

From: [Charlotte Wright](#)
To: [Plan Hearings](#)
Cc: [Bianca Sullivan](#); [Jennifer Leslie](#)
Subject: PC7 OTOP DairyNZ Evidence
Date: Thursday, 16 July 2020 8:29:21 pm
Attachments: [PC7 OTOP DairyNZ Economic Evidence Jennifer Leslie.pdf](#)
[PC7 OTOP DairyNZ planning evidence Bianca Sullivan.pdf](#)

Good evening

Please find attached for DairyNZ:

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Planning evidence of Bianca Sullivan

Economic evidence of Jennifer Leslie

Charlotte Wright

Senior Policy Advisor

Environmental Change Team

Te tuku I tetahi anamata pai ake, mo nga kaipamu

Delivering a better future for farmers

DairyNZ

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Work days/hours:

Monday, Tuesday, Wednesday

Thursday, Friday: 10-2

IN THE MATTER

of the Resource
Management Act 1991

AND

IN THE MATTER

of Part B of proposed Plan
Change 7 of the
Canterbury Land and
Water Regional Plan

AND

IN THE MATTER

of the submissions and
further submissions by
DairyNZ

**STATEMENT OF EVIDENCE OF BIANCA JANE SULLIVAN
FOR DAIRYNZ LIMITED**

17 July 2020

INTRODUCTION

1. My name is Bianca Sullivan.
2. I hold the qualifications of Bachelor of Science (Microbiology) from the University of Canterbury and Master of Applied Science (Honours) in Environmental Management from Lincoln University. I have 25 years of experience in environmental planning and resource management.
3. I am an Environment Planner and Director at Enviser Limited and have been in that role since 2017. My work over the last 20 years has focussed on water and nutrient management, primarily in the Canterbury region. In my previous role as a Principal Consents Advisor at Environment Canterbury (2006 to 2017), I managed a number of large consenting processes, including Hurunui Water Project, and provided input to the preparation and interpretation of regional plans, including the Canterbury Land and Water Regional Plan (LWRP).
4. In my current role I undertake a range of planning and policy work for local government and private clients. I am also a Certified Hearing Commissioner and undertake hearing commissioner work for regional councils.
5. I am particularly familiar with the implementation of the water allocation and nutrient management provisions of the LWRP. For Environment Canterbury, I am currently leading the processing of discharge permit applications by Ashburton Lyndhurst Irrigation Limited, Barrhill Chertsey Irrigation Limited and MHV Water Limited to discharge nutrients, and am leading a review of 89 water permits in the Hakatere / Ashburton River catchment to implement the LWRP minimum flows.

SCOPE OF MY EVIDENCE

6. This statement of evidence does not provide a comprehensive planning analysis of the relevant statutory documents, but rather focusses on the provisions of Part B of Proposed Plan Change 7 (PC7) that relate to Section 14 of the LWRP that are covered by DairyNZ's submission and further submission. I was involved in drafting DairyNZ's submission, which focuses on the proposed

nutrient management approach for the Orari-Temuka-Opihi-Pareora sub-region (OTOP), including the nitrogen loss reductions proposed for the three High Nitrogen Concentration Areas (HNCAs).

7. In preparing my evidence I have considered the following documents:
 - 7.1 The notified proposed PC7 and accompanying section 32 report;
 - 7.2 The operative LWRP;
 - 7.3 The section 42A officers' report, including the recommended amendments to provisions and errata table dated 29 April 2020;
 - 7.4 The Orari-Temuka-Opihi-Pareora Zone Implementation Programme Addendum (ZIPA);
 - 7.5 The National Policy Statement for Freshwater Management 2014, incorporating the changes made in 2017 (NPSFM);
 - 7.6 The Canterbury Regional Policy Statement (RPS); and
 - 7.7 The evidence of Ms Jennifer Leslie for DairyNZ.
8. I have referred to the s42A recommendations and analyses where available, however note that the s42A report contains little detailed analyses for submission points on the provisions of Section 14. Rather, it mostly refers to the general discussion elsewhere in the report which is sometimes of limited value.

Code of conduct

9. I confirm that I have read and am familiar with the Environment Court's Code of Conduct for Expert Witnesses, contained in the Environment Court's Practice Note 2014, and I agree to comply with it.
10. I confirm that the issues addressed in this statement of evidence are within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

11. I have set out the data, information, facts and assumptions considered in forming my opinions as well as the reasons for the opinions expressed.

SUMMARY

12. Dairying and dairy-related industries are a significant contributor to the OTOP economy, as described in the evidence of Ms Jennifer Leslie. DairyNZ's submission supports the water quality outcomes proposed by PC7, however considers that the focus on staged reductions in nitrogen loss from farming activities should be linked to achievement of the water quality outcomes.
13. PC7 proposes an amended environmental flow and allocation regime (which is not addressed in this evidence) in addition to the staged nitrogen reductions for farming activities. Both will benefit water quality and ecosystem health but, as discussed by Ms Leslie, will reduce the operating profit on dairy farms and impact the wider economy. The s32 report has assessed the potential effects of each independently, but there has been no analysis of the cumulative effects of increased minimum flows and staged nitrogen reductions. I consider this to be a fundamental gap in the work that informs PC7 which may have resulted in an overly conservative approach to achieving the water quality limits and targets.
14. Given this uncertainty and the high costs to the community of the reductions, I have questioned whether the proposed approach is the most effective to achieve the desired outcomes. There are many initiatives that farmers commit to, either on-farm through Farm Environment Plans (FEPs) or as wider catchment initiatives, that contribute to water quality improvements yet are not captured in nitrogen loss numbers by models such as OVERSEER. By linking the staged reductions to achievement of the water quality outcomes, farmers are more likely to invest in technology and initiatives rather than solely focus on reducing their on-farm nitrogen loss numbers.

WATER QUALITY OUTCOMES, LIMITS AND TARGETS

15. DairyNZ's submission acknowledges the degraded nature of parts of the Orari, Temuka, Opihi and Pareora catchments. Technical advice was received from Dr Craig Depree, DairyNZ's Principal Scientist - Water Quality, at the time of preparing DairyNZ's submission on Section 14. Dr Depree provided input into

DairyNZ's submission and based on his advice, I consider that the water quality outcomes, limits and targets set in Tables 14(a) to 14(g) are largely appropriate.

16. The exception to this is the ammoniacal nitrogen concentration for Lake Opuha set in Table 14(e). While the lake type is stated as "Artificial lakes – on river", the ammoniacal-nitrogen limit proposed is consistent with that for a pristine lake with a 99% species protection level¹. Lake Opuha is an artificial lake constructed to act as an irrigation reservoir and is popular for recreation. It is mesotrophic, with a trophic level approaching 4.0². Lake Opuha should not have an ammoniacal-nitrogen limit consistent with that of a pristine lake.
17. Paragraph 3.21 of the s42A report states that "*Numeric values included in Tables 14(c), 14(e) and 14(f) are based on achieving the freshwater outcomes in Tables 14(a) and 14(b), maintaining current state where the outcomes are achieved and supporting community values established during the collaborative zone committee process.*" There is no specific discussion on DairyNZ's submission point in the s42A report and, while the proposed approach seems reasonable, the limits set in Table 14(e) still need to be achievable and appropriate.
18. In relation to Lake Opuha, the ZIPA states that "*Water quality of the lake is moderately enriched with nutrients but does not exhibit issues such as significant algal blooms. It is important for the lake and the downstream environment that no further increase in nutrient enrichment occurs. Microbial quality of the lake is generally good and is considered suitable for swimming.*"
19. Based on advice from Dr Dupree, DairyNZ's submission requested a 95% species protection level, which is attribute state B in Appendix 2 of the NPSFM. The incorrect limits were requested in DairyNZ's submission however and I consider that Table 14(e) should be amended as follows:

Lake name and measurement location	Ammoniacal Nitrogen	
	Annual median ¹ [mg/L]	Annual maximum ² [mg/L]
Lake Opuha	0.03 >0.03 and ≤0.24	0.05 >0.05 and ≤0.40

¹ Attribute state A in the NPSFM for ammoniacal-nitrogen

² <https://www.lawa.org.nz/explore-data/canterbury-region/lakes/lake-opuha/>

NUTRIENT MANAGEMENT

20. PC7 divides the OTOP sub-region into six Freshwater Management Units (FMUs) for managing water quality and quantity. The Orari, Opihi and Timaru FMUs each contain areas where the nitrate nitrogen concentrations are especially elevated, and additional staged reductions are proposed through three HNCAs – Rangitata Orton, Fairlie Basin and Levels Plains. These additional reductions are implemented through Policies 4.4.18 to 4.4.20A, Rules 14.5.14 to 14.5 and Table 14(zc).
21. DairyNZ's submission accepts the need for additional nutrient reductions beyond Baseline GMP, however expresses concerns about the proposed approach. An amended approach is proposed, which I discuss in detail below.

Policies 4.4.18 and 4.4.19

22. The s42A report recommends consolidating and simplifying Policies 4.4.18 and 4.4.19 however there is minimal discussion on specific submission points. I agree that it makes sense to combine and simplify these policies however, in the absence of any contrary view from the s42A report, I consider that there is still merit in the relief sought by DairyNZ, which is discussed below.
23. The approach in Section 14 is to achieve nutrient targets through on-farm nitrate reductions independent of whether the water quality targets are being achieved. In my view, such an approach focuses farmers on their nitrogen loss numbers rather than encouraging them to look at on-farm actions and broader initiatives that may improve water quality. There will likely be greater engagement in, and demand for, initiatives by Environment Canterbury, DairyNZ, the Zone Committee and others to educate, fund and advise on water quality improvements if the reductions are linked to achievement of the PC7 targets. I have suggested amendments to achieve this below.
24. Environment Canterbury's work to inform PC7 included assessments of both the nutrient reductions and environmental flow regime, however no assessment of the cumulative effects was completed. Many farmers will be affected by both the HNCA reductions and higher minimum flows, and it is

feasible that both together will result in the water quality outcomes and targets being achieved sooner than anticipated by the independent assessments. As I discuss further in relation to Policy 14.4.20A, Ms Leslie concludes that the cumulative economic effects of both higher minimum flows and nitrogen reductions are likely to be greater than the independent assessments carried out by Environment Canterbury. I consider the lack of consideration of the cumulative effects of higher minimum flows and nutrient reductions to be a major omission in Environment Canterbury's preparation of PC7.

25. Given the lag time discussed in the s42A report, the 5-year interval between the two percentage reductions will likely not be long enough to see any benefits in the environment from the 2030 reductions by 2035. From the evidence of Ms Leslie, there is a considerable increase in economic impact between the proposed 2030 and 2035 reductions, with minimal time to make the required investments to achieve the reductions.
26. While the 2030 reductions will impact farmers, I acknowledge that these reductions are likely to be necessary to achieve the limits and targets set by PC7. However, the evidence of Ms Leslie shows that the costs to achieve a 20% reduction from Baseline GMP are greater than those to achieve the 10% reduction. Ms Leslie concludes that the significant impact on farm profitability will restrict some dairy farms from investing in water quality improvements.
27. Ten years is proposed to achieve the first 10% reduction, however only an additional 5-years is proposed to achieve the next 10% (a 20% reduction from Baseline GMP by 2035). Given the considerably greater impacts on farmers from the 2035 reductions, along with increased uncertainty as to whether these reductions will be necessary to achieve the limits and targets, I consider that the proposed 2035 reductions should be extended until 2040, and only required if the plan targets are not being achieved. This is discussed further below.
28. DairyNZ's submission was one of many that requested that the further reductions only be required while the water quality outcomes are not being achieved. In this way, the farming community are incentivised to invest early in water quality improvements and to look wider than just those improvements that can be incorporated into nitrogen loss numbers.

29. This submission point is discussed in paragraph 12.158 of the s42A report, where the officers do not recommend these changes *“as they might not maintain newly improved water quality if nitrogen discharges can increase once the targets have been met”*. While I agree that this outcome would be inconsistent with the NPSFM, I consider it to be highly unlikely. The discharge of nutrients from most properties will be authorised by either a land use consent for an individual farming activity, or by a discharge permit for the discharge of nutrients from an irrigation scheme or principal water supplier. The conditions on these consents will specify nitrogen loss rates and the methods and timeframes to achieve them. Farm Environment Plans will be prepared for each property in accordance with Schedule 7 of the LWRP and will be reviewed and audited regularly. These conditions are currently standard on any consent of this type and are consistent with the LWRP approach. I consider that this framework will act to lock in any gains made at the time the water quality outcomes are achieved, as these consents will not authorise additional losses.
30. For example, under the approach proposed in my evidence, if monitoring until 2030 shows that water quality is on track to achieving the outcomes by 2040 (as recommended in the ZIPA), the additional reductions would not be required however the 2030 reductions would already have been achieved. The nitrogen loss rates and mitigations associated with the 2030 reductions would be required by consent conditions and additional nitrogen discharges would not be authorised.
31. DairyNZ’s submission also requested a more flexible approach to consent duration, suggesting that limiting duration for consents for farming activities to a maximum of 10 years may not be appropriate in all situations. I note that the ZIPA recommends 10-year consent durations for land use consents to farm, with only one percentage reduction beyond GMP per consent term. This was included in the notified Policy 4.4.19(b), which the s42A report recommends be deleted and combined with Policy 4.4.18. Policy 4.4.18(c), as recommended in the s42A report, limits the consent duration to 10 years for farming activities that are required to make nutrient reductions but omits the reference to only one nitrogen reduction per consent term. I have not been able to find this omission discussed in the s42A report.

32. The plan is likely to be reviewed prior to 2035 and the intent of the 10-year duration is to provide for a consent application each plan term³. Following from this, and notwithstanding my suggestion above to extend the 2035 staged reduction to 2040, it seems unreasonable to require the 2035 reductions through consents when those reductions will be reviewed prior to this time. Depending on what reductions are included in the next plan iteration, there will be winners and losers if both the 2030 and 2035 reductions are required through consents that span these reduction periods.
33. Providing for longer durations, for example up to 15 years, can encourage further investment in water quality improvements for consent holders who are making solid progress toward reductions. Should the Hearing Panel accept this approach, I consider that Policy 14.4.18(c) should be deleted and the region-wide Policy 4.74 relied upon.
34. If the Hearing Panel decide to retain the 10-year duration requirement, I consider that the additional requirement for one nitrogen reduction per consent term be added, as per policy 4.4.19(b). Ideally this should reference the 2030 reduction, however current land use consents to farm are issued for up to 15 years (under Policy 4.74) and some analysis of consent expiry dates would be needed to inform this.
35. I therefore recommend the following amendments to Policy 4.4.18. The red amendments are those recommended by the Environment Canterbury officers and the blue are my recommendations.

Water quality is improved ~~in the Orari, Opihi and Timaru Freshwater Management Units~~ by:

- a. *requiring additional further reductions of nitrogen losses in defining the Rangitata Orton High Nitrogen Concentration Area, Fairlie Basin High Nitrogen Concentration Area and Levels Plain High Nitrogen Concentration Area ~~within which targeted reductions of nitrogen by 1 January 2030~~ in accordance with Table 14(zc) ~~are required~~; and*
- b. *requiring further reductions of nitrogen losses in the Rangitata Orton High Nitrogen Concentration Area, Fairlie Basin High Nitrogen Concentration Area and Levels Plain High Nitrogen Concentration Area by 1 January 2040 in accordance with Table 14(zc), if the nitrate*

³ s42A report paragraph 12.185

nitrogen limits and targets in Tables 14(d) to 14(g) are not met or on the pathway to being met by 1 January 2030; and

- c. *avoiding the grant of any resource consent that will result in the nitrogen loss calculation from a farming activity exceeding the Baseline GMP Loss Rate, except where Policy 14.4.20 applies.;* ~~and~~
- d. ~~limiting the duration of any resource consent for a farming activity that is required to make further reductions in nitrogen loss (beyond Baseline GMP Loss Rates or consented nitrogen loss rates) to no more than ten years.~~

Policy 14.4.20A

- 36. Considerable amendments are recommended to Policy 14.4.20A and, in general, I consider that these streamline the policy. I support the intent of the policy, as it seems reasonable to provide an extension of time to those consent applicants who are already making good progress toward the relevant nitrogen reduction targets. However, I have several concerns about the policy, including the suggested amendments.
- 37. Under clause (b), time extensions for achieving the Table 14(zc) reductions will only be considered for those applicants who achieved mitigation better than GMP during the nitrogen baseline period and who can demonstrate that those mitigations were effective in minimising nitrogen losses. The nitrogen baseline period was 2009 to 2013 and this essentially penalises farmers who may have made considerable gains in nutrient reductions since the baseline period and may now be beyond the GMP requirements.
- 38. In addition, it will be extremely difficult for a dairy farmer to demonstrate that any mitigations undertaken during the baseline period were effective in minimising nitrogen losses. As worded, this would rely on a farmer having undertaken monitoring, which in my experience would be highly unlikely. The amended wording for this clause provides a tougher threshold for farmers and is reliant on their actions some time ago. In some cases, ownership will have changed since the baseline period making meeting the requirements of this subclause extremely difficult. I consider that this part of clause (b) should be deleted as, by definition, achieving beyond GMP will have minimised nitrogen losses.
- 39. The s42A report recommends that clauses (c) to (e) are deleted. I consider that it is appropriate to remove clause (d), as this level of scrutiny would be

expected through the consent application process. However, I do not agree with the deletion of clauses (c) and (e).

40. Clause (c) provides for consideration of the financial implications of achieving the nitrogen reductions and I refer here to the evidence of Ms Leslie. In some instances, the financial costs to dairy farmers of the proposed staged reductions beyond GMP will be considerable and potentially crippling. I consider that some flexibility to extend the reduction timeframes, especially for those farmers who can demonstrate considerable progress towards water quality improvements, will still achieve the water quality targets while providing for the community's well-being.
41. Clause (e) provides for consideration of the progress towards achieving the nitrate nitrogen limits and targets. If considerable progress is being made toward achieving the targets, or if the targets are met sooner than expected, it is entirely reasonable for this to be taken into account when considering an application to extend the time limit for reductions. I consider that this clause should be retained, rather than deleted.
42. Two additional matters were raised in DairyNZ's submission on Policy 14.4.20A. The first is the relevance of the policy to applications to change conditions under s127 of the RMA. As written the policy would only apply to new applications. I acknowledge that in many instances an application to change conditions to extend the timeframes for nutrient reductions would likely be outside the scope of a s127 application, however I consider that this would not always be the case. A consent holder's situation may change, requiring them to seek a minor extension to their reduction timeframe. I consider that the policy should provide for consideration of this.
43. The second additional matter raised in DairyNZ's submission relates to the lack of analysis of the cumulative effects of both the nutrient reductions and minimum flow regime proposed by PC7 for OTOP. I consider this to be a major omission in Environment Canterbury's preparation of PC7.
44. As discussed above in relation to Policies 4.4.18 and 4.4.19, many farmers will be affected by the HNCA reductions and higher minimum flows, which may result in water quality targets being achieved sooner than anticipated by the

independent assessments. As mentioned above, Ms Leslie considers that the economic effects on those properties affected by nutrient reductions and higher minimum flows would likely have been underestimated.

45. While I consider that this is a matter that should ideally have been assessed and considered as part of the PC7 development, in the absence of this it is relevant to consider the effects on a consent holder of achieving the environmental flow and allocation regime set out in Tables 14(h) to 14(za) when considering an extension to the nutrient reduction timeframes. I have suggested an amendment to Policy 14.4.20A below to reflect this.
46. In my view, a decision to grant an application with an extended timeframe for nitrogen reductions should balance several factors. For example, if good progress is being made towards achieving the water quality targets and a farmer has already gone beyond GMP, it would be appropriate to place more weight on the capital and operational costs of achieving the additional reductions, or the impacts of a tougher environmental flow regime. However, and especially considering Te Mana o Te Wai, if little progress is being made toward achieving the water quality limits, financial and other considerations may be given less weight. The key is to include the relevant considerations in the policy to enable consent decision makers to make well-balanced decisions that achieve plan objectives.
47. In conclusion and considering my comments above, I recommend that Policy 14.4.20A be amended as follows. The wording “*be considered having regard to*” should be reinstated, as not all the matters listed would be relevant to an application.

“Where an application for a land use consent for a farming activity or a holder of an existing land use consent for a farming activity demonstrates the nitrogen loss rate reductions required by Policy 14.4.20(c) are unable to be achieved by the dates specified in Table 14(zc), ~~only consider granting an any~~ application for an extension of time to achieve those reductions ~~where~~ be considered having regard to:

- a. the Baseline GMP Loss Rate and the level of any an enduring nitrogen loss rate reduction below the Baseline GMP Loss Rate ~~has~~ already ~~been~~ achieved; and
- b. the nature and extent of any mitigations implemented prior to 1 July 2020, including during the nitrogen baseline period that are

~~better than Good Management Practice, and it is demonstrated that the extent to which these have been effective in minimising nitrogen losses;~~; and

- c. the capital and operational costs of achieving the nitrogen loss rate reductions and the benefit (in terms of maintaining a farming activity's financial viability) of spreading that investment over time; and
- ~~d. the nature, sequencing, measurability, effectiveness and enforceability of any steps proposed to achieve the nitrogen loss rate reductions; and~~
- d. progress made towards achieving nitrate-nitrogen limits and targets in Tables 14(a) to 14(g); and
- e. the effects of achieving the environmental flow and allocation regimes set out in Tables 14(h) to 14(za).”

Policies 14.4.20B and 14.4.20C

48. The s42A report recommends that Policies 14.4.20B and 14.4.20C are deleted as they duplicate region-wide policies 4.38D and 4.38E. I agree that this is appropriate, however it can be difficult to navigate between Section 4 and sub-regional sections to determine the appropriate provisions that apply to consent applications. I suggest that a note be inserted under the heading “Nutrient Management” as follows:

“Note: Regional Policies 4.38D and 4.38E apply in addition to Policies [insert policy numbers].”

Rules 14.5.15 to 14.5.19

49. I support the inclusion of Rule 14.5.15, which directs that nitrogen reductions only apply to that part of a property that is within an HNCA. This will be helpful guidance for consent processes, where such matters can be the subject of considerable discussion.
50. DairyNZ’s submission also supports Rules 14.5.16 to 14.5.18, and in particular the provision for a methodology where the Farm Portal is unable to generate a Baseline GMP Loss Rate or GMP Loss Rate. This approach is consistent with the region-wide rules and I consider it appropriate that it is also included in Section 14. Minor amendments to these rules have been recommended in the s42A report, which I consider strengthen the rules.

51. Condition 8 of Rule 14.5.19 provides for achieving the nitrogen loss reductions in the HNCAs. Consistent with the amendments requested to Policy 14.4.18 and Table 14(zc), I consider that condition 8 should be amended as follows:

“8. For properties within a High Nitrogen Concentration Area, the methods and timeline within the Farm Environment Plan for achieving the nitrogen loss reductions set out in Table 14(zc) unless the water quality targets in Table 14(g) are achieved, or are on the pathway to being achieved by 1 January 2030; and”

Table 14(zc)

52. Table 14(zc) contains the proposed staged reductions beyond the Baseline GMP Loss Rate for farming activities in HNCAs. Percentage reductions are proposed to be achieved by 1 January 2030 and 1 January 2035, with a doubling of the reductions required between these dates for farming activities in the Rangitata-Orton and Levels Plains HNCAs (10% to 20% for dairy farming and 5% to 10% for all other farming types).

53. As discussed previously in my evidence, Ms Leslie discusses the economic impacts of these reductions and concludes that the staged reductions will reduce operating profit and affect dairy farm viability and solvency. The costs to achieve the first 10% by 2030 are manageable for most dairy farms, however the additional 10% reduction required by 2035 will be considerably more severe.

54. I have already discussed my approach to the proposed percentage reductions above in relation to Policy 4.4.18. If the Hearing Panel accept this approach, I consider that the following amendments will need to be made to Table 14(zc):

54.1 Delete “cumulative” from the column heading in Table 14(zc), as it is unnecessary and ambiguous;

54.2 Extend the 2035 reductions until 2040;

54.3 The addition of a footnote which reads *“The percentage reduction to be achieved by 1 January 2040 shall only be required if the nitrate nitrogen limits and targets in Tables 14(d) to 14(g) are not met, or on the pathway to being met, by 1 January 2030”*;

54.4 Recognition that the reductions in Table 14(zc) as they apply to 2040 are 'up to' the level identified; and

54.5 The addition of a footnote that reads "*The percentage reductions required by Table 14(zc) are only to be applied to consents for farming activities where the required reduction for each stage is greater than 3 kg nitrogen per hectare for dairy, and 1 kg per hectare for all other farming activities.*" This is proposed for Section 8 (Waimakariri) of PC7 and ensures that reductions are material.

55. An amended Table 14(zc) is included as Appendix 1.

NEW MONITORING AND REPORTING POLICY

56. Continued monitoring and reporting by Environment Canterbury and others is critical to determine achievement of the targets and limits, to track the accuracy of Environment Canterbury's modelling predictions, and to inform successive plan reviews. DairyNZ's submission proposed an additional policy to this effect, which is similar to Policy 8.4.35 proposed by PC7 for the Waimakariri.

57. I consider that reporting every two years would be more appropriate than the five years suggested in DairyNZ's submission and proposed through Policy 8.4.35. Such monitoring and reporting will be valuable to the community so they can keep informed about progress toward the targets. The farming community are being required to make a considerable investment towards achieving the nutrient reductions in Table 14(zc) and 5-yearly reporting only provides one report each plan cycle.

"Inform successive plan review cycles and consenting requirements by reporting every 2 years on:

- a. the current state of freshwater quality and ecosystem health, and any trends observed; and*
- b. the results of any relevant investigations carried out in relation to the groundwater system; and*
- c. progress made towards freshwater outcomes and limits."*

HIGHER LEVEL DOCUMENTS

58. The requirement to maintain or improve the overall quality of freshwater is clear in both the NPSFM and RPS. As I noted in my introduction, although I have

not undertaken a full planning assessment, I have considered these documents in preparing my evidence and consider that the provisions I have proposed will deliver on their requirements.

59. For completeness I have considered the recommendations from the Government's Essential Freshwater reforms although I understand these are not, at least at this time, relevant to this process. From a preliminary review, I consider that any changes to water quality limits required by these reforms will need to be implemented through a future plan change or review. It would be difficult to 'retro-fit' the changes into the PC7 framework while staying within the scope of the existing plan change.

SECTION 32 EVALUATION

60. Section 32 of the RMA requires an evaluation to determine the most appropriate way of achieving the objectives of the proposal. As I have noted, I have evaluated the provisions proposed in PC7 throughout my evidence and, where appropriate, have made suggestions on what I consider to be more appropriate provisions. In my opinion, the provisions proposed in my evidence will provide additional certainty for both Environment Canterbury and the community that the outcomes sought by PC7 will be achieved, and may result in those outcomes being achieved sooner.

CONCLUSION

61. The primary focus of my evidence has been on the nutrient management provisions and their ability to deliver on the water quality targets and limits. While I consider the outcomes sought by PC7 are appropriate and reflect the requirements of the NPSFM, DairyNZ's evidence and that of others such as Rangitata South Irrigation Limited, has challenged the basis on which the nutrient management provisions were developed.
62. The proposed provisions require long term nutrient reductions which may preclude the necessary investment in water quality improvements. I consider that the amendments proposed in my evidence will encourage investments in on-farm reductions while incentivising farmers to improve practices. This may

be more effective in achieving the water quality outcomes than a sole focus on nitrogen loss numbers.

Dated 17 July 2020

Bianca Sullivan

Appendix 1

Table 14(zc): Staged Reductions in Nitrogen Loss for Farming Activities in High Nitrogen Concentration Areas

High Nitrogen Concentration Area (see Planning Maps)	Farming Type	Cumulative Percentage reductions in nitrogen loss and dates by which these are to be achieved	
		By 1 January 2030	By 1 January 2035-2040
Rangitata-Orton	Dairy	10%	Up to 20%
	All other	5%	Up to 10%
Fairlie Basin	Dairy	10%	-
	All other	5%	-
Levels Plains	Dairy	10%	Up to 20%
	All other	5%	Up to 10%

The starting point for applying each percentage reduction in nitrogen loss in Table 14(zc) is generally the Baseline GMP Loss Rate except as otherwise provided for in Policy 14.4.20.

For the purposes of applying the nitrogen reductions in 14(zc), 'Dairy' farming does not include 'Dairy Support' activities. 'Dairy Support' is classified under 'All other' farming activities.

The percentage reductions required by Table 14(zc) are only to be applied to consents for farming activities where the required reduction for each stage is greater than 3 kg nitrogen per hectare for dairy, and 1 kg per hectare for all other farming activities.

The percentage reduction to be achieved by 1 January 2040 shall only be required if the nitrate nitrogen limits and targets in Tables 14(d) to 14(g) are not met, or on the pathway to being met, by 1 January 2030.