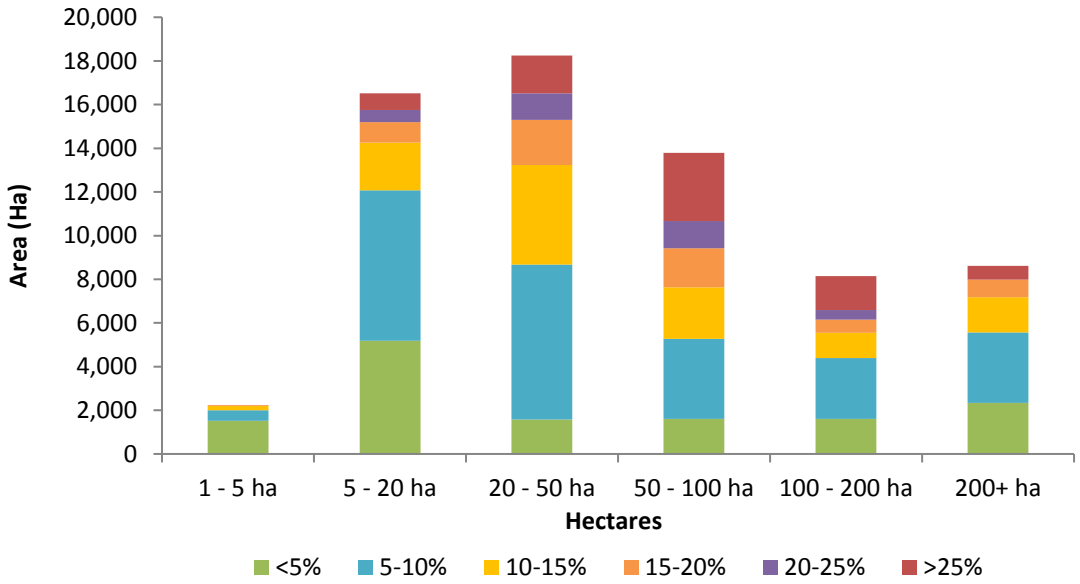


Figure 1: Areas of winter forage crop in 2014 by percentage of property area.

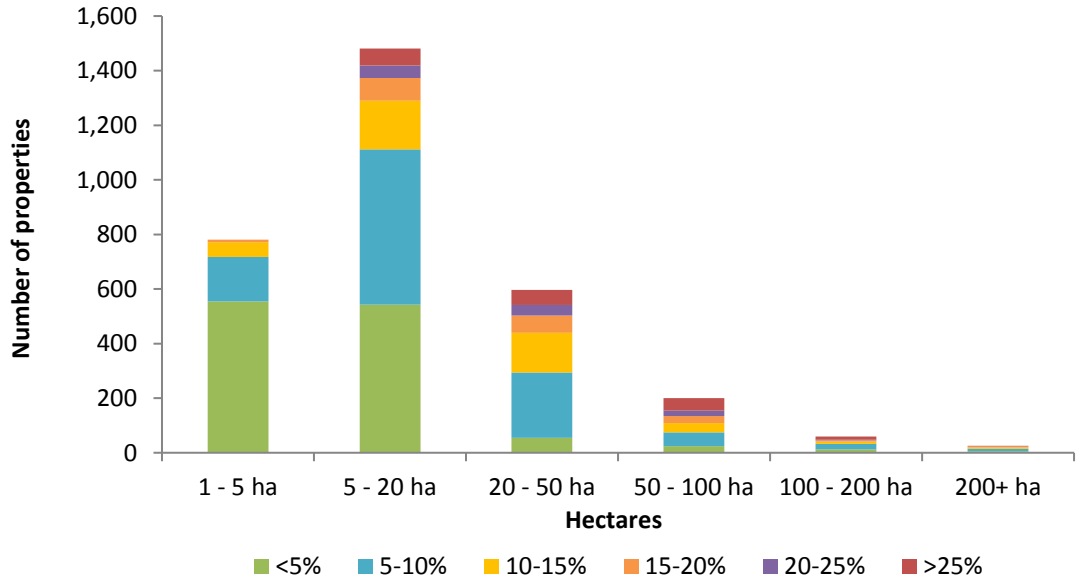


Figure 2: Number of properties and percentage of farm area in winter forage crop area ranges.

Avoidance of unintended consequences

Restricting activities always brings with it risks of unintended consequences. For intensive winter grazing these risks tend to relate to a change in how the activity occurs on-farm and a change in how the activity occurs between farms.

Restricting intensive winter grazing is designed to result in either more active management of the activity or less of the activity on a farm, which may include winter forage crops being lifted and fed on off-paddock structures. However, it could also lead to increased use of higher yield crop so the same number of animals can be grazed on the reduced crop area. For example, higher yielding crops such as fodder beet[72] (18,000-22,000 T DM/ha/ya) may be planted over the lower yielding turnips (6,000-12,000 T DM/ha/ya), or kale and swedes (8,000-18,000 T DM/ha/ya). The in-situ grazing of higher yield crops increases stock grazing density, concentrates nitrogen leaching, increases pugging and compaction damage to soils and soil erosion. A condition on the permitted activity relating to maximum stocking rate would address this risk.

Intensive winter grazing restrictions are also designed to result in more active management of the activity or less of the activity across the landscape. However, it could also lead to change in the distribution of winter crop either within or between river catchments. Conditions on the permitted activity that relate to both large areas of winter crop and large percentages of winter crop would address this risk.

Management options that could reduce the risk of unintended consequences are:

- Best practice grazing management – grazing down a slope or towards a waterway, long crop face, back fencing, and grazing critical source areas last (or not cropping these areas).
- Low stocking density
- The use of area and percentage thresholds
- Promotion of lifting fodder beet to feed out off-paddock structures.
- Promotion of catch crops directly after winter to utilise excess nutrients[73].

Key points from Beef + Lamb New Zealand (B+LNZ) Submission

A large number of submissions on the intensive winter grazing rule in the proposed Water and Land Plan identified a percentage based threshold as a more reasonable way of regulating intensive winter grazing. This is especially evident in submissions from sheep and beef hill country farmers, where larger areas of forage crop are used to carry the farms own stock over winter. Analysis of the land area used for winter crop in 2014, shows the majority of total crop area in Southland (over 65%) is grown on sheep and beef properties, especially farms with a large area of crop (Figure 3; Pearson et al., 2016). See Table 6 (pg 25) in Pearson et al. (2016) for winter forage crop area by land use.

[72]Steve Canny from Venture Southland has identified issues from pesticide spray drift from fodder beet management causing decline in bee populations.

[73] https://www.dairynz.co.nz/media/5786610/technical-series-march-2017_web.pdf

Submissions from B+LNZ presented that almost all feed consumed on sheep and beef farms is produced on-farm - most farmers conserve feed from peak pasture growth or grazing and many (but not all) farmers use a part of their property as a winter feed area. In 2013-14, roughly 80% of South Island Intensive Finishing farms (which are 86% of Southland sheep and beef farms), had a winter feed area equivalent to 2-8% of the farm's effective area and a handful of these farms had a winter feed area 10% or above. B+LNZ identify a need for the majority of their farmers to be able to 'carry' the farms stock over the winter, without the requirement of obtaining resource consent.

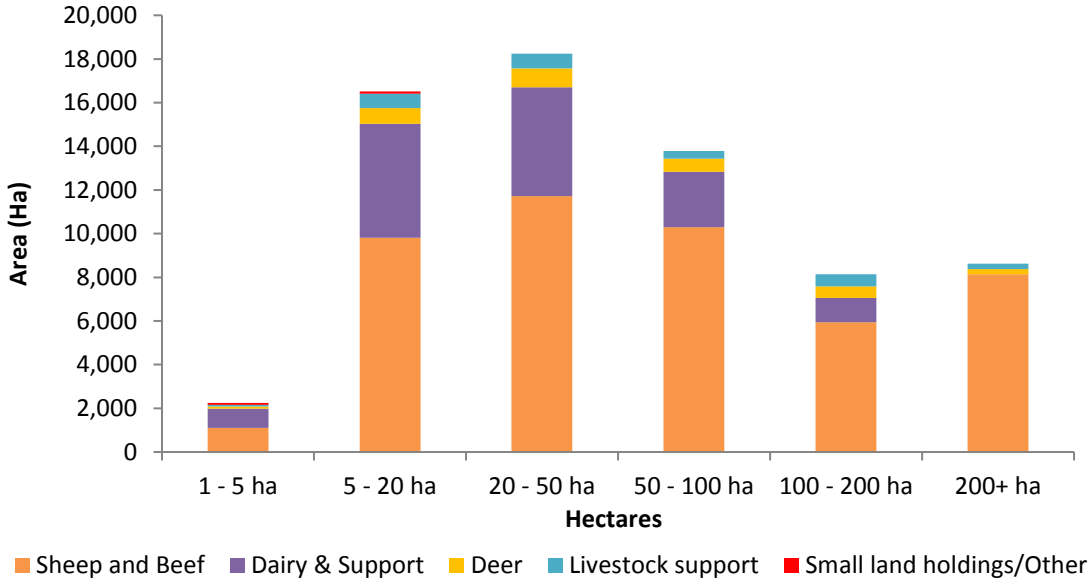


Figure 3: Area of winter forage crop in Southland for 2014 by land use (Southland Land Use Map, April 2015).

Additional requests from policy planners

To provide more options for the hearing panel to consider the request was made to test the following additional scenarios:

- Scenario 19: Greater than 10 % of a landholding
- Scenario 20: For landholdings less than 200ha, greater than 20 ha OR for landholdings greater than 200ha, 10% of the landholding

Alternative scenario

An alternative approach is to implement a combined area threshold and percentage of farm area rule with a 'sinking lid' over a number of years. The most effective of the scenarios presented is number 6 (not including those with targeted physiographic zone thresholds) which could be used as a target. The sinking lid is necessary to manage the potential impact of the adjustment on farmers, while focusing on those with the largest area of winter forage crop and most intensive growers. It has the added advantage of controlling the number of potential resource consent applications received each year, while. The rule would also benefit by including a maximum stocking density to avoid the unintended consequences noted above.

To be equitable for all farm sizes while also capturing the largest and most intensive properties with winter forage crop, a percentage of the farm area applies until a maximum crop area is reached. The rule could be structured the following way:

- From May 2018 Scenario 21: Greater than 15% of a land holding OR greater than 100ha on a land holding.
- *Either* From May 2019 Scenario 22: Greater than 10% of a land holding OR greater than 100ha on a land holding.
- *Or* From May 2019 Scenario 7: Greater than 15% of a land holding OR greater than 50ha on a land holding.
- From May 2020 Scenario 6: Greater than 10% of a land holding OR greater than 50ha on a land holding.

Scenario 21 captures 30,225 ha of winter forage area (44%) and affects 534 properties (85 with over 100 ha of crop). 182 properties have 15-20% of the property in crop and it is likely that there would be an incentive to either lift or reducing winter forage crop rather than apply for resource consent.

Scenario 22 would increase the total area captured to 39,537 ha (60%) and would affect an additional 412 properties. Scenario 7 would increase the total area captured to 37,862 ha (55%) and effect an additional 109 properties from the 534 captured in scenario 21.

After 3 years, Scenario 6 would capture 44,812 ha of winter forage crop (66%) and would affect a total of 1021 properties, which is 75 additional properties from scenario 22 and 378 additional properties from Scenario 7.

This approach has the advantage of being evidence based, effective (44% increasing to 66% of crop area in the region over 3 years), and equitable. It would potentially impact on a larger number of properties than the current rule (scenario 8) but is more efficient. The percentage of a farm area threshold would apply to the majority of the properties in the first year and require minor changes to a farm operation to operate within a 15% threshold. It is likely that many farmers with smaller crop areas would choose to rethink their activity, probably reducing their winter crop area, while farmers with larger areas would need to actively manage their activity and pass on these costs. An approach that is equitable for all farm sizes while also capturing the largest and most intensive properties with winter forage crop would go a long way towards achieving the goal of the pSWLP.

Scenario 22 is also the most equitable and effective scenario, if a sinking lid approach is not applied. This is because most properties being affected by the 10% of a property threshold. As B+LNZ provided in their submission this is suitable for most drystock farms to carry their own stock over winter.

Summary of Scenarios and Environmental Risk Assessment

The 'Environmental Risk Assessment for Winter Grazing Scenarios' assessed the effectiveness and efficiency of the proposed scenarios based on the area of crop captured, number of properties captured and proportion of high risk physiographic zones captured (Table 1, Figure 4). The scenarios that are likely to be the most effective at managing this high risk activity are those where the area threshold is more restrictive than the percentage of a property (either scenario 6 or 7). However,

this approach affects a large number of properties and is not equitable for different sized farms. The current proposed threshold of 50 ha winter forage crop (scenario 8) captures less winter forage crop area compared to scenario 6 and 7, and affects a much smaller number of properties, but has the same issues of equality. Scenarios 11 and 12 provide an example of when the area threshold is not applied to larger farms and a 15% or 10% threshold for a permitted activity is used. Of the 85 properties with over 100 ha of winter forage crop area, these scenarios result in 48 or 61 farms, respectively, meeting the permitted activity threshold. This is equal to 6-10% of the total winter forage crop area in Southland. Scenarios 21 and 22 are the most equitable for varying sized properties, with an upper limit necessary to capture the properties with the largest areas of crop.

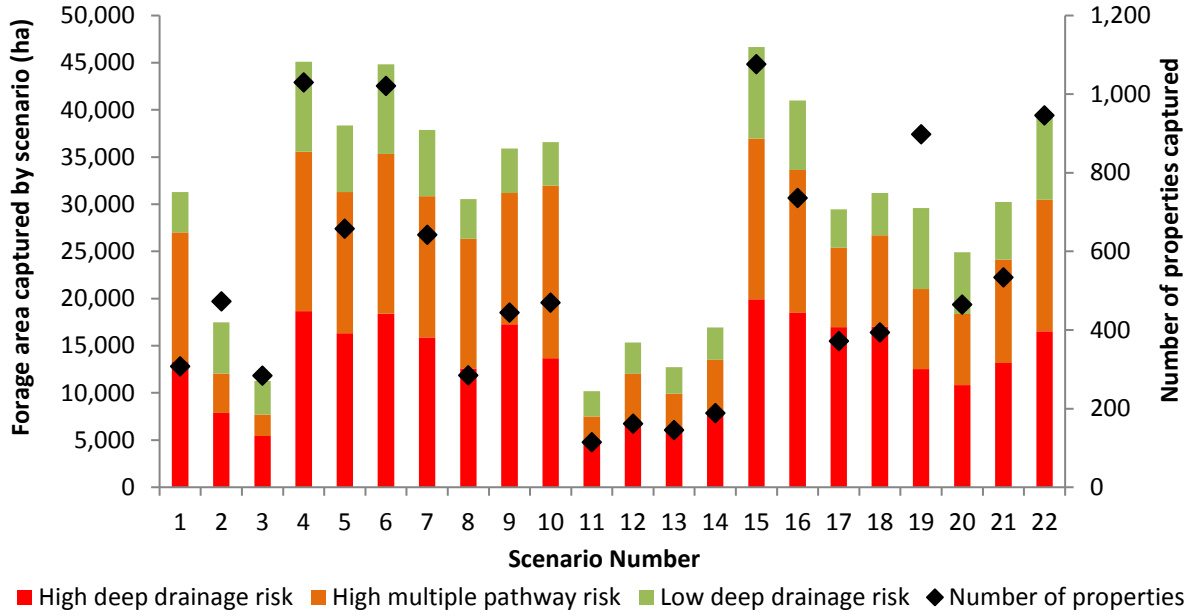


Figure 4: Environmental risk assessment for winter grazing scenarios identified by key contaminant pathways and the number of proprieties which would require resource consent under that scenario.

Table 1: Environmental risk assessment for winter grazing scenarios based on key contaminant pathway.

No.	Scenario	Number of properties	Percentage of total crop area (%)	Winter forage area captured by scenario (ha)			Percentage of risk by pathway (%)		
				High deep drainage risk	High multiple pathway risk	Low deep drainage risk	High deep drainage risk	High multiple pathway risk	Low deep drainage risk
1	**Notified proposed Southland Water and Land Plan – Greater than 50ha on a landholding OR 20ha in Old Mataura or Peat Wetlands**	308	46	13,279	13,729	4,280	42	44	14
2	Working Draft Southland Water and Land Plan – Greater than 15% of a landholding.	473	26	7,891	4,153	5,448	45	24	31
3	Greater than 20% of a landholding	284	17	5,422	2,275	3,564	48	20	32
4	Greater than 50ha on a landholding OR greater than 20ha in Old Mataura and Peat Wetlands OR greater than 10% of a landholding	1,030	66	18,652	16,920	9,531	41	38	21
5	Greater than 50ha on a landholding OR greater than 20ha in Old Mataura and Peat Wetlands OR greater than 15% of a landholding	658	56	16,314	14,973	7,047	43	39	18
6	Greater than 50ha on a landholding OR 10% of a landholding	1,021	66	18,399	16,915	9,498	41	38	21
7	Greater of 50ha on a landholding OR 15% of a landholding	643	56	15,895	14,967	7,000	42	40	18
8	50 ha of a landholding	285	45	12,606	13,724	4,222	41	45	14
9	Greater than 20ha total in Old Mataura, Peat Wetlands, Oxidising and Riverine physiographic zones OR greater than 50ha elsewhere (except Alpine)	445	53	17,286	13,900	4,736	48	39	13
10	Greater than 20ha total in Old Mataura, Peat wetlands and Bedrock/Hill country OR 50 ha elsewhere (except Alpine)	470	54	13,676	18,297	4,597	37	50	13
11	For landholdings less than 333ha, greater than 50 ha OR for landholdings greater than 333ha, 15% of the landholding	115	15	4,601	2,910	2,670	45	29	26
12	For landholdings less than 500ha, greater than 50 ha OR for landholdings greater than 500ha, 10% of the landholding	162	22	6,721	5,302	3,304	44	35	22
13	For landholdings less than 333ha, greater than 50 ha OR greater than 20ha in Old Mataura and Peat Wetlands; OR for landholdings greater than 333ha, 15% of the landholding OR greater than 20ha in Old Mataura and Peat Wetlands	146	19	6,442	3,480	2,819	51	27	22
14	For landholdings less than 500ha, greater than 50 ha OR greater than 20ha in Old Mataura and Peat Wetlands; OR for landholdings greater than 500ha, 10% of the landholding OR greater than 20ha in Old Mataura and Peat Wetlands	189	25	8,008	5,506	3,427	47	33	20
15	Greater than 50ha on a landholding OR greater than 20ha in Old Mataura, Peat Wetlands, Oxidising and Riverine OR greater than 10% of a landholding	1,077	68	19,936	17,010	9,722	43	36	21
16	Greater than 50ha on a landholding OR greater than 20ha in Old Mataura, Peat Wetlands, Oxidising and Riverine OR greater than 15% of a landholding	736	60	18,539	15,103	7,342	45	37	18
17	For landholdings less than 333ha, greater than 50 ha OR greater than 20ha in Old Mataura, Peat Wetlands, Oxidising and Riverine; OR for landholdings greater than 333ha, 15% of the landholding OR greater than 20ha in Old Mataura, Peat Wetlands, Oxidising and Riverine.	372	43	16,955	8,431	4,071	58	29	14
18	For landholdings less than 500ha, greater than 50 ha OR greater than 20ha in Old Mataura, Peat Wetlands, Oxidising and Riverine; OR for landholdings greater than 500ha, 10% of the landholding OR greater than 20ha in Old Mataura, Peat Wetlands, Oxidising and Riverine	394	46	17,041	9,670	4,462	55	31	14

Table 1 (continued): Environmental risk assessment for winter grazing scenarios based on key contaminant pathway.

No.	Scenario	Number of properties	Percentage of total crop area (%)	Winter forage area captured by scenario (ha)			Percentage of risk by pathway (%)		
				High deep drainage risk	High multiple pathway risk	Low deep drainage risk	High deep drainage risk	High multiple pathway risk	Low deep drainage risk
19	Greater than 10% of a landholding	898	43	12,514	8,493	8,581	42	29	29
20	For landholdings less than 200ha, greater than 20 ha OR for landholdings greater than 200ha, 10% of the landholding	465	36	10,826	7,544	6,536	43	30	26
21	Greater than 15% of a landholding OR greater than 100 ha	534	44	13,171	10,973	6,081	44	36	20
22	Greater than 10% of a landholding OR greater than 100 ha	946	58	16,512	13,960	9,065	42	35	23

Appendix

Area of winter forage crop in Southland 2014

	1 - 5 ha	5 - 20 ha	20 - 50 ha	50 - 100 ha	100 - 200 ha	200+ ha	Total Area
<5%	1,518	5,184	1,582	1,607	1,605	2,335	13,831
5-10%	483	6,887	7,087	3,668	2,783	3,226	24,134
10-15%	198	2,192	4,560	2,363	1,163	1,620	12,096
15-20%	41	935	2,066	1,788	601	800	6,231
20-25%		563	1,228	1,243	440		3,474
>25%		754	1,723	3,115	1,555	639	7,787
Total Area	2,240	16,515	18,246	13,785	8,146	8,621	67,553

Number of properties with winter forage crop in Southland 2014

	1 - 5 ha	5 - 20 ha	20 - 50 ha	50 - 100 ha	100 - 200 ha	200+ ha	Total Area
<5	555	543	55	24	12	5	1,194
5-10	162	569	239	51	21	10	1,052
10-15	54	178	146	34	8	5	425
15-20	10	83	63	26	4	3	189
20-25		46	38	20	3		107
>25		62	56	45	12	2	177
Total Area	781	1,481	597	200	60	25	3,144

ArcMap Definition Queries for Policy Analysis

Layer location: M:\GIS\Projects\ArcMap\Environmental Info\Land Use 2015 DeanP\MattLandUse\Winter Grazing\Winter Forage Areas.shp

Scenario threshold above which consent is required	*Query Used*
19. Greater than 10% of a landholding	Definition Query: "Farm_Area" >20 Select by Attributes: "Percentage">10
20. For landholdings less than 200ha, greater than 20 ha OR for landholdings greater than 200ha, 10% of the landholding	Definition Query: "Farm_Area" >20 Select by Attributes: Farm_Area <200 AND "Forage_ha">20 OR "Farm_Area">200 AND "Percentage">10
21. Greater than 15% of a landholding OR greater than 100 ha	Definition Query: "Farm_Area" >20 Select by Attributes: Percentage >15 OR "Forage_ha">100
22. Greater than 10% of a landholding OR greater than 100 ha	Definition Query: "Farm_Area" >20 Select by Attributes: Percentage >10 OR "Forage_ha">100

Appendix 3 – Documents and Information Considered

a. Decisions Version of the pSWLP dated 1 March 2021 (Decisions Version);

b. Report and Recommendations of the Hearing Commissioners dated 29 January 2018

c. The Topic A Interim Decisions

d. National Policy Statement for Freshwater Management 2020 (NPSFM);

e. Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (NES-F);

f. Resource Management (National Environmental Standards for Plantation Forestry) Regulations 2017;

g. Science and Cultural Health Joint Witness Statements of 2019;

h. Resource Management (Stock Exclusion) Regulations 2020;

i. The statements of each planner and technical expert filed with the Court in October/November 2021;

j. Relief sought by each party filed with the Court in October/November 2021;

k. The Council's preferred "tracked changed provisions (as filed to the Court on 11 November 2021), prepared in response to the relief sought by the parties on 29 October 2021;

l. The Joint Witness Statement signed by Freshwater Ecology experts (1 December 2021) (JWS – Ecology);

m. The Joint Witness Statement signed by Forestry experts (29 November 2021) (JWS – Forestry);

n. The Joint Witness Statement JWS signed by Farm Systems experts (22 November and 6 December 2021) (JWS - Farm Systems);

o. The Joint Witness Statement signed by Science experts (26 November 2021) (JWS – Science);

p. The Joint Witness Statement JWS signed by Planning experts (10 December 2021) (JWS – Planning);

q. The Evidence in Chief of each planner and technical expert filed with the Court on 20 December 2021 or 4 February 2022;

r. The Evidence in Chief of Dr Ton Snelder (dated 11 February 2022);

s. The Evidence in Chief of Dr Ross Monaghan (dated 11 February 2022); and

t. The Evidence in Chief of Dr Greg Burrell (dated 11 February 2022).

requirements.