

**BEFORE COMMISSIONERS APPOINTED
BY THE CANTERBURY REGIONAL COUNCIL**

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of the First Schedule to the Act

AND

IN THE MATTER of Canterbury Regional Council proposed Plan
Change 1 to the Hurunui and Waiau River
Regional Plan: Dryland Farming

AND

IN THE MATTER of submissions under clause 6 First Schedule

BY **BEEF + LAMB NEW ZEALAND LIMITED**
Submitter

BRIEF OF EVIDENCE OF DR LINDSAY EUAN FUNG

4 October 2019

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QUALIFICATIONS AND EXPERIENCE

1. My full name is Lindsay Euan Fung.
2. I am the Environmental Stewardship Manager for Deer Industry New Zealand (DINZ), and have been employed in that capacity since 2014. I have a Doctor of Philosophy in Forestry (tree physiology and genetics).
3. I have over 20 years' experience in natural resource management research and planning through my current position and previous roles as a scientist (soil conservation), regional council environmental science team leader and science and policy manager (for the deer and horticulture industries).
4. I have been involved in a professional capacity in a wide range of national and regional natural resource planning matters with a focus on developing policy which will ensure the sustainable management of land and freshwater resources through credible water quality limits and pragmatic provisions that allow farming to remain profitable within environmental and social limits.
5. I have worked collaboratively with Greater Wellington Regional Council (stock exclusion from waterways guidelines), Environment Canterbury (Matrix of Good Management) and Environment Southland (Southland Economic Project) in pre-policy development stages for their respective regional plans. I am currently coordinating the deer industry's approach to implementing Farm Environment Plans (FEPs) across the country but with particular collaboration with Environment Canterbury (FEP Auditor training) and Environment Southland (FEP workshops and farmer groups).
6. I have been involved in national level technical groups such as the Land and Water Forum Stock Exclusion "flexi-group", the Cadmium Working Group, the Pan Sector Intensive Winter Grazing Group, the Land Use Capability Classification Governance Group and the Biological Emissions Reference Group.
7. I have provided expert evidence to the Environment Court on the Horizons One Plan and statements of evidence for regional or district plans (Northland, Waikato, Bay of Plenty, Gisborne, Greater Wellington, Marlborough, Canterbury and Southland).
8. Although I am employed by Deer Industry New Zealand, over 80 % of deer farmers also farm mixed livestock (sheep and/or beef cattle). Other than managing deer-specific behaviours, the evidence submitted by Beef + Lamb New Zealand applies in all cases to

deer farms. The farming systems are identical regardless of livestock species mix and the two industries are only differentiated by different revenue sources coming from essentially the same land classes and production systems.

9. This brief of evidence provides a planning assessment which specifically focuses on the matters in the Canterbury Regional Council's ('CRC') proposed Plan Change 1 (PC1) to the Hurunui and Waiau River Regional Plan (HWRRP): Dryland Farming, and on which Beef + Lamb New Zealand submitted. The evidence includes:
 - a) Support for Beef + Lamb New Zealand's Submissions and further submissions on PC1.
 - b) Support for the recommendations in the Officers' s42A report.
10. In preparing this evidence I have reviewed the plan change, supporting reports and statements of evidence of other experts relevant to my area of expertise, and relevant background documents and technical reports, including:
 - (a) CRC proposed Plan Change 1;
 - (b) CRC s32 report;
 - (c) CRC s42A report;
 - (d) B+LNZ submission on PC1;
11. I have read the Code of Conduct for Expert Witnesses in the Environment Court's 2014 Practice Note and agree to comply with it. I confirm that the opinions I have expressed represent my true and complete professional opinions. The matters addressed by my evidence are within my field of professional expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

EXECUTIVE SUMMARY

12. Plan Change 1 is intended to give effect to the Canterbury Regional Policy Statement, the Hurunui Waiau Zone Implementation Programme 2011, the Canterbury Water Management Strategy (CWMS), and to implement the NPS-FM.
13. In relation to the NPS-FM PC1 must:
 - (a) Consider and recognise Te Mana o te Wai in the management of freshwater¹;
 - (b) Safeguard life supporting capacity, ecosystem processes and indigenous species and their associated ecosystems, along with the health of people and communities as affected by contact with freshwater²;
 - (c) Enable communities to provide for their economic well-being, including productive economic opportunities, in sustainably managing freshwater quality³;
 - (d) Maintain and where degraded improve overall water quality within a freshwater management unit⁴
 - (e) Set freshwater objectives for values in accordance with policies CA1 – CA45; which includes:
 - i. Considering at all relevant points in the process how to enable communities to provide for their economic well-being, including productive economic opportunities, while managing within limits⁵;
 - ii. set water quality limits and targets to achieve the freshwater objectives,

¹ National Policy Statement for Freshwater Management (2014), updated August 2017, Objective AA1.

² National Policy Statement for Freshwater Management (2014), updated August 2017, Objective A1.

³ National Policy Statement for Freshwater Management (2014), updated August 2017, Objective A4

⁴ National Policy Statement for Freshwater Management (2014), updated August 2017, Objective A2

⁵ National Policy Statement for Freshwater Management (2014), updated August 2017, Policy A1.

⁶ National Policy Statement for Freshwater Management (2014), updated August 2017, Policy CA2 (f) iab.

- iii. phase out existing over allocation, and
 - iv. Improve and maximise the efficient allocation and efficient use of water.
14. Some of the key issues to be resolved in these proceedings, are the appropriate means of addressing nutrient losses to water from low intensity dryland farmers while providing for the flexibility in those systems to provide for economic wellbeing and resilience, as well as allowing for regulation to be proportional to risk and environmental effects.
 15. There is a requirement for certainty when imposing regulation on communities. That certainty allows for communities to plan for their future and make decisions about their wellbeing, including socially, economically and spiritually. Agriculture is the Hurunui sub-region's main economic activity and is vitally important to the sustainability and well-being of its communities. The sheep and beef sector is a significant farm type and employer within the region. These factors combined mean that the sheep and beef sector is inextricably linked to the Hurunui's viability and economic success.
 16. PC1 proposes to enable existing dryland farms to continue to operate without resource consent within the Nutrient Management Area of the Hurunui Waiau Zone. It proposes to do so by:
 - (a) Acknowledging the comparatively small nutrient contribution by dryland farm systems to freshwater; and
 - (b) Providing for dryland farming as a permitted activity, including where the farming practices winter grazing over part of the property; and
 - (c) Allowing for a farmer collective to manage and audit Management Plans within a catchment; and
 - (d) To enable all of the above without the requirement for farms to have an Overseer nutrient budget or similar by requiring dryland farms that are permitted under the proposed rules to register with Farm Portal instead.
 17. PC1 takes the approach that contaminants from low intensity dryland systems should be managed through tailored Management Plans and through the limiting of permitted winter grazing by a threshold of 10ha on a property less than 100ha, 10% of a property between 100ha and 1000ha, and 100ha of winter grazing for any property over 1000ha.

18. The sheep and beef industry is diverse, adaptable and to date has been resilient, continually making eco-efficiency ⁷ gains in how it produces red meat. Sheep and beef farmers have managed to increase meat production, while decreasing the total number of animals farmed, made significant progress in reducing their environmental footprint, while losing some of their most productive land to other land uses.
19. Overland flow is the primary contaminant transport pathway associated with sheep and beef farming, although the nature and scale of this loss are highly variable throughout the region. Contaminants most commonly associated with overland flow include sediment, phosphorous, and faecal bacteria. Nitrogen loss to water is proportionally much less of a concern for the sector.
20. In my opinion policy approaches that take into account the relative environmental impacts of land use and discharges, and which are sensitive to farm system and land use flexibility within boundaries, provide for integrated natural resource management. These are the most appropriate approaches to achieving the purpose of the Act, and the most efficient and effective way to achieve the objectives of the Plan.
21. Tailored integrated sub-catchment management provides an efficient and effective method to sustainably manage land and water resources in a way which provides for the economic, social, and cultural wellbeing of communities, and as such should be enabled and empowered through PC1.
22. Tailored Management Plans, focussed on reflecting the natural character of the farm in its catchment context, along with the identification and management of critical source areas, provides an approach which is farm, and catchment-specific, adaptable and can be implemented and owned by farmers and communities.
23. The recommendations made through this planning evidence are designed to provide land use flexibility, and allow for innovation, adaptability and resilience within the sheep and beef sector, while giving effect to the vision and principles of the CWMS, NPS-FM and CRPS, along with meeting the purpose of the Act.

⁷ Eco-efficiency is based on the concept of creating more goods and services while using fewer resources and creating less waste and pollution; and is a tool used to promote a transformation from unsustainable development to one of sustainable development.

B+LNZ SUBMISSION

24. B+LNZ have made a submission on PC1 that I have summarised below. This evidence is intended to focus on and address the resource management issues raised in the submission, and provide a planning analysis of that submission, including the planning justification of the relief sought and evaluation.
25. B+LNZ's submission was based on ongoing feedback given to the CRC throughout the process of developing PC1. B+LNZ considered that he notified plan change had taken that feedback into account and so supported the plan change.
26. In particular, B+LNZ supported:
 - (a) New Policy 5.3C;
 - (b) Changes to Rule 10.1;
 - (c) New Rule 10.1.A;
 - (d) Changes to Rule 10.2;
 - (e) 'Change of land use' definition;
 - (f) 'Dryland farmer collective agreement' definition;
 - (g) 'Low intensity dryland farming' definition;
 - (h) 'Winter grazing' definition;
 - (i) Schedule 2A.
27. My understanding of B+LNZ's submission is that the organisation supports the establishment of actions to manage water quality, and in particular the identification of environmental risk tied with appropriate actions to avoid, remedy, or mitigate this risk. B+LNZ supports the provisions as they are sufficiently linked to commensurate effects on water quality or ecosystem health and processes.

BACKGROUND WATER QUALITY & FARMING LAND USES

28. CRC have identified water quality as a regionally significant issue which is intended to be addressed through HWRRP PC1.
29. The Hurunui and Waiau Rivers contains significant conservation, community, cultural, and recreational values.
30. Both rivers support wetlands of representative importance and the Hurunui River is an area of statutory acknowledgement to Ngāi Tahu. The sub-region generally also contains sites of special wildlife significance and Rūnanga Sensitive Areas.
31. Both rivers are used for recreational swimming, fishing, water sports, and are important to the identities of the people who inhabit the sub-region.
32. PC1 must give effect to the NPS-FM. It says that *“New Zealand faces challenges in managing our fresh water to provide for all of the values that are important to New Zealanders. The quality, health, availability and economic value of our fresh water are under threat... To respond effectively to these challenges, we need to have a good understand of our freshwater resources, the threats to them, and provide a management framework that enables water to contribute to New Zealand’s economic growth and environmental integrity and provides for values that are important to New Zealanders”*.
33. Water quality degradation is caused by both point source discharges from municipalities, storm water discharges, and discharges from factories, along with non-point source pollution from farming, which cumulatively contributes to the state of freshwater quality and associated ecosystem health. The principal driving factors for these adverse effects include nutrient levels, loss of riparian habitats, altered and reduced flows, suspended and deposited sediment, along with faecal contamination. Pest species and changes to the physical habitat of the rivers systems, such as dams, also contribute to changes in the natural character of the river and its associated values. All externalities of concern are required to be managed in order to protect the life supporting capacity of the region's freshwater resources, and in giving effect to the vision and principles of the CWMS.

34. PC1 also specifically attempts to address equity issues, as recognised in the Summary of Evaluation under Section 32 of the Resource Management Act R19/23 ('s32 Report').⁸
35. The sheep and beef sector is economically important at both the regional and national scale. The New Zealand sheep and beef sector's total value of production is \$10.4 billion, with exports worth \$7.5 billion and domestic sales worth an additional \$2.9 billion in 2018. The sector has 80,000 employees, of which 59,000 are directly employed and an additional 21,000 indirectly employed.
36. The sector exports over 90 percent of its production and is New Zealand's second largest goods exporter and largest manufacturing industry. B+LNZ's Economic Services annual New Season Outlook Report (annexed at Appendix A) released 3 October 2019 has forecast sheep and beef exports to each pass \$4 billion for the 2019-2020 season. The health and wellbeing of the red meat sector within New Zealand is important to the economy and regional New Zealand, accounting for 3.2 percent of gross domestic product.
37. The importance of agriculture to the economic, social, and cultural wellbeing of the region is recognised in the Canterbury Regional Policy Statement chapters 1.2.2 and 15; and is recognised and provided for within PC1 through Policy 5.3 and Rule 10.A.

PLANNING APPROACH PROPOSED BY CANTERBURY REGIONAL COUNCIL

38. CRC has a statutory role under the Resource Management Act 1991 to promote the sustainable management of natural resources, including, but not limited, to the control of discharges of contaminants into or onto land, air, or water, and controlling the use of land for the purpose of maintaining and enhancing water quality.
39. A core focus of PC1 is to ensure that dryland farming in the Hurunui Waiau zone is not unreasonably constrained by the rule framework managing the cumulative effects on water quality from land use while still implementing the NPS-FM.

⁸ S32 Report p9,10

STATUTORY FRAMEWORK

40. When evaluating the provisions of PC1, I have adopted the modified *Long Bay-Okura* tests. I am mindful of the relevant provisions of the RMA at part 2 to part 5 that impact upon my analysis, but in the interests of efficiency I have not repeated them here.
41. The evaluation I have undertaken in preparing this evidence is underpinned by the requirements set out above. I do not analyse each provision against each of the tests, but where my evaluation requires it I have provided commentary on specific tests.
42. The s32 report and the s42A report provide an assessment of PC1 against the RMA and relevant planning documents. I do not replicate that assessment, but rather focus on areas where I have a different interpretation or view.

RELEVANT PLANNING DOCUMENTS

43. Along with the Resource Management Act, The Te Rūnanga o Ngāi Tahu Act 1996 and the Ngāi Tahu Claims Settlement Act 1998 are relevant for PC1 when applying sections 6(e), 7(a), and 8 of the RMA.
44. Other planning documents that the Plan must give effect to are⁹:
 - (a) The NPS-FM;
 - (b) The New Zealand Coastal Policy Statement (NZCPS);
 - (c) National Environmental Standard for Sources of Human Drinking Water; and
 - (d) The CRPS.
45. The relevant planning documents that the Plan must have regard to are¹⁰:
 - (a) The Canterbury Water Management Strategy; and

⁴¹Section 67(3) RMA.

¹⁰ Section 66(2) RMA.

46. The relevant planning documents that the Plan must take into account are¹¹:
- (a) Iwi management plans:
 - i. Te Whakatau Kaupapa: Ngāi Tahu Resource Management Strategy for the Canterbury Region (1990); and
 - ii. Te Rūnanga o Ngāi Tahu Freshwater Policy Statement (1999); and
 - iii. Mahaanui Iwi Management Plan 2013 (February 2013)
 - iv. Te Puhu o Tohu Raumati: Te Rūnanga o Kaikōura Environmental Management Plan 2007

National Policy Statement for Freshwater Management 2014

47. The key national policy statement of relevance to PC1 is the NPS-FM, as amended in 2017. The NPS-FM directs regional councils to determine community values for freshwater, which must include national values, set freshwater objectives, limits, targets and methods in regional plans to achieve freshwater objectives, to avoid over allocation, and where over allocation exists to phase this out over time. This applies to both water quality and quantity. These limits, targets and methods are to achieve the objectives of the NPS-FW.

PLANNING ASSESSMENT OF CANTERBURY REGIONAL COUNCIL PC1

48. This section of my evidence identifies the key issues, in relation to the submission by B+LNZ. I consider the evidence I have available to me and examine the proposed provisions against the statutory tests set out previously in this evidence. Where required I provide amendments to, or alternatives to the provisions, which in my opinion are a more efficient and effective way to achieve the purpose of the Act, and to give effect to the NPS-FM and Vision and Strategy, taking into account the costs and benefits, and the risk of acting or not acting if there is uncertain or insufficient information.

¹¹ Section 66(2A)(a) RMA.

Policy 5.3C (To protect existing values, uses and the mauri)

49. The Section 42A report recommends a minor addition to the proposed wording, to include the Jed catchment. The rationale for inclusion provide in paragraph 154 seems logical and on that basis the amendment is reasonable.
50. The report also argues against proposed amendments from other submissions and of particular relevance to Low Intensity Dryland Farming (LIDF) it notes that amendments proposed by Fonterra are redundant as they will be more specifically addressed through Rule 10.1A. I agree with this rationale and note that the existing wording already encapsulates the inherent need for flexibility in LIDF systems while Rule 10.1A prevents more intensive on-farm development beyond “business as usual” for the LIDF system.
51. Policy 5.3C is part of a suite of policies to manage the cumulative effects of land use on water quality, which are articulated as Objectives 5.1 and 5.2 (managing concentrations of nutrients entering mainstems and tributaries).
52. In my opinion PC1’s objectives (5.1. and 5.2) are consistent with the recent draft National Policy Statement for Freshwater Management. Further, Policy 5.3C specifically accounts for the variability of LIDF systems while subject to the aims of protecting existing water values, uses and mauri.
53. As such I support the Officers’ recommendations¹².

Rule 10.1

54. The Section 42A report (paragraph 178, page 42) does not recommend any amendments to this rule but notes submissions that seek to prevent Low Intensity Dryland Farming activities from operating under proposed Rule 10.1A until the 38tN/year load lost from source in the Hurunui catchment has been surrendered by Amuri Irrigation and that the surrender rate be increased to 50tN/year.
55. I note that in addition to the observation that there is a lack of technical evidence to support the increase to 50 tN/year, the unamended wording of Rule 10.1 and the presence of the

¹² Section 42A Report, paragraph 161, page 38.

Deed of Undertaking provides both i) certainty and ii) good faith for all affected parties (LIDF operators, Amuri Irrigation and Environment Canterbury).

56. In my opinion, given the genesis of PC1, demonstrating good faith is an extremely important component of achieving the desired outcomes of Objectives 5.1 and 5.2. Good faith establishes the basis for collaborative action and engenders trust such that LIDF owners actively implement Management Plans rather than treat them as a compliance/tick box exercise.
57. In addition the certainty provided by Rule 10.1 complements the good faith and allows planning (and implementation) of actions identified in the Management Plans to proceed with confidence. This rule provides the context for council and industry support initiatives to assist farmers develop and action Management Plans.
58. As such I support the Officers' recommendations¹³.

Rule 10.1A

59. As described in the Section 42A report, this rule appears to have been generally supported by submitters, albeit with some caveats, which do appear to be covered either in other rules (PC1 has already identified the two most likely activities that could cause large increases in nutrient losses from LIDF: increased areas under irrigation or *in situ* grazing of crops, typically during winter) or in activities that sit outside of PC1's ambit (viz council support for farmers to prepare management plans).
60. In my opinion Rule 10.1A is fundamental to the crux of the purpose of PC1, which is described in the Section 32 report (page 4) as "*a new suite of provisions to provide for low intensity dryland farming to operate as a permitted activity.*" And: "*Plan Change 1 will not alter the provisions for any activity other than low-intensity dryland farming.*"
61. The requirement for LIDF to have a Management Plan is similar in impact to a resource consent to farm, albeit without consent fees and with consent conditions being replaced by identified activities and practices that need to be undertaken in order to minimise contaminant losses from LIDF systems.

¹³ Section 42A Report, paragraph 178, page 42.

62. Pre-cursors to these Management Plans can be seen in soil conservation plans/traditional farm plans, mostly carried out for North Island hill country farms. Interestingly these plans – undertaken by specialised soil conservators *in conjunction* with the land owner – are viewed favourably by land owners and continue to be used as a basis for land management decisions within the farm. The crucial aspect of these plans is that they highlight strengths and weaknesses of each paddock, thereby allowing the manager to identify and assess opportunities and threats/risks of various livestock policies, animal husbandry practices or alternative land use for each paddock/block.
63. PC1 Management Plans have the potential to offer the same tailored approach to each LIDF business (with the additional benefit of industry endorsed good farming principles/practices and wider consideration of on-farm contaminant losses and their connection to in-stream water quality values). As such Rule 10.1A is a fundamental foundation for PC1 and successful implementation (through collaborative efforts of farmers, industry bodies, iwi and the council) should be a prime focus to achieve Objectives 5.1. and 5.2.
64. Further, LIDF is quite specific and targets those farms that should be considered as “low environmental risk” businesses, generally characterised by relatively low stocking density, minimal fertiliser inputs, significant areas of non-pasture (including retired areas, riparian plantings and wetlands), farming to an inherent natural carrying capacity of the land (i.e. the land can produce so much feed per year or season, so stock numbers are set at levels that do not exceed this production) – and in the case of North Canterbury many farmers will farm more conservatively due to the common pronounced dry summers that occur.
65. Given that LIDF systems at a farm level are less risky than other systems in terms of impacts on waterways, it seems appropriate that they operate at a permitted activity status, subject to the implementation of a Management Plan that provides the necessary on-farm detail for managing activities and critical source areas that do present the most likely risks. In other words the level of regulation is proportional or at least reflective of the level of risk.
66. One final comment on the implementation of Rule 10.1A and expanding on my comment in paragraph 74. The Dryland Farmer Collective or indeed any form of catchment or farmer collective offers a potentially very effective vehicle for developing robust Management Plans and then encouragement and support for individual members to follow through with commitment to implementation.

67. Catchment and farmer industry groups are increasingly being formed across the country and their popularity amongst farmers is due in part to i) peer support and confidence building, ii) local people responding to local issues, iii) ability to address issues that might span two or more farms rather than having fragmented individual actions, iv) ability for regulators, rural professionals and industry-good bodies to provide technical assistance and/or administrative support.
68. From a regulator's perspective a catchment group approach will help members understand the cumulative effects of farm practices (good and bad) on the catchment water quality and ability to meet the objectives of PC1. It is also noted that this approach has been endorsed in the recent Government discussion document "*Action for healthy waterways*".
69. A well-known successful example is the Pomohaka Water Care Group in Otago, and more recently the King Country River Care Group in the Waikato. In Southland there are 19 newly formed catchment groups in addition to industry specific groups set up assist farmers meet environmental responsibilities (for LIDF equivalents these include the Red Meat Profit Partnership Action Groups and the Deer Industry Environment Groups and Advance Parties).
70. I therefore support the Officers' recommendations¹⁴.

Rule 10.2

71. I support the Officers' recommendations to amend this rule as per page 44 of the Section 42A report.

Rule 11.1

72. I support the Officers' recommendations that there are no amendments this rule as per paragraphs 185 and 185, page 43 of the Section 42A report.

¹⁴ Section 42A Report, paragraph 175, page 41.

Definitions

Change of Land Use.

73. I note that the Section 42A report refers to a proposed amendment to the definition for *Change of Land Use* but argues against this as it changes the focus away from LIDF to low intensity farming which may include some irrigation. Paragraph 141 of the report outlines how this is not possible (beyond the scope of PC1 and requires further nitrogen loss reduction beyond the level in the Deed of Understanding).
74. I therefore support the Officers' recommendations to retain the definition as proposed in PC1.

Dryland Farmer Collective Agreement

75. Proposed amendments to the definition for *Dryland Farmer Collective Agreement* are sought by two submitters. One amendment is already rebutted in paragraph 141 of the Section 42A report as mentioned above while the other amendment (sharing information for monitoring) is covered under Rule 10.1A and Schedule 2A.
76. I therefore support the Officers' recommendations to retain the definition as proposed in PC1.

Low Intensity Dryland Farming

77. A number of submitters have sought amendments to the definition of *Low Intensity Dryland Farming* as described in the Section 42A report. I agree with the Officers' rationale and recommendation that the definition is retained as proposed.
78. In particular I would re-emphasise two key features of LIDF: i) the potential/ability to use brought in feed during times of feed shortage (to maintain stock or productivity gains leading up to a feed shortage; and ii) the potential to use a hardstand area such as a feedpad or self-feed silage pit during times of feed shortage (especially during winter) as opposed to prolonged periods of controlled feeding to achieve high weight gain (feedlots).
79. In both situations there is no overall intensification of the farm (no increase in stock numbers, nor increase in production of meat, or fibre, or velvet) and in some aspects these uses can be more assured of a beneficial result for in-stream values (brought in feed can be placed well away from waterways, feedpads or self-feed silage pits can be sited similarly (perhaps with a run off block or woodlot) and sumps for collecting leachate can be installed.

80. Conversely removing these options could result in greater risk of sediment loss to waterways and associated phosphorus and faecal pathogens (as pasture is more intensively grazed and bare ground is exposed).
81. As a passing comment I am unaware of how much imported feed is used for North Canterbury LIDF systems but DINZ has looked at three mixed livestock farms (with deer) that would fall in the LIDF definition (two in Hawkes Bay, one in South Canterbury) and found that imported feed accounted for 1-2.5 % of the total feed. That is, drystock farmers tend to grow their own feed either *in situ* and grazed or harvested and stored (as baleage or silage).

Winter Grazing

82. I support the Officers' recommendations to retain the definition as proposed in PC1 (Section 42A report, paragraph 205, page 48). The rationale is that winter grazing applies specifically to crops grown *in situ* and grazed – rather than feed that is brought in and applied in a number of ways that can spread the stock intensity across a larger area or remove the risk away from waterways.
83. Winter grazing is a high risk activity precisely because stock are confined to a small feeding area and the crop is fully grazed so that mostly bare ground is left.
84. Brought in feed is typically not supplied to the stock in such a manner. While feeding stations or portable feeders with supplemental feed can be sited in the winter grazed paddocks it would be counter intuitive to site them close to the feeding face as this defeats one of purposes of winter grazing practice to fully utilise the feed provided by the winter crop.
85. Further, as mentioned in paragraph 96, brought in feed whether for winter grazing, summer drought, or any “pinch” feed period is likely to only be a small proportion of total feed for LIDF systems.
86. For these reasons I do not support the proposal that supplementary feed is included in the definition.

Schedules

Schedule 2A

87. The Section 42A report recommends no amendments to the proposed Schedule 2A. I support this view, particularly as the one amendment submitted relates to the definition of LIDF and the requirement to monitor and report imported feed.
88. As this has been discussed in paragraphs 92-96 and again in paragraph 100, the inclusion of reporting on imported feed does little to contribute to informed risk assessment and creates additional administrative burden for the farmer and regulator alike while providing no additional environmental benefit.

DATED 4 October 2019



Dr Lindsay Euan Fung