Expert Conference – Farm Systems and Planning

Topic: Proposed Southland Water and Land Plan – Southland Regional Council

Date of conference: 23 and 30 June 2022

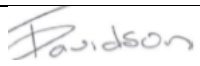
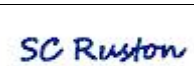
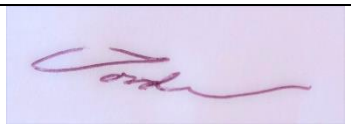
Venue: Remote AVL

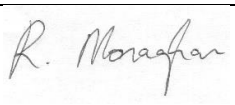
Facilitator: N/A

Recorder:

Participants

1 Witnesses who participated and agreed to the content of this Joint Witness Statement (JWS) by signing it on 26 June 2022 (Farm Systems) and 30 June 2022 (Planners).

Name	Expertise	Employed or engaged by	Signature
Treena Davidson (TD)	Planning	Nga Rūnanga	
Sharon Dines (SD)	Planning	Wilkins Farming	
Sue Ruston (SR)	Planning	Ballance	
Claire Jordan (CJ)	Planning	Aratiatia Livestock Ltd	
Ben Farrell (BF)	Planning	Southland Fish and Game Council	
Linda Kirk (LK)	Planning	Director General Conservation	
Peter Wilson (PW)	Planning	Federated Farmers	

Matthew McCallum-Clark (MMC)	Planning	Southland Regional Council	
Ross Monaghan (RM)	Farm Syst	Southland Regional Council	
Tom Orchiston (TO)	Farm Syst	Wilkins Farming	

Environment Court Practice Note

2 All participants confirm that they have read the Environment Court Consolidated Practice Note 2014 and in particular Section 7 (Code of Conduct, Duty to the Court and Evidence of an expert witness) and Appendix 3 – Protocol for Expert Witness Conferences and agree to abide by it.

Experts' qualifications and experience

3 These are set out in each experts' evidence.

Purpose of expert conference

4 The purpose of the expert witness conferencing is to answer the questions set out in the Court's Minute dated 16 June 2022.

5 The participants noted that the Court's questions were separated by expertise into planning questions and farms systems questions. While the expert conferencing included both planners and farm systems experts in a single session for the Farm Systems questions, the farm systems experts were not present for the answering of the planning questions.

6 Ballance Agri-Nutrients Limited (BAN) have advised that they do not have a direct interest in the provisions addressed in the questions directed to the planners (in the Court's minute of 16 June 2022). However, they noted that drafting changes that may result in answering these questions could impact Policy 16 as a whole and Rule 20, both of which BAN has an interest in. On that basis, BAN requested that their expert planner (Ms Ruston) be present in this Expert Conferencing to ensure that any changes recommended in this Joint Witness Statement do not result in untended changes to the surrounding content or functioning of Policy 16 and Rule 20. Ms

Ruston is satisfied that unintended changes have not resulted. On this basis, and for completeness, Ms Ruston is therefore not a signatory to the answers below.

7 LK participation was limited to matters in relation to implementing Policy 16 as per Director-General's scope.

8 If initials of the participant are missing from the response, that participant was not involved and holds no opinion.

Key information sources relied on

9 The experts relied on the following key sources of information:

a) The National Policy Statement for Freshwater Management

b) The National Environmental Standards for Freshwater

c) The 'tracked changes' relief sought by each party

d) The evidence of each participant

e) Previous JWSs

f) Questions and answers given in Court

g) The Court's Minute dated 16 June 2022

Conference outcomes

Questions for the Farm Systems Experts

Increase in land area

[24] Is reducing stocking density on all areas of the landholding used for intensive winter grazing, necessary to achieve:

- no increase in contaminants;[1] and
- contaminants are either minimised or reduced (depending on whether the land holding is in a Schedule X catchment).[2]

[1] Policy 16(1)(ba)(i)
[2] Policy 16(1)(ba)(ii) and (iii)

[RM and TO] Strictly speaking, not necessarily – reducing stock density is one factor that could be used, however other measures could possibly achieve the above outcomes. Some example measures are mentioned in the Statement of Evidence of Ross Monaghan at paragraphs 14-16. These measures would need to be accompanied by a robust farm planning process. Implementation of these measures could potentially off-set the leakages associated with a greater area of intensive winter grazing, albeit some form of quantitative and verifiable assessment would be required to consider the net effect(s) on contaminant loss risk arising from (i) future changes in winter grazing area and (ii) how these areas are managed and mitigated.

[25] If stocking density is not reduced, what level of confidence do the Farm Systems experts have that there will be no increase in contaminants and secondly, that contaminants will be minimised or reduced (as the case may be)?[3] When responding, consider both the SRC and Federated Farmers/Wilkins proposed area controls.

[RM and TO] The level of confidence would depend on the rigour of the assessment for considering the net effect(s) on contaminant loss risk arising from future changes in winter grazing area and management. Such an assessment would probably require a site-specific consideration of risk by experienced farm planners who have the expertise to consider changes in nitrogen loss risk (for example, by using the Overseer model or similar nutrient budgeting tool) and erosion risk (as an indicator of the potential for sediment and P losses)

[26] If a reduction in stocking density is required, how might that be determined?

TO I don't necessarily think a reduction in stocking density is required. Wintering is best managed though a farm planning process.

[3] Policy 16(1)(ba)(ii) and (iii)

TO agrees with RM that different stock classes and animal types have differing impacts, along with many other factors that will change how a particular paddock or areas should be used for IWG. Stocking density is just one tool in the tool box.

Farm systems experts are uncertain as to what stocking density metric should be used. As an example, a metric of animal carrying capacity over winter could be calculated (might yield a number of 10-20 cows/ha over winter) or as an alternative metric, a stocking density calculation of animal numbers per unit area per daily break offered, may be more appropriate. This metric may yield a number of 1000-2000 cows/ha/day. This latter metric may be confounded by variable extent of back fencing – this may not be an issue if the calculation is based solely on the new daily break.

If there is a desire to reflect on what has happened in previous years, the former is probably more usable.

[RM] Ideally, by calculating some assessment of equivalent stocking rate and stocking pressure, recognising that (i) animals have contrasting impacts per animal (e.g. dairy impacts are greater than sheep), and (ii) that the duration of winter grazing on any piece of land is important.

[CJ suggestion, supported by RM and TO] A similar approach could be to consider calculating the relative stock unit days/ha. This would incorporate both the stocking density and the duration of the intensive winter grazing, which are considered to be important factors when considering the environmental effects of intensive winter grazing.

This would be calculated as:

(animal numbers x relative stock unit equivalents x number of days on crop)/ha of crop on landholding = relative stock unit days/ha

This would be a relatively straightforward calculation to do, even if there were several mobs or stock classes that were treated differently on the same landholding.

It could also be approximated looking into the past if required, as most farmers would know how many animals they had on-farm, and the ha of crop they planted,

and would be able to estimate the number of days they spent on crop, several years in the past.

This metric would be useful to measure change over time on a particular landholding, but could not easily be used to set a hard threshold of intensity that would require a resource consent.

[27] Does the Farm Systems experts' level of confidence change depending on whether the permitted activity rule (Rule 20A(aa)) has an effects' focus or alternatively, a focus on contaminant load and concentration as proposed in [20] above?

Yes. We think it is difficult to assess the off-site effects of specific farming practices; it is usually more feasible to assess the degree of risk of loss of contaminants from a paddock and farm. The Overseer® model is a useful tool for assessing N loss risks. Assessing the risks of P and sediment losses would probably require a simpler approach, such as using the proportion of bare ground as an indicator of potential loss risk. An FEMP is an appropriate way of managing the risk of losses of contaminants.

[28] We may have overlooked the same, but in the context of intensive winter grazing we have not found evidence on the topic of microbial contaminant discharges.[4] How might microbial contaminant discharges be managed in order that they do not increase if the land area increases? Do changes in microbial contaminants support a control on stocking density if the land area increases?

Our current state of knowledge precludes us from providing quantitative estimates of likely changes in microbial contaminant loads for contrasting winter grazing management scenarios. Because the majority of faecal microbial contaminants follow the same transportation pathway as phosphorus and sediment, the science community tends to implicitly assume that management practices that minimise the transport of soil and phosphorus in overland flow will also likely reduce losses of microbial contaminants. This is a crude approximation, but the best guidance that can be provided given how little research has been undertaken on this topic.

[4] The parties agree to use Escherichia coli (E. coli) as a proxy for human health in this proceeding.

[29] For present purposes the court accepts that the removal of land from production will reduce contaminants.[5] When supporting an increase in area, is it enough to point to the removal of land from production from the landholding (or elsewhere in the region/catchment) as achieving [24] above?

Such an approach would need some sort of quantitative evaluation to assess the likely changes in contaminant losses. For example, a small increase in the area of a high loss land use activity would require the removal of a much larger area of land from production if that land had relatively low rates of contaminant loss before it was removed from production.

Critical source area management, slope and setbacks are a good way to reduce contaminant losses. Removal of land from production is one variable to consider but we would suggest that there are other factors to consider as well, such as stock type, proximity to waterways/bodies, soil type, paddock hydrology and drainage etc. It is more complex than area alone.

Other matters for the Farm Systems experts

[30] Is there any change to either proposed version of Rule 35B: sacrifice paddocks that the experts would recommend to the court to better manage the potential adverse effects of contaminant discharges, and to implement Policy 16(1)?

We have a concern about the effectiveness of the proposed (by Federated Farmers) 20 m buffers for mitigating contaminant loss from sacrifice paddocks greater than 10 degrees in slope; we are unaware of any evidence of their effectiveness under such a scenario of likely soil damage. It is our professional opinion that sacrifice paddocks can be subjected to a lot of hoof treading damage. This will usually lead to reduced soil infiltration and soil aggregate breakdown. Such outcomes on relatively steeply sloping land will likely greatly increase the risk of surface runoff. Sacrifice paddocks have high potential for losses of soil and contaminants and need very careful site-specific consideration. They could potentially be of similar or greater risk to intensive winter grazing and similar or greater mitigations may be appropriate.

[5] We have in mind setbacks, critical source areas and slope controls.

[31] Are the Rule 25(ba), (bb) and (bc x 2) permitted activity standards proposed by Federated Farmers likely to prove effective in managing the potential adverse effects (sediment and P) of cultivation on slopes greater than 20 degrees noting that the standards, as proposed, do not enable winter forage crops? Secondly, what amendments, if any, to the standards may be required to better implement Policy 16(1) as proposed by the parties, including for the purposes of sediment detention?[6]

In reply to the first question: The proposed standards go some way to mitigating the effects of pasture renewal on slopes above 20 degrees. A robust farm planning process allows for associated risk management. There is a need for critical source area management to be explicitly mentioned, unless there is confidence it is addressed by the farm environmental plans.

In reply to the second question: The timing of "cultivation" could be an important factor, i.e. what time of year is it appropriate. This may be able to be addressed as part of a farm plan.

Questions for the Planners

[15] Having heard from some planners, we sense that the witnesses' understanding of the content and interpretation of Policy 16(1)(ba) may differ and, if true, this may impact the implementation of Rule 20A and FEMPs. We set out questions for their comment.

[16] Setting aside dairy farming of cows, sub-cl (ba) applies to intensive winter grazing activities. The planners are to confirm whether the policy applies to both existing and new activities.

[All] Policy 16(1)(b) and (ba) need to be read together. Policy 16(1)(b) is intended to apply to all existing farming activities and contains a similar overall direction to Policy 16(1)(ba), with an acknowledged difference in not absolutely preventing an

[6] Refer Monaghan, EiC at [37(c)]

increase in losses, and that the implementation mechanism is primarily the Farm Environment Management Plan.

In looking closely at the wording of the two sub-policies, we are not certain why there is a difference in (b)(ii) seeking to 'reduce adverse effects on water quality' and (ba)(iii) seeking to 'reduce nitrogen, phosphorus, sediment or microbial contaminant discharges'.

Given the close examination of the framework for intensive winter grazing in Rule 20A, it seems clear that:

1. *given the way that intensive winter grazing is undertaken on different areas of the same property each year, or moves between different properties, it is less clear what a 'new' intensive winter grazing activity is, in comparison to 'new' dairy farming of cows; and*
2. *if a farmer exceeds the permitted activity thresholds in Rule 20A, then, given the conditions and matters of discretion in the restricted discretionary activity rule, it is our understanding that Policy 16(1)(ba) would apply. Given an existing farming operation that incorporates intensive winter grazing could fail to meet the area threshold, the conclusion is that Policy 16(1)(ba) does apply to this sub-set of existing activities. Policy 16(1)(b) will apply to the remainder.*

[17] For existing activities is it intended that:

- the activity is intensified when the area of the activity increases? and/or
- the activity is intensified when stocking densities on the same area of land are increased?[7] or
- something else?

[All] The way the rule has been drafted, the only threshold for intensity is whether the area of the activity increases (the first of the three above options). The activity is also intensified when stocking densities on the same area of land are increased. However, we note the Farm Systems Experts' conclusion at [24], stocking density is only one of the factors that influence the risk of contaminant losses.

[7] An increase in stocking density may be achieved by feeding high yielding crops such as beet.

[18] Correct us if wrong, but if the activity is intensified, the policy requires that there be:

- no increase in contaminants;[8] and
- contaminants are either minimised or reduced depending on whether the land holding is in a Schedule X catchment.[9]

[All] That is correct.

[19] (Text revised 21/6/22) The court heard evidence from Mr Wilson, Federated Farmers, suggesting that a reduction in contaminants achieved at the scale of the region or catchment/sub-catchment following implementation of the pSWLP's rules and methods (refer footnote 22 in Minute 16/6/22) could support an increase in discharge of contaminants consequential upon an increase in the area of IWG. Mr Willis, for Dairy Interests, seems to say the contrary at paragraphs [5.12] and [5.13] of his 20 December 2021 brief. Both Policy 16 and Rule 20A appear to be dealing with the discharge of contaminants at the scale of a farm or landholding and do not admit to the possibility for an individual farmer may offset an increase in contaminant discharges by pointing to contaminants being minimised or reduced elsewhere on his/her property or further afield. The planners are to comment.

[All] Rule 20A applies at the scale of a landholding. It does not clearly anticipate an offset of increased effects within another part of the property or elsewhere in the catchment. We would support an explicit reference to mitigations and offsets within the landholding, but consider policy direction for catchment-scale offsets or reductions is better dealt with through Plan Change Tuatahi.

Rule 20A

Further questions for the planners:

[20] If Rule 20A(aa) is to be approved in some form, should the provision be amended to refocus away from effects and onto implementing Policy 16(1)(ba) by – we suggest:

[a certifier has certified that][10] the landholding's:

[8] Policy 16(1)(ba)(i)
[9] Policy 16(1)(ba)(ii) and (iii)
[10] Noting not all planners supported this wording

(a) contaminant load and concentration is no greater than that allowed by Rule 20A(a)(i);[11] and

(b) losses of contaminants will be reduced where the farming activity occurs within the catchment of a waterbody in Schedule X.

If the planners support this, propose suitable wording.

TD, MMC, BF do not support inclusion of a Rule 20A(aa). However, if one is to be included, then SD wording below would be supported. The planners noted the response of the Farm Systems Experts at [27] above.

SD supports the suggested wording below:

[a certifier has certified that][12] the landholding's:

(a) risk of losses of contaminants are no greater than that allowed by Rule 20A(a)(i);[13] and

(b) risk of losses of contaminants will be reduced where the farming activity occurs within the catchment of a waterbody in Schedule X.

[PW] I thought it necessary to explain the Federated Farmers relief. Clause (aa) or something like it only apples if the 10% area limit and/or 10 degree slope limit is adopted.

If the 15% area limit is retained, there is no need for clause (aa).

My understanding is that 15% (and under 20 degrees) of a landholding available for IWG on crop under a permitted activity standard is adequate for most landholdings in Southland, especially in the context of a decline in cow numbers in Southland overall. 15% and 20 degrees will be a reduction in IWG-crop area for some landholdings.

If the 10% limit is adopted, I believe that clause (aa), or something like it, is required to provide an alternative pathway to allow increases in IWG area where the effects

[11] Noting a decision is required whether SRC's proposed slope control is within scope and secondly, the merits of extending Rule 20A sub-cl (aa) to the slope control (sub-cl (a)(ii)) needs to be made.
[12] Noting not all planners supported this wording
[13] Noting a decision is required whether SRC's proposed slope control is within scope and secondly, the merits of extending Rule 20A sub-cl (aa) to the slope control (sub-cl (a)(ii)) needs to be made.

of this additional area are the same or less to avoid the perverse effects of higher stock numbers on smaller areas of land.

The NES-F regulation 29 caps the maximum area of intensive winter grazing (under forage crop) under permitted activity as the maximum of what occurred on a landholding between 1 July 2014 and 30 June 2019. This may be a greater or lesser area than the pSWLP approach.

I understand the crux of the issue is how to assess, in a permitted activity context, that the effect is the same or less, and to be certain that the effects assessment is accurate.

I have suggested using stocking density as one approach to achieving this. If the stocking density across the whole property during the period of intensive winter grazing was not to increase (i.e. same stock numbers over a greater area of land) and/or, then it can be assumed that the effects are the same or less. The level of stocking would be assessed through the certified farm environmental plan and auditing process. The outer limit of land available for an increase would also be limited by regulation 29 of the NES, and, the upper slope threshold of land able to be cultivated for intensive winter grazing (Rule 25, 20 degrees).

I would support writing this approach into the plan rules (Rule 20A), rather than relying on the NES-F, or directly inserting the NES-F provisions into this plan. There may also need to be additional clauses added to Appendix N to outline how the maximum area for IWG that occurred between 2014 and 2019 is to be delineated and determined, and how relative stocking density is to be assessed.

I also understand that there may be concerns about how such a process could be run on a permitted activity basis, through the certified farm environmental management plan. Whilst I believe that this can be managed through the certified farm environmental management plan with amendments to Rule 20A and Appendix N, I can see if the Southland Regional Council wants certainty and an additional degree of oversight on the process that a controlled activity rule could be introduced.

The controlled activity rule would apply only to the additional area of winter grazing and would have matters of control focused on the assessment of the relative stocking density and/or the likely effects of the additional area.

Council retains the right to decline the application, alter it, or recommend its processing under the restricted discretionary status.

SD wording above would be an appropriate way of giving effect to the alternative pathway introduced through my clause (aa).

[21] Subject to the Farm Systems advice, should reducing stocking density on the landholding be a condition of the proposed permitted activity rule?

[SD, MMC, TD, BF, CJ, LK] Following the response from the Farm Systems Experts at [24], no.
[PW] In the context of the additional area of intensive winter grazing, if the additional stocking is assessed over the whole landholding for the winter period and then capped or reduced from this then yes.

[22] We anticipate most farmers will not read the provisions of the proposed plan when preparing their FEMP. Should the FEMP include an objective for intensive winter grazing that articulates the outcomes for this activity? If so, propose wording.

[MMC, SD, PW, TD, BF] On review, it appears the objectives of the FEMP are overly oriented toward the Canterbury Good Management Practices approach, and are ordered poorly for the Southland context. Some redrafting of Objective (a) is recommended to put the focus on minimising effects and reducing contaminant loss in Schedule X areas. Revised wording of Objective (a) is attached. A specific IWG objective is not considered necessary if the overall direction is set in new (a). Also noted that the remaining objectives are not part of this JWS and may be subject to change.

[23] Should a condition of the permitted activity rule (Rule 20A(a)) include a provision that requires grazed land to be re-sown in the following spring or is best left for the FEMP?[14]

[MMC, CJ, BF, TD, SD, PW] This level of detail is possibly best left to the FEMP. The dates initially in the NES-F were subject to much debate and have now been replaced with an 'as soon as reasonably practicable' requirement, which could be added if this was considered useful.

[14] Monaghan, EiC at [21]

High risk winter grazing

[32] We understand parties have been consulting on a definition of winter pasturing and the inclusion of a provision in the plan (a rule or method). The outcome of this is to be given in evidence either by the parties' witnesses (if no agreement reached) or the witnesses of the Regional Council (if agreement reached).

[MMC, PW, BF, CJ, TD] Preferred wording, subject to confirmation from Farm Systems Experts on the appropriate residual for sheep and deer, is:

High risk pasture winter grazing:
Break feeding stock on pasture between 1 May and 30 September inclusive where:

a. For stock other than lactating dairy cows, supplementary feeding is more than 8,000 kgDM/ha; or

b. The post-grazing residual is less than, or likely to be less than:

i. 1,000 kgDM/ha for sheep or deer; and

ii. 1,200 kgDM/ha for cattle.

Option for revised FEMP Objective:

5. Objectives of Farm Environmental Management Plans

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

(a~~c~~) Nutrient and soil management: To avoid where practicable or otherwise minimise nutrient, **faecal contaminants**, and sediment losses from farming activities to ground and surface water. **If the farm is within a catchment identified in Schedule X, the losses of nutrients, faecal contaminants, and sediment are reduced, with an emphasis on the contaminants causing the degraded status in Schedule X;**

(b~~d~~) Waterways and wetland management…

(ce) Collected agricultural effluent management…

(f) Drainage maintenance…

(d~~a~~) Irrigation system designs and installation…

(e~~b~~) Irrigation management…

(f) Understanding hauora and ki uta ki tai…

Rule 35B:

Key: Blue = SRC preferred wording, Green = Federated Farmers preferred wording

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

(i) stock do not remain on the sacrifice paddock for longer than 60 days in any six month period;

SRC:

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

Federated Farmers

(ii) if the slope of land that is used for a sacrifice paddock is greater than 10 degrees, 20 metre buffers must be provided on waterways and features identified in (v);

(iii) the sacrifice paddock must not be in a forage crop at the relevant time;

SRC:

(iv) sacrifice paddocks do not occur on more than 1% or 30 hectares of the landholding in any year (whichever is the lesser);

Federated Farmers:

(iv) no more than 1% or 5 hectares of the landholding (whichever is the greater) is used as a sacrifice paddock in any year;

(v) stock must be kept at least:

(1) 50 / 20 metres from the bed of any Regionally Significant Wetland or Sensitive Waterbodies listed in Appendix A, nohoanga listed in Appendix B, mātaitai reserve, taiāpure, estuary or the coastal marine area; and

(2) 50 / 10 metres from 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

Federated Farmers

(3) in the case of land with a slope greater than 10 degrees, 20 metres from 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

(v) 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

(vi) if the land that is used as a sacrifice paddock requires replanting, this must occur as soon as practicable after livestock have been removed from the paddock; and

(vii) A Farm Environment Plan for the landholding is:

(1) prepared, certified and audited in accordance with Appendix N; and

(2) implemented by the landholder completing the practices, actions and mitigations specified in the FEMP in accordance with the timeframes set out in the FEMP; and

(viii) 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 25(ba), (bb) and (bc x 2) permitted activity standards proposed by Federated Farmers

(ba) The use of land with a slope greater than 20 degrees for the purpose of renewing or establishing pasture by direct drilling is a permitted activity provided the following conditions are met:

(i) cultivation does not take place within a distance of 10 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) cultivation does not occur at an altitude greater than 800 metres above mean sea level; and

(v) sediment detention is established when cultivating critical source areas; and

(vi) Farm environment plans prepared in accordance with Appendix N must outline paddock specific sediment control measures;

(bb) The use of land with a slope greater than 20 degrees fr the purpose of renewing or establishing pasture by oversowing, and/or spraying with the assistance of animals in the pasture establishment period is a permitted activity provided the following conditions are met:

(i) cultivation does not take place within a distance of 10 metres from the outer edge of the bed of a lake, river, or modified watercourse or the edge of a natural wetland; and

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

(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) sediment detention is established when cultivating critical source areas; and

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

(vi) during the establishment of the pasture up to 10 weeks, or when ground remains bare the land must not be grazed except as follows:

a. An initial 48-hour grazing period to assist in the establishment of seed; and

b. No grazing for six weeks; and

c. One further 48-hour grazing period between 6 to 10 weeks;

(vii) If the ground remains bare following 10 weeks, the land must not be grazed until pasture is re-established in accordance with this rule; and

(viii) Farm environment plans prepared in accordance with Appendix N must outline paddock specific sediment control measures and the grazing plan consistent with (vii);

(bc) The use of land with a slope greater than 20 degrees for the purpose of renewing or establishing pasture by oversowing, and/or spraying without the assistance of animals in the pasture establishment period is a permitted activity provided the following conditions are met:

(i) cultivation does not take place within a distance of 10 metres from the outer edge of the bed of a lake, river, or modified watercourse or the edge of a natural wetland; and

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

(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) There is to be no grazing until the pasture is established; and

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

(vi) sediment detention is established when cultivating critical source areas; and

(vii) Farm environment plans prepared in accordance with Appendix N must outline paddock specific sediment control measures; and

(viii) If the ground remains bare following 10 weeks, the land must not be grazed until pasture is reestablished in accordance with this rule;

(bc) Cultivation within the setback distances specified in (a), (b), (ba), (bb), or (bc) above for the purposes of renewing or establishing pasture within a buffer by direct-drilling, oversowing, and spraying is a permitted activity provided it:

(i) does not take place more than once in any 5 year period; and

(ii) it occurs after other cultivation activity; and

(iii) established pasture exists on the remainder of the paddock.

Key part of Rule 20A:

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

Federated Farmers, Wilkins Farming Co Ltd:

(i) intensive winter grazing does not occur on more than 15% of the area of the landholding; and

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

Rule 20A(aa) options

"adverse effects" option:

(aa) The use of land for intensive winter grazing that does not meet (a)(i) or (ii) of Rule 20A is a permitted activity provided a certifier has certified in a Farm Environmental Management Plan that the adverse effects (if any) allowed by the winter grazing plan are no greater than those allowed for by 20A(a)(i)-(v).

"contaminant" option:

(aa) …a certifier has certified that the landholding's:

(a) contaminant load and concentration is no greater than that allowed by Rule 20A(a)(i);16 and

(b) losses of contaminants will be reduced where the farming activity occurs within the catchment