Expert Conference – Planning – Joint Witness Statement #1

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

Date of conference: 17 - 18 November 2021

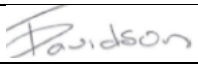
Venue: Remote AVL

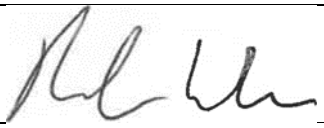
Facilitator: Commissioner Anne Leijnen

Recorder: Isabelle Harding

Attendees

1 Witnesses who participated and agreed to the content of this Joint Witness Statement (JWS) by signing it on 18 November 2021

Name	Employed or engaged by	Signature
Treena Davidson	Nga Rūnanga	
~~Ailsa Cain~~	~~Nga Rūnanga~~	
Sharon Dines	Wilkins Farming Company Ltd	
Sue Ruston	Ballance Agri-Nutrients Ltd	
Claire Jordan	Aratiatia Livestock Ltd	
Ben Farrell	Southland Fish and Game Council and Royal Forest and Bird Protection Society of New Zealand Inc	
Christine Foster	Beef + Lamb New Zealand	
Jerome Wyeth	Rayonier New Zealand	
Gerard Willis	Fonterra Co-operative Group and DairyNZ Ltd	

Carmen Taylor	Ravensdown Ltd	
~~Janan Dunning~~	~~Gore District Council, Southland District Council, Invercargill District Council (TAs)~~	
Linda Kirk	Director-General of Conservation	
~~Jane Whyte~~	~~Meridian Energy Ltd~~	
Peter Wilson	Federated Farmers of New Zealand	
Lauren Maciaszek	Southland Regional Council	
Matthew McCallum-Clark	Southland Regional Council	

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 expert's Will Say statement.

Participants

4 Ailsa Cain has not signed this JWS, as she is not a planning expert.

5 Jane Whyte has not signed this JWS as it is not a matter she has an interest in, and has not participated.

6 Janan Dunning has not signed this statement as it does not address matters that he has an interest in or has participated in.

7 All of the experts unanimously agree the content of Appendix 'N' contained in Attachment 2, subject to the answers from other technical conferencing, but

acknowledge that not all of the witnesses have directly addressed all aspects of Appendix ‘N’ or have instructions to prepare evidence on Appendix ‘N’.

Attachments to this JWS

8 List of Questions for the Farm Systems Experts.

9 Amended Appendix N.

Conference outcomes

10 The background and context relating to the appeal process is set out in the Topic B Overview evidence of Matthew McCallum-Clark

11 The Planning conferencing identified a number of technical questions to form the basis of the agenda for the Farm Systems experts – this is attached, along with an amended Appendix N

Attachment 1 - Farm Systems Expert Questions:

Farming practice improvements/Farm Environment Management Plans (Appendix N)

1. To what extent will there be water quality improvements achieved by farming in accordance with farm environmental management plans prepared and implemented under Appendix N?
2. Would Farm Environment Management Plans under Appendix N deliver water quality improvements that progress Te Mana o te Wai?
3. Could improvements from an implementation perspective be made to Appendix N?
4. How can Ngāi Tahu indicators of health be incorporated into Appendix N? What would their purpose be?
5. How do you think hauora can be recognised and monitored through Appendix N and farming practice? Are additional tools, methods and/or indicators needed? If so, what should be included?
6. Does the current resourcing in the Southland's farm systems advice sector have the capacity to deliver on the FEMPs now or will there be a lag in implementation?

Setbacks for cultivation

7. Rule 25 (cultivation) regarding effectiveness of setback differences: how much more effective at reducing sediment and nutrient runoff would it be to have 10m for 4-16 degree slopes and 20m above 16 degree slopes than the current suggestion of 5m up to 10 degree slopes and 10m between 10 and 20 degree slopes?

Critical Source Areas

If the suggested definition for critical source areas is: *a landscape feature like a gully, swale or a depression 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.*

8. Does this definition miss any landscape features that could be a critical source area?
9. What are the factors that determine the riskiness of critical source areas?
10. Are some critical source areas riskier than others?
11. What is the best way of determining what/where a critical source area is?

Intensive Winter Grazing

12. Is reducing or restricting mob size (i.e., no more than 120 cattle or 250 deer) important for avoiding or mitigating adverse effects of IWG (assuming the same stocking density)? Could there be perverse outcomes for water quality? If stocking density is a more critical factor to the extent of adverse effects, is there a simple measure for that?
13. If intensive winter grazing is to occur in a critical source area, what controls and restrictions should be in place to result in minimising sediment and nutrient loss? Are there any practices that could be adopted that make this appropriate?
14. Is it possible to increase the land area subject to IWG from 10% to 15% of the farm area without increasing adverse environmental effects?

Stock Exclusion (sheep)

15. How do sheep behave and what are the potential adverse effects of sheep in and around natural wetlands and what risk to water quality and impacts on vegetation in natural wetlands do sheep present? How are those potential adverse effects best managed? For example, is fencing required? Where? What type?
16. What are the differences in fencing required to exclude sheep from freshwater bodies compared with other stock? What are the cost differences associated with those differences?

Attachment 2 - Appendix N – Day 2 of Conferencing

Further changes shown in Purple

Appendix N – Farm Environmental Management Plan Requirements

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 56 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 ~~ephemeral or~~ intermittent ~~flow paths~~ rivers~~/streams~~), 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 break fed and/or intensively winter grazed and the land to be planted for winter grazing for the next period 1 May to 30 September; and~~

(ha) 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, ~~shows~~ 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 than degrees~~

(j) any areas of the land within a degraded catchment 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).

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 ~~must be prepared by a Certified Nutrient Management Advisor and the~~ 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 ~~and minimises losses~~, including through upgrading existing systems to

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

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, ~~to~~by avoiding stock damage, and avoiding where practicable, or ~~and to~~ otherwise minimising inputs of nutrients, sediment and faecal contaminants to ground and surface water~~, to maintain or improve water quality~~

(e) Collected ~~animal~~ agricultural effluent management: ~~To manage the operation of animal effluent systems to avoid adverse effects on water quality avoid contaminant losses to water bodies do not have …adverse effects on water quality; contaminant losses to water bodies do not occur;~~ To manage ~~the operation of~~ collected agricultural effluent ~~management systems~~ in accordance with best industry practice, to ensure contaminants derived from collected ~~animal~~ 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 ~~significant adverse effects on water quality and aquatic habitat~~.

The FEMP may also identify additional objectives relevant to the farming activities or to address environmental risks identified in accordance with Part (6) below.

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

(a) an ~~assessment~~ identification of the adverse environmental effects, and risks associated with the farming activities on the property, including, ~~where relevant,~~ consideration of the risks associated with the relevant physiographic zone/s ~~characteristics of the property,~~ and how the identified effects and risks will be managed ~~or~~ and mitigated ~~(i.e., 'mitigations')~~; and

~~and risks associated with the farming activities on the property and how the identified effects and risks will be managed; and~~

(b) where the farm is located within a degraded waterbody identified in Schedule X, the ~~measures~~ mitigations that ~~to demonstrate how farming activities~~ will achieve a reduction in the discharge of the contaminants where relevant to the farming activity that trigger the degraded status of the catchment; and

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

(d) the records to be kept for measuring performance and achievement of the objective; ~~target;~~ and

(e) identification of any specific mitigations ~~measures~~ 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 ~~addresses~~ takes into account and responds to the risk pathways for the relevant physiographic zones. ~~that includes:~~

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

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

~~(c) transportable water troughs; and~~

~~(d) supplementary feed (including baleage, straw or hay) being fed in such a way as to prevent the supplementary feed being trampled into the ground, such as by placing the supplementary feed in portable feeders or behind an electrified wire; and~~

~~(e) limiting the mob size to no more than 120 cattle or 250 deer; and~~

~~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 ~~the~~ 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 ~~each~~ 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.