



# Forest Practices Circular

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<b>Issued by:</b>	FMS Implementation Committee
<b>Title:</b>	<b>Implementing Silviculture in LNE and UNE</b>

## Management Principles:

This will be the official reference on determining the application of regeneration harvest in the Upper and Lower North East Forest Agreement Regions. This circular supersedes FPC 2012/01, however the implementation procedures remain the same with additional reference to retaining seed trees.

## Background:

The IFOAs specify limits to silviculture in harvesting operations. Forestry Corporation of NSW (FCNSW) must implement IFOAs in a consistent manner. This circular provides an interpretation of the IFOA requirements that:

- agrees with the letter of the IFOAs
- is based on FCNSW's understanding of the intent of the IFOAs
- follows the principles of ecologically sustainable forest management
- facilitates wood supply in accordance with commitments
- provides a basis for appropriate silvicultural treatment and monitoring into the future

## Implementation:

These procedures implemented on 1 February 2003 will continue to be applied.

## Determining the Silviculture to be Applied

In determining the silviculture, consider stand composition, stand structure, forest type, objectives of management and timber markets. Using the silvicultural decision tree in the Native Forest Silviculture Manual (Chapter 8) as a guide, determine the appropriate silviculture for the different types of stands identified in the area.

Estimate the areas of the AGS and STS tracts, either by mapping discrete areas or by estimating the proportion of the total net harvesting area in different stand types. Pre-harvest mapping is preferred where the mosaic of stands within the planning unit is relatively simple. Where pre-harvest mapping is not practical, estimate proportions of each tract.

All of the net harvest area of any harvest-planning unit **must** be allocated to either the STS or AGS tract where:

- The AGS tract includes all part of a planning unit that may be destined for regeneration harvesting using AGS at any stage in the future.
- The STS tract includes all parts of a planning unit that may be destined for regeneration harvesting using STS at any stage in the future.
- Each tract may contain pre-commercial and non-commercial stands.

The final application of silviculture will be determined by SFOs during tree marking.

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## Methodology:

### Regeneration harvesting in the AGS tract

#### 1. Planning:

- Estimate the total area of AGS tract
- Calculate and specify the maximum number of groups:  
**number of groups = area of AGS tract (ha) X 0.225 X 4**  
(assuming the group area will be 0.25ha. If smaller canopy openings are anticipated, use 1/expected group area instead of 4 in the equation)  
This specification ensures that IFOA limitations are not exceeded.
- Determine how many further AGS events will be required to maximise high quality sawlog yield in the remainder of the 20 year IFOA period.

#### 2. Tree marking

Carefully consider the location of groups to be created in subsequent harvesting operations and:

- target mature stands
- aim to harvest all mature stands or the specified maximum number of groups if further AGS events are envisaged during the 20 year IFOA period  
This will assist in fulfilling wood supply commitments.
- provide a visual break of trees and understorey between the disturbed areas of each group if groups are next to each other
- visual breaks, habitat trees, non commercial trees and other uncut areas make up the required AGS non-harvest 10% of NHA
- ensure that canopy openings have a maximum diameter of 55m from crown edge to crown edge. If groups are not circular, the dimensions may be varied e.g. 50X50, 60X40, 80X30, 125X20
- map the location of the centre of each group, use a GPS if available (and record the approximate dimensions if it differs substantially from a 0.25ha circle)
- thin as appropriate in the remainder of the AGS tract, removing no more than about 60% of stand basal area (thinning can include harvest of scattered, commercially mature trees amongst a younger age class destined for future AGS)

#### 3. Following harvesting:

- evaluate whether site preparation or planting is necessary to ensure adequate tree regeneration
- plan, implement and monitor regeneration treatments
- record the area treated by AGS (usually no. of groups/4 ha) and thinning

### Regeneration harvesting in the STS tract

#### 1. Planning

Estimate the proportions of the STS tract where there will be:

- little or no BA removed – pre-commercial and non commercial stands
- low to moderate levels of BA removed – low quality stands and stands containing young trees with growth potential (Return Stands)
- high levels of BA removed – commercially mature, good quality, dry stands
- thinning rather than regeneration harvesting

If there are substantial areas where BA removal is likely to be high, use angle counts to estimate percentage removal. Multiply estimated proportions by percentages to estimate overall BA removal. In most cases this will be less than 40%. If expected BA removal across the **tract** is higher than 40%, modify the prescribed silviculture for the relevant stand type (see silvicultural decision tree, Chapter 8 Silviculture Manual).

The harvesting plan must indicate the expected range of stand BA removal and specifically confirm to SFOs if a planning unit includes substantial areas where **stand** BA removal is expected to exceed 40%. If this is the case, the harvesting plan must specify any special

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provisions for the retention of seed trees that may be required. Where practical, these areas should be shown in the harvest plan. SFOs will be able to harvest the commercially mature trees from such areas knowing where sufficient BA is retained in other parts of the tract (non harvest areas, areas of light STS and thinning areas) to ensure compliance with IFOA specifications.

2. Tree selection to achieve the following:

- to occur on a tree by tree basis, focusing on harvesting trees that are commercially mature whilst retaining growers (in return stands only), seed trees and habitat trees
- aim to minimise damage to retained trees
- should result in an irregular pattern of tree removal
- mitigate visual impact by residual trees and retained trees
- thin regrowth stands in the tract as appropriate

3. During harvesting:

- monitor tree retention to ensure that seed trees are retained as required and all other commercially mature trees are removed, except those retained to comply with IFOA conditions.
- map non harvest areas, areas of heavy STS, and thinned areas. Compare these with harvest plan specifications to ensure that IFOA specifications are not exceeded.

4. Following harvesting:

- evaluate whether site preparation or planting is necessary to ensure adequate tree regeneration
- plan, implement and monitor regeneration treatments
- record harvesting pattern and map all areas with growers retained for harvest within the IFOA period

**Related Documents:**

**Date of Next Review**

27 September 2023



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