

From: [Lindsay Fung](#)
To: [Plan Hearings](#)
Subject: Re: Proposed Plan Change 7 to the Canterbury Land and Water Regional Plan - Hearing Evidence from the NZ Deer Farmers' Association
Date: Friday, 17 July 2020 4:37:07 pm
Attachments: [2020-07-17 ECan PC7 Hearing - NZDFA-SCNO and CWC.pdf](#)

Hello

Please find an updated PDF of our evidence - with the correct date on the cover page!

Kind regards
Lindsay



On Fri, 17 Jul 2020 at 15:58, Lindsay Fung <lindsay.fung@deernz.org> wrote:

Hello

Please find attached evidence from the NZ Deer Farmers' Association - South Canterbury / North Otago and Canterbury / West Coast Branches (submitter #296) .

Kind regards
Lindsay



On Tue, 23 Jun 2020 at 16:38, Plan Hearings <planhearings@ecan.govt.nz> wrote:

Tena koe

The following documents have been made available on the webpage for [Proposed Plan Change 7](#) to the Canterbury Land and Water Regional Plan.

- Under the tab 'Independent Hearing Commissioner Documents' the document

[Additional questions from the Hearing Panel – 16 June 2020](#) has been made available

- Under the tab ‘Council Documents’ the [Officers' response to Questions from the Hearing Panel - 28 May 2020 and 16 June 2020](#) has been made available

In regards to Submitter’s Statements of evidence-in-chief as detailed in [Minute 6 of the Hearing Commissioners](#), we ask that evidence that is being provided by email is provided via this email address planhearings@ecan.govt.nz.

Should you have any further queries, please do not hesitate to get in touch with me.

Nga mihi

Tavisha Fernando

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Proposed Plan Change 7 to the Canterbury Land
and Water Regional Plan Hearing

**Summary Statement from
Graham Peck, Russell Rudd and Lindsay Fung
on behalf of the
South Canterbury / North Otago and Canterbury
/ West Coast Branches
of the
New Zealand Deer Farmers' Association**

17 July 2020

Contact for service:

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Introductions

Graham Peck

1. My name is Graham Peck.
2. I farm deer near Pleasant Point in the OTOP Zone. I have been farming deer since 2004 when my wife, a physiotherapist, and I moved here with our 3 children from a family farm, just north of London in the UK, to give them a more sustainable future.
3. I am the current Chair of the New Zealand Deer Farmers Association¹ – South Canterbury / North Otago Branch, a position I have held for 5 years.
4. Our farm is 380 ha of rolling downland country mixed with limestone cliffs stocked at 9-10 livestock units per ha. When our youngest son came back to the farm in 2015 it enabled me to become involved in roles such as the chairmanship of the SCNO branch of the DFA. I have had a lifelong interest in the wildlife and biodiversity, both on the land that I have been privileged to look after and all around the world.

Russell Rudd

5. My name is Russell Rudd.
6. I farm deer near Rangiora Point in the Waimakiriri Zone. I have been farming deer since 1995 firstly in Rapaura outside of Blenheim. I got started with encouragement from my late father in law who was farming down the road and gifted us 50 red weaner hinds to start breeding from. This area has been quickly taken over by the wine industry and meant we needed to move to continue deer farming along with other farming interests. In 2009 we moved south to Canterbury on to 600 ha and our deer herd has reached 400 breeding hinds.
7. I am the current Chair of the New Zealand Deer Farmers Association –Canterbury / West Coast Branch, a position I have held for 4 years. Our committee is small but effective. I have also held the Chairman's position at the Marlborough vegetable growers committee. I attended Lincoln College for two years and often host students at both of our properties. My wife is Rose and we have four children and have been heavily involved in their schooling and associated activities and fund raising. Two of our children are showing an interest in agriculture as a career.

Lindsay Fung

8. My name is Lindsay Fung.

¹ The New Zealand Deer Farmers Association is a voluntary subscription funded incorporated society representing the regional and national interests of approximately 1500 financial members. The combined membership of the two branches is approximately 700 deer farmers - the largest and dominant deer farming region in the country.

9. I am the Environmental Stewardship Manager for Deer Industry New Zealand (DINZ), a levy-funded industry-good organisation representing New Zealand deer farmers and venison processors.
10. I hold a Doctor of Philosophy from the University of Canterbury (Forestry Genetics and Tree Physiology).

Scope of Statement

11. This statement on behalf of the New Zealand Deer Farmers' Association South Canterbury / North Otago and Canterbury / West Coast Branches (NZDFA-SCNO & CWC) will cover:
 - Livestock exclusion from springs, using a deer farm in the OTOP zone as an example of farming to good management practices compared with the requirements specified in the proposed Plan Change 7 (PC7).
 - Comments on the Section 42a Hearing Report with regards to stock exclusion are also provided. Evidence for the Proposed Waikato Regional Plan Change 1 – Waikato and Waipā River Catchments Hearing (3 May 2019) is included as this is pertinent to this plan change (PC7).
 - Deer industry initiatives in environmental stewardship and the opportunity for collaboration with Environment Canterbury.
12. As per our submission we endorse Beef + Lamb New Zealand's submission and their hearings evidence. This is because:
 - We estimate that 80% of our farmers also farm sheep and/or cattle.
 - Our farming systems are virtually identical (meat production and annual production of velvet or wool) and stocking rates reflect this.
 - Unsurprisingly deer farms occur on the same terrain and localities as sheep and beef farms and so face the same environmental issues

Livestock exclusion from waterbodies (Waimakiriri and OTOP Zones)

13. We refer the hearing panel back to our original submission on stock exclusion and our specific concerns around exclusion of livestock from springs. We emphasise that our concerns are regarding exclusion from springs on farms that are typically on downlands or hill country and where livestock densities are considerably less than those found on flat, intensively farmed land. Our view is that exclusion of deer from springs or any waterbody is only possible through permanent deer fencing (with a cost of \$25/m not including labour).

Deer farming livestock intensity

14. NZDFA-SCNO & CWC note that stock exclusion from waterbodies *is generally agreed* as a preferred approach and is most *applicable and justified in intensive farming systems*. Nationally it is our observation that deer farms appear to be similar in intensity (stocking rates) to sheep and beef farms:

- South Island high country stations can have stocking rates under 5 stock units per hectare.
- Hill country farms tend to have stocking rates between 9-12 stock units per hectare.
- “Intensive” deer velvet farms or specialist venison finishing farms, typically on flat or gentle land have stocking rates between 17-19 stock units per hectare.
- By way of contrast, milking platforms might range from 18 to 28 stock units per hectare.

15. Deer (and sheep and beef) farms do not overstock farms beyond what can be supported by the feed grown on the farm (*i.e.* there is no significant amount of extra feed brought onto the farm; we estimate that perhaps 1 % – 2.5 % of the total annual feed is imported).

16. Note that these stocking rates refer to the overall farm – *i.e.* it includes all the livestock classes and species present on the farm.

Deer behaviour in and around water

17. Our understanding is that the purpose for excluding stock from waterbodies is to prevent direct deposition of dung and urine (with associated faecal bacteria and nitrogen) into the waterbody and reduce soil and phosphorus loss to the waterbody from soil disturbance around stream banks or water margins.

18. Our observation of deer in waterways is that they do not behave the same way as a dairy cow; namely that they do not increase rates of defecation or urination or seek the water out to stand in (unless there are high temperatures and a lack of shade). Other than for drinking, deer do not stand for long periods in water.

19. A 2010 report for Environment Waikato (*Faecal Contamination of Rural Waikato Waterways. Sources, Survival, Transport and Mitigation Opportunities. A review for Environment Waikato*)² supports our farmers observations and provides some alternative findings for direct deposition of *Escherichia coli* (as a proxy for effluent) in waterways:

² <https://waikatoregion.govt.nz/services/publications/tr201038/>

- "Dairy cows defecated 50 times more per metre of stream crossing than they did elsewhere on the raceway." (page 5)
- "When dairy cattle can freely access water, they defecate at a higher rate than when on land, and this is more pronounced at herd crossing points. However, beef cattle freely accessing water have not been found to defecate at a more frequent rate in water than on the paddock." (page 5)
- "In catchments where deer wallows were not connected to streams, *E. coli* levels were similar to other dry stock pastoral systems." (page 30)

20. Wallowing which is the highest environmental risk from deer *does not occur in flowing water*: where this is the case, exclusion from a water way may not have any impact on water quality. Conversely ensuring any wallows that are created do not connect with a water way will be highly effective.

Alternative mitigations

21. In our submission we explicitly identify the use of sediment traps and constructed wetlands as an alternative approach to preventing contaminants entering a waterway. This is a commonly accepted practice amongst deer farmers and widely used across the country.
22. DINZ has produced a range of advice and resources for deer farmers to adopt good management practice including "Deer Facts" – a brochure series of topics. One topic (published in 2016) is "Protecting waterways from wallow and feed pad run-off"³ and provides visual examples of the use of sediment traps, settling ponds and constructed wetlands.
23. Other options include fencing off strategic lengths of the waterway which then act as a settling out stage prior to any filtering such as a natural wetland.

Risk posed by deer to springs

24. With respect to downlands or hill country farms that are comparatively lightly stocked (12 stock units per hectare), and noting deer behaviour around water and the possibility of alternative mitigations, we question if the expense required to exclude deer from springs that may be intermittent and transient over time would provide any significant improvement of water quality.
25. As each farm has a set of particular circumstances the decision to exclude deer from springs or provide alternative mitigation is best assessed through a farm plan (such as a Management Plan as defined in PC7) that identifies springs as critical source areas and the assesses the risk factors and appropriate measures to manage the risks.

³ https://www.deernz.org/sites/dinz/files/DeerFact_Protecting_W-ways_Web.pdf

Examples of unfenced springs – deer farm in OTOP

26. Here is a picture of an intermittent spring in a paddock. The spring flows following prolonged rainfall and drains down the paddock to a waterway that has been deer fenced.



27. Fencing off this small spring and its flow path to the stream would be both costly and result in unusable small fingers of pasture, particularly with respect to moving deer between paddocks where sufficient space is required for the deer to move as a mob and with clear line of sight for their destination.
28. On the same farm the spring that supplies the house water is located on a steep slope below some pine plantings but is similarly unfenced.



29. This paddock in itself is particularly challenging for the farmer as there is a large waterway at the bottom that if retired would create more problems for stock management and weed growth. The current mitigation in place is a long, retired section (330 m long, 25 m wide) further downstream with a large sediment trap/settling pond at the exit point from the farm.
30. The farmer notes that a historic *E. coli* measurement nearby the spring had a count of 4 n/100ml (no further measurements have been done). While there is a large retirement zone and sediment trap at the exit point from the farm, the farmer notes that there are now high numbers of ducks that are found in the retired area.

Nutrient management (OTOP Zone)

31. Our submission seeks to place winter grazing where sediment and phosphorus loss are of concern (in the OTOP zone) on a consistent footing with general regional requirements for winter grazing (where nitrogen loss is of concern). We fully acknowledge that concentrating stock to feed on a crop with the resulting loss of vegetative cover creates high risk of environmental damage.
32. We note that for most deer farms that do not bring in extra stock over winter, using an intensively grazed winter crop would require between 8 – 12 % of the total farm area. Therefore, the regional 10 % of total area threshold for a permitted activity seems to capture most farms that do not bring in extra stock (e.g. dairy grazing).
33. We remain sceptical that winter grazing in the High Runoff Risk Phosphorus Zone (delineated at 1:50,000 scale mapping) is any riskier than that carried out outside of this zone. Rather that the risks can and should be managed at the paddock scale. In other words, poorly managed winter grazing outside of the zone would likely result in a worse outcome than well managed winter grazing within the zone and *vice versa*.
34. NZDFA-SCNO & CWC are aware of Environment Southland's focus on winter grazing this season in response to extensive publicity in the previous season (regarding both animal welfare and environmental impacts). DINZ and the Southland branch of the NZDFA collaborated with Environment Southland to raise awareness of good winter grazing practices although it should be noted that analysis of winter grazing in the 2019 season did not result in any deer farm requiring any follow up or remedial action. In other words, deer winter grazing were not deemed to be of concern to the council (for that particular season).
35. To date in 2020 DINZ is unaware of any winter grazing issues from deer in Southland (following aerial monitoring carried out by the council earlier in the season).

Deer behaviour during winter grazing

36. Different livestock species behaviour can influence the environmental risk and outcome. Winter grazing of deer differs from that of cattle in several aspects:

- Deer are lighter than cattle and so will cause less soil compaction or pugging under the same soil and moisture conditions.
- Because deer are browsers rather than grazers, back fencing is not always used.
- Current good farming practice includes the use of a run-off paddock and/or placing supplemental feed away from the feeding break. This results in deer spending less time concentrated at the feeding face so there is less soil damage or concentration of contaminants.
- Deer farmers observe that once deer have had their fill on the opening of a new break, the strongly social animals drift to the top of any paddock, or sit down in a sheltered aspect and rest and ruminate for long periods. It is deer farmers' experience that deer on crop maintain a different break grazing and a resting pattern than cattle and will sit out inclement conditions.
- Breaks tend to be shifted every 4-7 days rather than daily. This means that there is initially a generous amount of crop for the herd to spread out and feed.
- Crop type can also make a difference. Deer will preferentially browse kale leaf and return to the stem later. The plant also has a fibrous root system that remains in the ground and lowers the risk of pugging or soil loss. Kale produces less dry matter per hectare than fodder beet but will also have a reduced risk of soil damage and resulting contaminant loss to waterways.
- Temporary electric fencing is used to break feed crops or pasture. Deer require a 4 or 5 wire system at 1.4 – 1.5 m heights. Electric fencing.

37. Recently (June 2020) DINZ has added a Deer Fact brochure "Intensive winter feeding. Minimising the environmental risk"⁴ which contains more practices that can minimise soil and phosphorus loss from winter grazing. A further resource (visual examples of good practice) for winter grazing is in development.

38. We also wish to note for the panel that DINZ and NZDFA have provided input into developing guidelines ("Winter forage crop grazing and wet weather management. Guidelines for FEP auditor")⁵ for the auditing of winter grazing by Environment Canterbury-approved independent Farm Environment Plan auditors (the guideline came into effect as of 1 July 2020).

⁴ https://www.deernz.org/sites/dinz/files/DeerFact_IntensiveWinterFeeding_V8_Web.pdf

⁵ <https://www.ecan.govt.nz/your-region/farmers-hub/fep/information-for-auditors/>

Example of winter grazing – deer farm in OTOP

39. Here are photographs of a winter grazing block on the same deer farm.



Deer grazing on a kale winter crop (deep break and note the residual stems in the foreground that will be eaten after the foliage has been eaten).



Supplemental feed placed away from the feeding face to avoid stock lingering at the face and positioned at the top of the slope, away from waterways

40. Rather than require all farms that have 20 ha or more winter grazing crop to seek a consent for grazing, a requirement for a Management Plan that includes winter grazing would reduce cost for farmers (to demonstrate what many are already doing as business as usual) and administrative burden for council staff. A subset of farms in catchments that are prioritised by in-stream sediment or Phosphorus issues or extent of winter cropping could then be required to show how their Management Plans address risks from winter grazing.

Comments on the Section 42a Hearing Report with regards to stock exclusion

41. We note that our concerns are acknowledged in the Section 42a report (page 366, paragraphs 12.133 and 12.134):

*"12.133. In relation to the applicability of the provisions to springs, Part 2 Section 4 provides a recommendation to insert a definition that describes springs that have a connection to a surface waterbody. This definition would ensure that the stock exclusion provisions do not apply to seepages or springs **where there is no downstream connection**. The insertion of this definition would address the submissions from South Hilton Ltd, Knocklyn Holdings Ltd, Orari Gorge Station and Woodbury Deer Industry Environment Group.*

*12.134. Overall, we recommend changes to enhance management of springs in FEPs along with minor changes to the Policy and Rule framework so that stock is required to be **excluded from springs when they contain water**, and greater encouragement of protection of seeps and springs that are not flowing is achieved through FEPs."*

42. While this is encouraging, we remain concerned with two aspects: i) how a "downstream connection" is defined and ii) exclusion from (intermittent) springs when they contain water.
43. The two springs shown in the photographs above could be considered to have a "downstream connection" as when water is flowing it flows down the slope and connects with the stream at the bottom of the paddock. These paddocks are generally lightly stocked and there is no evidence of soil damage/loss immediately around the springs.
44. As stated earlier, exclusion of deer from springs or any waterbody is only possible through permanent deer fencing. Therefore, regardless of when the spring is flowing or not (and what stocking rate is used in the paddock), permanent deer fencing will be required.
45. On page 537, paragraph 8.404 of the Section 42a report we consider that the authors have failed to understand the nature of our concerns. The paragraph reads:

"8.404. With regard to the concerns that fencing could lead to further sedimentation on deer farms, Policy 4.34 requires farming activities that have nutrient losses to operate at good practice or better. The Deer Industry of New Zealand has prepared an Environmental Management Code of Practice which outlines practical guidance for minimising the environmental impacts from deer farming.²²⁸⁷ The code of practice describes a number of practices for addressing fence pacing which under the CLWRP should be implemented in addition to excluding deer from waterways. We therefore do not recommend any amendments."

46. In essence the authors are suggesting that deer farmers create greater potential risk by erecting permanent fencing that then changes deer behaviour and then spend more effort and expense to remediate that risk be it fence pacing or wallowing.
47. A more cost-effective approach would be managing the stocking rate appropriately (standard practice rather than good practice) and consider strategically placed mitigations (retired areas, sediment traps, wetlands) at stream exit points from the paddock/farm.
48. The authors only identify fence pacing as a perverse outcome, but wallowing may also occur in response to erecting a fence. By way of example NZDFA (Waikato & Waipā branches) submitted farmer evidence for the Proposed Waikato Regional Plan Change 1 – Waikato and Waipā River Catchments Hearing (3 May 2019) and is reproduced here:

Unintended consequences – deer behaviour



49. *"Moving back down to the flatter land, one of the main waterways has been fenced off, however soon after, this wallow was formed. At the moment it is not connected to the stream, but this may become an issue in heavy rainfall events or if the wallow increases in area. Creating an alternative wallow further back from the stream and filling in this wallow with rocks is one potential solution. The farmer has sub-soil*

drained the wallow and intends to create an alternative wallow further back in the paddock."

50. This hill country farm is in typical topography of the Waipā catchment where the main concern is sediment and Phosphorus loss to waterways. The farm is 326 hectares of which about 300 is effective (and includes areas of bush and tree cover). The predominant soil is Mairoa Ash – light and free draining and with a degree of erosion risk. Annual rainfall is about 1200 mm and elevation is between 350 – 450 m. This farm has a stocking rate of 12 stock units per hectare and has only fenced the flat sections of the farm (perhaps covering one third of the farm catchments' lengths).

Lower stream water quality monitoring site



51. *"Close to where the water exits the farm, the regional council has conducted two assessments of stream health using the Macroinvertebrate Community Index (MCI) score and surveying fish species. The last assessment was in early 2018 (summer) and provided very good results – the MCI score was well above the average for the 60 sites that were assessed across the region and is not too dissimilar to a score typically seen under native forest."*
52. We refer to this as an example of where a lightly stocked farm that does not exclude stock from all the waterways but does implement good management practices can both farm livestock and maintain good ecological stream health... in an catchment where the priority is on minimising sediment and phosphorus loss.
53. In essence deer farms that operate at good management practice demonstrate a number of common features:
- Farms are stocked to a level that the land can sustain in terms of feed grown (with minimal imported feed for specific times of the year).

- Farmers understand different animal species and stock class behaviours and manage stock accordingly to minimise stress.
 - Farmers understand critical source areas and other environmental risk factors on the farm and apply the most cost-effective measures to minimise the risks.
54. These are best documented through a Farm Plan and where nitrogen is not a major concern (most deer, sheep and beef farms do not rely on large inputs of nitrogen), a Management Plan as defined in PC7 would be an appropriate tool for this purpose.

Deer Industry Initiatives

55. In May 2018 DINZ released an environmental management code of practice, designed to be compatible with a farm plan and aligned with the Beef + Lamb New Zealand (B+LNZ) Land and Environment Plan toolkit. Environment Canterbury staff provided advice and input.
56. Additional information has been developed through i) the industry – government partnership programme “Passion to Profit” (P2P) in the form of fact sheets and, ii) fifteen videos developed by Landcare Trust on sustainable deer farming practices. A more detailed list of industry activities on environmental stewardship is provided in the foreword of the code of practice. A soft copy of the Code of Practice will be provided to the hearing panel on a USB card.
57. The industry continues to support B+LNZ environment planning workshops and is also providing resources (funding, facilitators and consultants) for deer farmers to establish environment “practice change” groups across the country following the successful P2P Advance Party model that facilitates farmer-to-farmer support and critical review. Some Advance Parties focus on environment issues or have chosen to focus on them for a year to complete and action their farm plans.
58. NZDFA-SCNO & CWC are also working alongside Environment Canterbury to help implement Plan Change 5 – independent auditors for Environment Canterbury are provided with training visits to deer farms to view environmental issues and deer farming practices. In February 2019 auditors undertook a mock audit of a deer farm and results were later discussed with local deer farmers. This event was reported in the April/May 2019 edition of the industry magazine “*Deer Industry News*” (page 22, hard copies will be provided at the hearing).
59. Similarly, Environment Southland assisted NZDFA-Southland to run a farm plan workshop for all Aparima catchment deer farmers in March 2019 and partners closely with the industry’s Southland Environment Advance Party. The industry will continue to support further groups and collaborate with Environment Southland to implement good environmental management practices on Southland deer farms.

60. NZDFA- SCNO & CWC extend a similar invitation to collaborate with Environment Canterbury to ensure deer farmers complete and action their farm plans and minimise their environmental impacts from farming activities, and wish to see policies and rules in PC7 that encourage such collaboration.

61. We thank the commissioners for hearing our concerns.