# Agenda Item 5: Clause 3 feedback on Forestry provisions

## Purpose

1. The main purpose of this paper is to provide an overview of clause 3 feedback on forestry provision, and to seek guidance from councillors on changes to the forestry provisions.

## Executive summary

1. The National Environmental Standard for Commercial Forestry (NESCF) provides a permissive regime for commercial forestry activities, with most forestry activities in Otago currently able to be undertaken as permitted activities. While management plans are required for many of the permitted activities, the NESCF does not require that these plans are reviewed or approved by the regional council.
2. The clause 3 draft Land and Water Regional Plan (LWRP) included four policies[[1]](#footnote-2) and two rules[[2]](#footnote-3) that are of particular relevance to forestry. A number of other provisions are not specific to forestry, but would be relevant to consents related to forestry activities. The draft LWRP requires consent for most afforestation, replanting and harvesting activities.
3. Feedback received through clause 3 consultation largely opposes the proposed forestry provisions, and seeks that forestry activities are managed solely under the NESCF. The feedback makes particular reference to the lack of Otago specific information to support the stringency over the NESCF.[[3]](#footnote-4)
4. Updated advice from science and the compliance team has also been received on the effects of forestry in Otago. In response to clause 3 feedback, it is timely to re-look at the approach and evidence, and some changes are recommended, including:

|  |  |  |
| --- | --- | --- |
| **Topic** | **Clause 3 version** | **Updated staff suggestion** |
| New forestry/afforestation | Discretionary consent required if over 10ha | No change |
| Re-planting after harvest | Discretionary consent required if over 10 ha | Remove rules (with reliance on the NESCF) |
| Harvest | Controlled activity consent required | No change |

## Draft provisions consulted on during Clause 3 consultation

1. As you will recall, the draft provisions for forestry included rules for replanting and afforestation, harvesting, and discharges. The draft provisions are outlined below.

### Replanting and afforestation

1. Replanting is the planting of a previously forested area after harvest, while afforestation is the term used in the NESCF for new commercial forest planting.
2. In the draft LWRP, replanting and afforestation would be permitted if the area of exotic forest was less than 10 ha per landholding, and planting did not occur within 10 or 20 m of a waterbody or wetland where the slope is greater than 10 degrees. The size of the setback is dependent on the vegetation within the setback, with 10 m setbacks required where the setback vegetation is predominantly indigenous. Given the 10 ha permitted activity threshold, almost all commercial forestry would require consent.
3. Under the draft LWRP, replanting and afforestation consents were intended to manage the effects of forestry on water quantity and quality, noting that managing planting well can enable better outcomes at harvest.
4. For replanting, many impacts associated with the forestry cycle have been previously realised, so there are lesser benefits to being more stringent than the NESCF, when compared to afforestation.

### Harvesting

1. In the draft LWRP, harvesting was a controlled activity, provided that where the slope is greater than 10 degrees, harvesting within 10-20 m of a waterbody is undertaken in accordance with specified good practices, and the harvested area is replanted within 18 months. This rule pathway enabled council to have greater oversight of the harvest plan required under the NESCF, and would likely have resulted in more robust harvest plans, improved monitoring and better water quality outcomes. A consent requirement for harvesting will also enable a greater oversight of works by compliance and enforcement staff.
2. Harvesting activities are understood to be the highest risk stage of the forestry cycle, due to the mobilisation of sediment associated with felling trees, and removal of land surface protection provided by the trees.

### Discharges

1. Appendix 17 of the existing Water Plan includes several additional permitted activity conditions related to the disturbances of the bed, and these apply to the harvesting of forests. The draft LWRP carried over the existing controls of the existing Regional Plan: Water for Otago.[[4]](#footnote-5)

## Overview of key effects of forestry

### Effects of forestry of catchment water yield

1. The Glendhu paired catchment study identified that in the studied catchment, forestry land uses reduced catchment water yield.[[5]](#footnote-6) A number of international case studies also conclude that water yield reduction is the dominant response following an increase in forest cover.[[6]](#footnote-7) However, the quantum of that water yield reduction, and its variation over the life of a forest are uncertain. Preliminary results of the in-progress Scion research programme entitled “Forest Flows” suggest different results on the effects of forestry on water yield, although the published findings of this research are not yet available.[[7]](#footnote-8)

### Efficacy of buffers

1. There is limited technical support for the use of standard setbacks as a tool to manage sediment loss in the forestry context. For setbacks more generally, there is a relationship between buffer width and sediment removal, with diminishing improvements in sediment, nitrogen and phosphorus capture for buffers greater than 15-20 m in width.[[8]](#footnote-9)
2. For forestry specifically, the benefit of buffers to reduce impacts on aquatic ecosystems is dependent on a range of factors, including slope, vegetation composition and density, soils, sediment delivery processes and water chemistry, such that the setting of a standard buffer for ecosystem health may undermine the benefits of setbacks in the forestry context.[[9]](#footnote-10)

### Sediment from forestry

1. The implementation of buffers greater than the NESCF when planting, and the management of harvesting via a consent process, are intended to provide greater oversight, and improved management of sediment originating from forestry activities.

## Updated technical information

1. Two memoranda have been prepared by the ORC science and compliance teams, providing an overview of known information about sediment issues from plantation forestry in Otago.[[10]](#footnote-11) Full copies of these memoranda are included in Appendix 1, and are summarised below.

### Science memorandum

1. Compared to other regions in New Zealand, Otago has very little commercial forestry on erosion-prone land,and has not historically been subject to heavy rainfall (although these events are expected to become more frequent in the future).
2. The Glendhu study, which focussed predominantly on changes in water yield between forested and unforested catchments, identified that sediment yield in the forested catchment almost doubled during harvest, when compared to the unforested catchment. Another Otago-based study found that there was an increase in sediment yield when shifting from standing forestry to a post-harvest situation. Overall, sediment yield from forest harvested on schist are low compared to other parts of New Zealand.
3. There is also an identified correlation between high sediment loads in some estuaries, and the extent of forestry in the upstream catchments. For example, more than 75% of the catchment of the Akatore Estuary south of Taieri Mouth is exotic forestry, and downstream, fine sediment is an issue in the estuary. Similarly, in the Pleasant River estuary, where approximately 26% of the catchment is commercial forestry, source tracking of sediment found that in the terrestrially sourced sediment, topsoil for recently harvested forested had a 69 times greater sediment yield than topsoil from pasture/fodder crops.

### Compliance memorandum

1. A memorandum has been prepared by the ORC compliance team, providing an overview of compliance with the NESCF in Otago.[[11]](#footnote-12) This memorandum is summarised below.
2. Due to the high proportion of land in Otago having a low or moderate erosion susceptibility classification, a large majority of NESCF activities are permitted in Otago[[12]](#footnote-13). The exception to this is cable hauling through rivers, which generally requires consent under the Regional Plan: Water for Otago.
3. Compliance data shows that nearly one third of forestry non-compliances had noticeable sedimentation issues. These issues typically arise during earthworks associated with harvesting activities, such as the construction of haul roads, harvest machinery tracks and landings or skid sites. Sediment discharges to water generally arise due to the lack of, or inadequate stabilisation and/or stormwater controls, or the placement of spoil material onto land where it may enter water.
4. While the NESCF requires the implementation of mitigations or controls to manage sediment, there is no consideration as to whether the mitigations or controls are suitable, or at a scale to be effective. Given the dynamic nature of forestry land uses, controls for sediment discharges that work in one setting, may not be effective, or sufficient in another. However, provided that controls are in place, the activity would likely comply with the permitted activity requirements of the NESCF. Two examples of this are described above in relation to sediment from forestry. In addition, while ‘best practice guidelines’[[13]](#footnote-14) are available to provide education on stormwater control measures, they are not enforceable in most cases.
   1. In the first example, the contributing factors to non-compliance include spoil material being deposited onto land where it may enter water, failure of compacted banks and inadequate stormwater controls. While the spoil material was non-compliant with the relevant NESCF regulations, it is likely that the compacted banks and stormwater controls would have been compliant with the NESCF at the time of installation, despite not being fit for purpose.
   2. Similarly, in the second example, while NESCF compliant controls were in place, they were inadequate to manage a significant rainfall event, resulting in a discharge of sediment to water. In the third example, while roading/tracking was compliant with the NESCF, cable hauling resulted in non-compliance with the NESCF, with significant scouring of a hillside, and discharge of sediment to water as a result of logs being hauled across a river.

## Summary of Clause 3 feedback

1. Feedback on the forestry provisions was received from a number of organisations. There is both support for, and opposition to the forestry provisions in the feedback. Appendix 2 contains a table of the feedback received by sub-topic. The key themes are summarised below:
2. The organisations that generally support the forestry provisions reference the consideration of the effects of forestry on catchment water yield and sedimentation. Some strengthening of policies was sought, related to sedimentation and the effects of forestry on the habitats of threatened species. These organisations also supported the proposed rules, with some seeking more stringency for:

Forestry in over-allocated catchments, where forestry could impact water yield.

Forestry discharges, particularly related to risk of erosion, landslides and instability.

1. One organisation supported the policy direction, but requested changes to the rule framework.
2. The organisations that oppose the forestry provisions make reference to the lack of information from ORC explaining why the NESCF regime is not sufficient in Otago, and why the additional stringency is required. This includes justification for setbacks that are greater than those in the NESCF. These organisations also consider that there are few issues with forestry in Otago, and that the region does not have the same highly erodible soils as other regions (such as Gisborne). Some of these organisations also questioned the reference to bonds in the matters of discretion and control in the forestry rules.
3. The organisations in opposition particularly note the ability for consents for replanting recently harvested forest to be declined, which puts at risk existing forestry operations, both in terms of the ability to harvest and replant, and the implications on foresters’ obligations under the Emissions Trading Scheme. Reference is also made to the regulations in the National Environmental Standards for Freshwater managing the conversion of land use for plantation forestry to pastoral land use, which are described as being a moratorium.
4. The organisations in opposition consider that the NESCF is not permissive, as it includes conditions that must be complied with. They consider that monitoring has shown little need for major enforcement action by the council, and note that under the NESCF, ORC can charge for monitoring certain permitted activities, including harvesting.

## Suggested changes to the forestry provisions

1. Based on the technical evidence and clause 3 feedback received on the draft LWRP, some changes are recommended to the forestry provisions.
2. The policies related to forestry can remain largely unchanged, other than for the deletion of elements that relate to replanting (see further discussion below).

### Afforestation (new planting of forest)

1. Two options exist in relation to afforestation:
   1. Retain the requirement for a resource consent for new commercial forestry over 10ha (in line with previous direction from governance, including retaining 10m/20m setbacks from permanently flowing rivers for new forestry under 10ha in area); or
   2. Remove the rules for new forestry in the LWRP, such that afforestation is only managed under the NESCF.
2. Staff support option a. because:

* a resource consent process may enable greater control over the location of planting, thereby enabling better performance at harvest time;
* appropriate setbacks from waterbodies can be considered on a case-by-case basis for forestry planting over 10ha; and
* a consent process could also help with management of impacts on water quantity. However, the uncertainty around the extent of forestry impacts is acknowledged, and an assessment of the effects of afforestation of water yield will need to be provided by an applicant.

### Replanting existing forest

1. Staff suggest removing rules relating to replanting in the LWRP, such that replanting is only managed under the NESCF. This is for two main reasons:
   1. Given replanting is of land that has already been subject to at least one forestry cycle, it is a lower risk activity, when compared to afforestation of previously unforested land.
   2. The forestry industry has significant concerns about potential Emissions Trading Scheme liabilities if there are additional controls on re-planting. While staff do not consider that this is likely to eventuate, this concern would be alleviated.

### Harvesting

1. Staff suggest retaining the draft LWRP rules for harvesting, as:
   1. This low level consenting requirement (as a controlled activity) is recommended to be retained to enable some oversight of the harvesting management plans required to be prepared under the NESCF, to ensure those plans contain mitigations and controls that are appropriate for the location and nature of the harvesting operation.
   2. Evidence from the ORC compliance team has demonstrated that controls that comply with the NESCF may not be sufficient to manage sediment discharges, and suggest that greater council oversight in the development of these plans would be beneficial to their overall efficacy.

### Bed disturbance

1. Staff suggest retaining the draft LWRP rule managing the disturbance of the bed by forestry activities, carrying over the existing rules from the Regional Plan: Water for Otago. The permitted activity conditions that are additional to those in the current regional plan will be reviewed to ensure they are reasonable and appropriate. An additional check against the requirements of section 70 of the RMA has resulted in some minor adjustments, but no substantive change.

**Appendix 1 – Technical Memoranda (separate documents)**

**5A MEMORANDUM Re: Sediment issues from forestry in Otago**

**5B MEMORANDUM Re: NESCF Compliance and sedimentation issues in Otago**

**Appendix 2 – Summary of Clause 3 Consultation Responses**

| **Topic** | **Summary of feedback received** |
| --- | --- |
| Rely on NES-CF | General support for a consistent approach with the NES-CF to manage forestry. Questions raised as to what additional matters need control in the LWRP.  Feedback covers both:  (a) those who seek reliance on NES-CF  (b) requests for reasoning behind any variations from the NES-CF provisions. In particular:   * Why the various controls and management plans cannot be relied upon; * A view that Otago is generally low-risk for forestry, so additional controls need to be justified; and * Reasons behind variations in slope classes, setback distance and river definitions. |
| Setbacks | Feedback is split between:  (a) Parties who support the revised setback distances  (b) Those who oppose setback requirements consider that the requirements are inconsistent amongst other land uses and are significantly more stringent than the permitted conditions for afforestation or replanting in the NES-CF. In addition,   * The economic impact on small to medium forest owners; * Concerns of weed infestations in areas left unplanted; * Potential ETS liabilities for existing forest. |
| Planting | Feedback is split between (with more significant feedback from group (b) below):  (a) Those parties who consider the rules are generally acceptable and achievable, subject to:   * Greater consistency with the NES-CF, * Including risk factors of landslide/erosion when considering the activity status of commercial forestry, * Re-defining exotic continuous cover, plantation forestry and permanent forestry, * Acknowledge that the effects of forestry operations can extend beyond property boundaries.   (b) those parties who oppose consider the provisions in the draft LWRP are not consistent enough with the NES-CF and provide a more stringent approach despite no justification that the current regime is not working. In particular:   * Requiring a preference for indigenous vegetation, citing financial and practical concerns for commercial forestry, * Current permitted forestry activities being subject to restricted discretionary consent, * The introduction of a consent bond, * The permitted activity conditions for afforestation or replanting activities to be an area of 10 ha or less, * Objection to limiting land use for the purposes of managing water yield. |
| Re-planting | General opposition due to a lack of consistency with the regulations provided in the NES-CF and addressing adverse sedimentation effects. In particular:   * Requiring resource consent to replant areas larger than 10 ha, potentially affecting those forestry owners who are registered in the ETS, * A time lag in economic returns provided by the preference for indigenous vegetation. |
| Harvest | Feedback is split between:  (a) Those who support but suggest greater reliance on the NES-CF regulations for harvesting  (b) Those who oppose:   * The discretionary activity status when PP-R17-CON1 is not complied with; * Requiring a bond as a condition for consent   These parties request that harvesting of commercial forestry be provided for as a permitted activity, subject to compliance with appropriate conditions and in accordance with a harvest management plan per the NES-CF. |

1. PP-P10, PP-P11, PP-P12 and PP-P13 [↑](#footnote-ref-2)
2. PP-R16 and PP-R17 [↑](#footnote-ref-3)
3. This line of response is driven by s32(4) of the RMA that states: *If the proposal will impose a greater or lesser prohibition or restriction on an activity to which a national environmental standard applies than the existing prohibitions or restrictions in that standard, the evaluation report must examine whether the prohibition or restriction is justified in the circumstances of each region or district in which the prohibition or restriction would have effect.* [↑](#footnote-ref-4)
4. In BED-R22-PER1 [↑](#footnote-ref-5)
5. Fahey, Barry and Payne, John (2017). The Glendhu experimental catchment study, upland east Otago, New Zealand: 34 years of hydrological observations on the afforestation of tussock grasslands. [↑](#footnote-ref-6)
6. Filoso, S., Bezerra, M. O., Weiss, K. C., & Palmer, M. A. (2017). Impacts of forest restoration on water yield: A systematic review. PloS one, 12(8), e0183210 [↑](#footnote-ref-7)
7. www.forestflows.nz [↑](#footnote-ref-8)
8. Zhang, X., Liu, X., Zhang, M. and Dahlgren, R. (2010). A review of vegetated buffers and a meta-analysis of their mitigation efficiency in reducing nonpoint source pollution. [↑](#footnote-ref-9)
9. Kuglerová, L., Muotka, T., Chellaiah, C., Jyväsjärvi, J. and Richardson, J. (2023). Protecting our stream by defining measurable targets for riparian management in a forestry catchment. [↑](#footnote-ref-10)
10. Memorandum from Ben Mackey to Tom de Pelsemaeker, dated 28 February 2024; Memorandum from Brodie O’loughlin to Tom de Pelsemaeker, dated 13 March 2024. [↑](#footnote-ref-11)
11. Memorandum from Brodie O’loughlin to Tom de Pelsemaeker, dated 13 March 2024. [↑](#footnote-ref-12)
12. The erosion susceptibility classifications are used in the NES-CF to identify when different restrictions and consent thresholds are reached. There is on-going debate nationally about the robustness of the erosion susceptibility classifications, and in Otago this includes the relatively high risk of mass movement/landslides, which the national erosion susceptibility classification may not take into account. [↑](#footnote-ref-13)
13. <https://www.mpi.govt.nz/forestry/national-environmental-standards-commercial-forestry/nes-pf-guidance/guidance-forestry-activities-nes-pf/>, accessed 8 April 2024; <https://docs.nzfoa.org.nz/forest-practice-guides/>, accessed 8 April 2024. [↑](#footnote-ref-14)