

Description of measurements carried out in 2003/04 Environmental Audit of Timber Production on Public Land

1. Objective

The objective of this document is to list those measurements undertaken by the independent environmental auditor in the 2003/04 Environmental Audit of Timber Production on Public Land. These measurements are undertaken to identify compliance of public land timber production with specific elements of the Code of Forest Practices for Timber Production 1996.

This document primarily serves as a description of measurements to be carried out in the process of the audit. Other assessment guidelines that don't require specific measurement are listed within the audit workbook and have not been included within this document.

2. Roding

2.1 Guideline: *Roads must be cross-sloped or crowned with table drains provided to minimise the concentrations and velocity of run-off and ensure that water drains from the road surface.* [Code s2.4.5.1.]

Assessment:

- Assess at least 500 metres of roadline during the coupe inspection. Assess clearing widths against prescription requirements. Where necessary, measure clearing widths at a minimum of every 200 metres along the sampled section.

2.2 Guideline: *Runoffs, cross drains or culverts should be spaced according to the road grade and the soil erosion hazard as set out in the NRE guidelines [Utilisation Procedures s9.6] and should have sufficient capacity to convey the peak flow from a 1:5 year ARI storm event.* [Code s2.4.5.2.]

Assessment:

- Assess at least 500 metres of roading, where available, during coupe inspection. Measure and record the distance and slope between drainage structures. Record instances and location where the drainage spacing does not comply with prescriptions or where the drainage is ineffective.

3. Roadline Coupe

3.1 Guideline: See above-listed guidelines from Code references s2.4.5.1 and s2.4.5.2.

Assessment:

- Assess two 1,000-metre sections of road and two stream crossings (if available) during inspection of selected roadline coupes. Measure and record distance and slope between drainage structures. Record situations (and distances) where drainage spacing does not comply with prescriptions or where drainage is ineffective.
- Assess two 1,000-metre sections of roadline as possible during coupe inspection. Assess clearing widths against prescription requirements, where necessary measure clearing width at a minimum every 200 metres.

4. Snig and forwarding tracks

- 4.1 **Guideline:** *Tracks must be outsloped or cross-drained immediately following completion of snigging operations on a section of a coupe or when tracks will not be used again for some time due to transfer of operations. [Code s2.3.10.5.]*

Assessment:

- Inspect at least 200 metres of snig track during coupe inspection. Record the measured distance of affected snig track and assess drainage structures for compliance with prescription requirements.
- Record instances of where an excessive number of drainage structures have been constructed, or an excessive amount of soil disturbance has resulted from their construction. Whilst not a specific guideline of the code, it is a goal of the code [2.3.10].

Guideline: *Cross-drains must be spaced and angled according to local prescriptions and soil erosion hazard class so as to interrupt any flow of surface water down the track and disperse it onto undisturbed or uncompacted areas avoiding direct discharge into drainage lines or streams. [Code s2.3.10.5.]*

Assessment:

- Cross drainage structures are considered compliant when they are installed on an angle sufficient to interrupt any flow of water down a track and disperse it away from the track, avoiding direct discharge into drainage lines or streams.

5. Reserved Area Protection

5.1 **Assessment:**

- Assess at least two, and up to four, 200 metre sections of buffer and measure widths of buffer strips for at least 2 and up to 4 points along two 200 metre strips where necessary to determine compliance to relevant prescriptions.
- Assess at least 200 metres of rainforest buffer during coupe inspection. Measure widths for at least 2 and up to 4 points along the sampled 200 m strip and where necessary to determine compliance to relevant prescriptions.
- Assess at least 200 metres of special habitat or landscape buffers strip during coupe inspection. Measure widths for at least 2 and up to 4 points along the sampled 200 metre strip and where necessary to determine compliance and extent of non-compliance to relevant prescriptions.
- Note; a maximum of 800 metres of buffer is to be measured at each coupe comprising of a combination of streamside reserve, special habitat, landscape or rainforest.
- Assess at least 200 metres of filter strip during coupe inspection. Measure widths for at least 2 and up to 4 points along one 200 m strip and where necessary to determine compliance to relevant prescriptions.
- Note that more than 4 points of width measurement may be required any sections of buffer or filter strip where there is an apparent narrowing of the strip to the extent that the buffer or filter that may not comply with requirements.
- Assess the crown cover of those species listed within the relevant prescription to determine classification of rainforest and measure the determined area against the relevant prescription.

6. Habitat Trees

- 6.1 Guideline:** *The following approaches should be considered to facilitate protection of flora and fauna values — retention of habitat trees and old-age understorey elements in appropriate numbers and configurations and provision for replacement of old hollow-bearing trees within or around coupes. Consideration must be given to both the protection of habitat trees during harvesting and subsequent management and the effects of retained trees on the growth of future crop trees. [Code s2.3.6.5.]*

Assessment:

- Assess the coupe for retention of prescribed numbers of habitat trees. Record the number of retained trees present, where harvesting operations have damaged the trees and/or where debris accumulated around the tree base does not comply with prescriptions. Record general comments on selection and protection of retained trees.

7. Log Landings and Dumps

- 7.1 Guideline:** *The coupe plan should include and specify where necessary the design, siting, construction, use and rehabilitation of log landings and dumps and where necessary siting and rehabilitation measures for major snig tracks. [Code s2.3.1.9.]*

Assessment:

- Check coupe plan and map, record the location and number of landings. Locate and inspect at least 1 and up to 2 landings. Record the dimensions of the landing and associated areas of significant soil disturbance associated with landing and establishment. Assess against prescription limits for relevant forest type (Utilisation Procedure S8, pg 14). Record the location of each landing and its approximate distance from permanent and temporary streams, drainage lines and wetlands. Identify its compliance with prescription requirements.
- Check the depth of surrounding undisturbed soils to determine if the depth of underlying rock may have limited the depth of rehabilitation.
- Where rehabilitation works have occurred, record rip depth and spacing against prescription requirements (Utilisation Procedure S8, pg 14).

- **Note regarding measurements**

All recorded lengths and widths required to establish compliance or non-compliance are to be measured using a tape measure or hip chain. Laser rangefinders may be used to obtain a preliminary measure of distance.