

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

UNDER the Resource Management Act 1991

IN THE MATTER of Proposed Plan Change 7 to the Canterbury Land and
Water Regional Plan and Proposed Plan Change 2 to the
Waimakariri River Regional Plan

**MEMORANDUM OF COUNSEL ON BEHALF OF THE CANTERBURY
REGIONAL COUNCIL
25 February 2021**

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MAY IT PLEASE THE HEARING COMMISSIONERS

- 1 The purpose of this Memorandum is twofold:
 - (a) First, to provide the Hearing Commissioners with an updated response to a question regarding the nitrogen floor; and
 - (b) Secondly, to advise the Hearing Commissioners whether there is scope to amend Rules 5.189B and 5.190A so that new areas of plantation forestry within flow-sensitive catchments are not controlled activities, but some other class of activity.

Nitrogen Floor

- 2 Enclosed as **Appendix 1** is a further Memorandum authored by Angela Fenemor and Amber Kreleger titled, "Update to Responses to Questions of Hearing Commissioners on Council Reply Report in relation to the Nitrogen Floor".
- 3 Counsel understands the intention of the further Memorandum is to remove the disconnect between Tables 8-9 and 8-9A and to assist with the implementation of the provisions.

Scope to amend Rules 5.189B and 5.190A

- 4 The Hearing Commissioners have asked counsel to advise whether there is scope to amend Rules 5.189B¹ and 5.190A so that new areas of plantation forestry within flow-sensitive catchments are not controlled activities, but some other class of activity.
- 5 In short, counsel considers there is some scope to amend Rule 5.189B such that new areas of plantation forestry within flow-sensitive catchments are not controlled activities but some other class of activity. This is because the notified provisions of Rules 5.189 and 5.190 operated as permitted activity and discretionary activity rules, respectively. In response to submissions, Officers recommended

¹ We note that the Hearing Commissioners originally asked counsel whether there is scope to amend Rules 5.189A and 5.190A so that new areas of plantation forestry within flow-sensitive catchments are not controlled activities, but some other class of activity. However, Rule 5.189A (recommended by the Officers in the Section 42A Report) was a permitted activity rule regulating replanting, after harvest, of areas of forest specifically planted and managed for a carbon sink, and excluding plantation forest, within a flow-sensitive catchment (and which has subsequently been removed from the Officer's Reply Report). Accordingly, counsel has assumed that the question relates to Rule 5.189B, which regulates the planting of new areas of plantation forest in flow-sensitive catchments as a controlled activity.

changes to the activity status of Rule 5.190 (which became Rule 5.189B) to a controlled activity. We set out the changes to these provisions at each stage of the hearing process below.

- 6 For completeness, we note that Rule 5.190A applies to the planting of forest for a carbon sink and specifically excludes plantation forestry. We have therefore focused our assessment on Rule 5.189B.

Notified provisions

- 7 Proposed Plan Change 7 (**PC7**) to the Canterbury Land and Water Regional Plan (**LWRP**) sought to introduce two rules in respect of plantation forestry activities regulated by the Resource Management (National Environmental Standards for Planation Forestry) Regulations (**NESPF**), Rules 5.189 and 5.190.
- 8 Rule 5.189 as notified provided for any plantation forestry activity regulated by the NESPF as a permitted activity, subject to satisfying various conditions. Relevantly, condition 1 of Rule 5.189 provided that the planting of new areas must not occur within any flow-sensitive catchment listed in sections 6 to 15 of the LWRP.
- 9 Rule 5.190 provided that any plantation forestry activity regulated by the NESPF that did not meet one or more of the conditions in Rule 5.189 would be a discretionary activity.

Section 42A Report

- 10 A number of changes were recommended to Rules 5.189 and 5.190 by the Section 42A Officers following the consideration of submissions, including new Rules 5.189A, 5.189B and 5.189C.
- 11 Relevantly, Rule 5.189B provided for the planting of new areas of plantation forest that did not meet condition 1 of Rule 5.189 (i.e., the new areas of plantation forest would be in a flow-sensitive catchment listed in sections 6 to 15 of the LWRP) as a controlled activity. Submission points by Cashmere Stream Care Group (PC7-193.20) and Rayonier NZ and Port Blakely (PC7-224.1) were referenced as providing scope for the proposed amendments to the notified provisions. Consequential changes were also recommended to Rule 5.190 to ensure that if an activity could not comply with the conditions of Rule 5.189B it would be assessed as a discretionary activity.

Reply Report

- 12 Further changes were recommended to the plantation forestry provisions in the Council's Reply Report. Relevantly, Officers recommended the inclusion of Rules 5.190A and 5.190B which regulate the planting of forest specifically planted and managed for a carbon sink, excluding a plantation forest, in a flow-sensitive catchment as a controlled activity and restricted discretionary activity, respectively.
- 13 Rules 5.189A and 5.189C were removed, and some further changes were recommended to Rule 5.189B (although its application to new plantation forestry in flow-sensitive catchments remains).

Conclusion

- 14 Counsel considers there is some scope to amend Rule 5.189B such that new areas of plantation forestry within flow-sensitive catchments are not controlled activities but some other class of activity.

Dated this 25th day of February 2021



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P A C Maw / I F Edwards
Counsel for the Canterbury Regional Council

**Appendix 1 - Update to Responses to Questions of Hearing
Commissioners on Council Reply Report in relation to the Nitrogen Floor**

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

Update to Responses to Questions of Hearing Commissioners on Council Reply Report in relation to the Nitrogen Floor

25 February 2021

Authors: Angela Fenemor and Amber Kreleger

In the response to questions from the Hearing Panel on the Council Reply Report, the Officers have suggested amendments that express the nitrogen floor in a way so that it works as intended. The solution offered by the Officers includes a new Table 8-9A, which sets out the nitrogen floor¹.

The nitrogen loss reductions in Table 8-9 are only required if the resulting nitrogen loss reduction is greater than the threshold loss rate specified in Table 8-9A. The thresholds in Table 8-9A have been calculated on the basis that reductions would not be required for farms with a nitrogen loss of less than 20 kg/ha/year. The thresholds expressed Table 8-9A are on a per stage basis (similar to the expression of the floor in the notified provisions), being a threshold based on 20% reduction from baseline GMP loss rate at 2030, and a threshold based on a further 10% reduction at 2040.

Table 8-9 expresses the reductions for 2030 and 2040 as a **total** reduction required by the specified dates. For example, for dairy land use, a 20% reduction below baseline GMP loss rate is required by 2030, and a total 30% reduction below baseline GMP loss rate is required by 2040.

To remove the disconnect between Tables 8-9 and 8-9A, and to assist with the implementation of the provisions, Officers recommend that the provisions are further amended as per the tracked changes that follow. Appendix A (attached to *Responses to Questions of Hearing Commissioners on Council Reply Report*, dated 24 February 2021) has also been updated and is attached to this memorandum.

- 8.4.25 Nitrate-nitrogen limits for the Waimakariri Sub-region are achieved, and risks of degraded water quality in potential future impacts on the nitrate-nitrogen concentrations of waterbodies outside the Waimakariri Sub-region are managed by:
- a. ~~further restricting, relative to the region wide rules, the area of land used for a farming activity as a permitted activity, and the area of winter grazing that may occur as a permitted activity; and~~
 - b. requiring, within the Nitrate Priority Area, ~~further~~ reductions in nitrogen loss from farming activities (including farming activities managed by an irrigation scheme or principal water supplier) in accordance with Table 8-9, provided that ~~the total any further stage of~~ reduction required ~~for each stage~~ is greater than ~~the nitrogen floor in accordance with Table 8-9A~~ 3 kg of nitrogen per hectare per year for dairy, or 1 kg of nitrogen per hectare per year for all other farming activities.²⁰⁷

Table 8-9: Nitrate Priority Area Staged Reductions in Nitrogen Loss for Farming Activities, Farming Enterprises and Irrigation Schemes

[recommended amendments to note 3]

¹ Responses to Questions of Hearing Commissioners on Council Reply Report, dated 24 February 2021. Pages 19 and 20

3 The percentage reductions required by Table 8-9 are only to be applied to farming activities that require resource consent for farming land use and where the ~~total required~~ reduction required for each stage is greater than the nitrogen floor specified for the farming type in Table 8-9A ~~3 kg nitrogen per hectare for dairy, and 1 kg per hectare for all other farming activities~~

Table 8-9A: Nitrogen Floor

Farming type	Percentage reductions required by Table 8-9 are to be applied where the total reduction required at each stage is greater than the following Nitrogen Loss	
	By 1 January 2030	By 1 January 2040
Dairy	5 kg N/ha year	8.5 kg N/ha/year
All other	1.05 kg N/ha/year	2.22 kg N/ha/year

Appendix A:

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

Relationship between the proposed Waimakariri nitrogen “floor” and reductions in nitrogen losses

25 February 2021 (revised)

Author: Amber Kreleger

Introduction

The evidence presented by Ms Ruston (on behalf of AsOne Inc) at the Hearing for Plan Change 7 to the Land and Water Regional Plan (LWRP) identified implementation issues with the proposed nitrogen floor included in Section 8 of the LWRP. In light of this evidence, and in response to questions from the Hearing Panel, Officers have provided amended provisions to the Hearing Panel which ensure the nitrogen floor works as intended.

As described in the Reply Report, the relationship between the reductions per stage and the time it takes to reach an annual average nitrogen-loss of 20 kg N/ha/year, the nitrogen floor beyond which no further reductions are required, is not linear. This memorandum describes that relationship and identifies the threshold below which the percentage reductions are no longer required and when the floor of 20 kg N/ha/year will be reached.

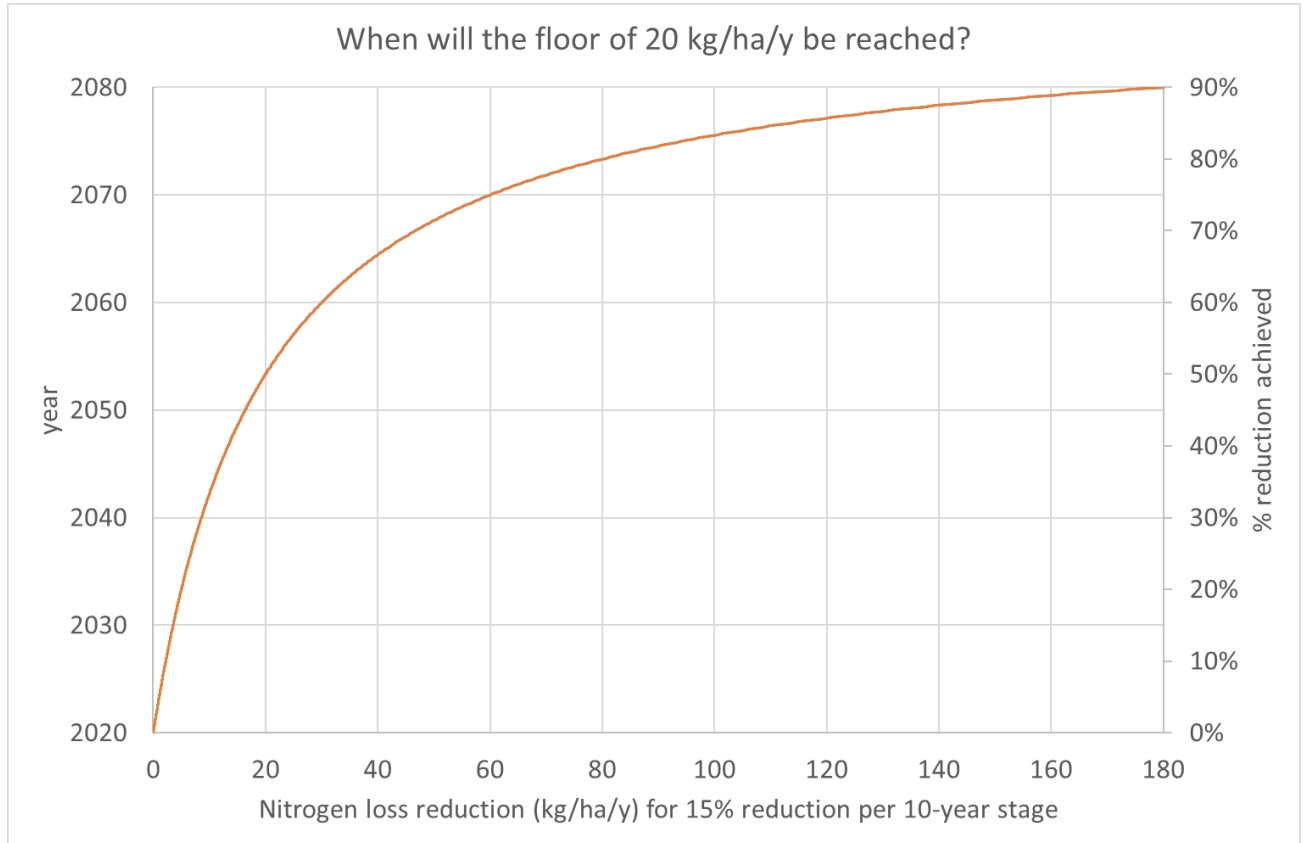
Relationship between nitrogen floor versus nitrogen-loss reduction with a set 15% loss reduction for dairy per 10-year stage

The relationship between an annual average nitrogen floor of 20 kg/ha/year and required nitrogen-loss reductions of 15% per 10-year stage is explained as follows: each 10-year stage a nitrogen-loss reduction is required of 15% of Baseline GMP, until the total nitrogen-loss from the property is 20 kg/ha/year. This means that:

- A property with a Baseline GMP nitrogen-loss rate of 30 kg/ha/year, will require a reduction of 4.5 kg/ha/year at each 10-year stage (15%) and it will take **2.2 stages** to reach the floor of 20 kg/ha/year $((30-20)/4.5=2.2)$. A total reduction of **10 kg/ha/year (33%)** is required to achieve the floor.
- A property with a Baseline GMP nitrogen-loss rate of 50 kg/ha/year, will require a reduction of 7.5 kg/ha/year at each 10-year stage (15%) and it will take **4 stages** to reach the floor of 20 kg/ha/year $((50-20)/7.5=4)$. A total reduction of **30 kg/ha/year (60%)** is required to achieve the floor.
- A property with a Baseline GMP nitrogen-loss rate of 100 kg/ha/year, will require a reduction of 15 kg/ha/year at each 10-year stage (15%) and it will take **5.3 stages** to reach

the floor of 20 kg/ha/year $((100-20)/15=5.3)$. A total reduction of **80 kg/ha/year (80%)** is required to achieve the floor.

The relationship between required nitrogen-loss reductions beyond Baseline GMP (15%) and the timeframe in which an annual average nitrogen-loss floor of 20 kg/ha/year is reached is not linear, see graph below.



This means that a farm will reach an annual average nitrogen loss of 20 kg/ha/year at the given time in the chart when cumulative achieved nitrogen-loss reductions are at or below the amount in the table below.

Table 1 Total reduction required to reach an annual average nitrogen loss of 20 kg/ha/year when the reductions per 10-year stage are 15% from baseline GMP

	2030	2040	2050	2060	2070	2080
Dairy (% reduction)	3.53 kg/ha/y (15%)	8.57 kg/ha/y (30%)	16.36 kg/ha/y (45%)	30 kg/ha/y (60%)	60 kg/ha/y (75%)	180 kg/ha/y (90%)
Other (% reduction)	1.05 kg/ha/y (5%)	2.22 kg/ha/y (10%)	3.53 kg/ha/y (15%)	5.0 kg/ha/y (20%)	6.67 kg/ha/y (25%)	8.57 kg/ha/y (30%)

Nitrogen-floor with a 20% nitrogen-loss reduction for dairy in the first 10-year stage and a 10% nitrogen-loss reduction the second stage

The Officers' recommendation is to increase the first stage (2030) of nitrogen-loss reductions for dairy from 15% to 20% and to reduce the second stage (2040) reductions from 15% to 10%. This increases the required nitrogen-loss reduction in the first stage from 3.53 kg/ha/year to 5.0 kg/ha/year. Officers have recommended that Table 8-9 does not specify the percentage reduction of nitrogen loss after 2040. The recommended thresholds below which nitrogen-loss reductions are no longer required because the floor of 20kg N/ha/year is met, are set out in Table 2 below.

Table 2 Total reduction required to reach an annual average nitrogen loss of 20 kg/ha/year (floor)

	2030	2040
Dairy (% reduction)	5.0 kg/ha/y (20%)	8.57 kg/ha/y (30%)
Other (% reduction)	1.05 kg/ha/y (5%)	2.22 kg/ha/y (10%)

How this works is explained as follows:

- A property with a Baseline GMP nitrogen-loss rate of 26 kg/ha/year will require a 20% reduction at 2030 which equates to a required reduction of 5.2 kg/ha/year. This is above the 5 kg/ha/year threshold in Table 2 and so the farmer is required to make the reduction. At 2040 a 30% reduction in nitrogen loss is required (7.8 kg/ha/year), however as this is below the threshold value in Table 2 (8.57 kg/ha/year) the farmer is not required to make the reduction.
- A property with a Baseline GMP nitrogen-loss rate of 24 kg/ha/year will require a 20% reduction at 2030 which equates to a required reduction of 4.8 kg/ha/year. This is below the 5 kg/ha/year threshold in Table 2 and so the farmer is not required to make the reduction.
- A property with a Baseline GMP nitrogen-loss rate of 30 kg/ha/year will require a 20% reduction at 2030 which equates to a required reduction of 6.0 kg/ha/year. This is above the 5 kg/ha/year threshold in Table 2 and so the farmer is required to make the reduction. At 2040 a 30% reduction in nitrogen loss is required (9 kg/ha/year). As this is above the threshold value in Table 2 (8.57 kg/ha/year) the farmer is required to make the reduction.