

# SUSTAINABLE HARVESTING METHOD

## Introduction

This harvesting method is intended for use in mature mixed native forest, almost the only source in Tasmania of world-class timber. Except for those areas identified in the Tasmania Together Process as high conservation forests, whose management can be decided by future generations, similar methods to this proposal are a far preferable option to current clearfell burn and conversion forestry.

The method should prove to be, with sensible work practices, as safe as current 'clear fell' practices. With the added bonuses of –

- Reduced fire risk over an extended period compared to plantation or eucalypt regrowth.
- Low environmental and visual damage.
- No change to the microclimate, soil depth or strata
- Little change to the carbon and nutrient cycle.
- Loss of water quality and volume associated with clearfelling will not occur.
- For some extra cost, reusable cellular fencing would eliminate the need to use 1080 to kill native wildlife.
- The method involves low volume high value harvesting directed toward local value adding, creating more local jobs in the forest industry.
- The RFA calls for those areas delineated for timber harvesting to be regenerated as native forest, converting mixed age and species forests to single age and species that is harvested before maturity goes against the parameters of ecological sustainability that is the basis of the RFA.
- On going opportunities for bio harvesting, and ecology based tourism, including proudly showing world-class sustainable harvesting methods in action.
- When taking account of the full range of environmental and cultural factors including leatherwood honey production, tourism, and value adding to all species of timber it is economically viable.
- It will prove to be far more acceptable to conservation minded people, effectively diffusing the current public condemnation of the Forestry Industry's old growth management practices. It allows for other uses for the forest apart from pulpwood and low quality timber production.
- With the introduction of more efficient sawmilling methods, fewer trees need to be cut for a given amount of sawn timber, any shortfall of sawlog and pulp can be obtained from existing plantations and immature eucalypt regrowth forests which comprise more than 90% of our Multiple Use Forests
- This method allows for further refinement with changing markets and as the science and technology of forestry management changes.
- In the case of a major regional fire event, the diversity of flora and fauna will be able to buffer the fire disturbance best. A natural fire very rarely causes anywhere near the catastrophic damage that a clearfell burn achieves.

This method is best applied to a distinct sub region e.g. a river valley, so as to allow economies of road making and machine use as equipment is moved from coupe to coupe for short periods of work. In addition a single access road into the area will facilitate a cleaning area for all vehicles and shoes to reduce weed and disease invasion. It also would enable an independently certified sustainable forest

management certification of timber from the area enabling a wider international market and a price premium on products.

## **METHOD**

--Survey a coupe of 50 to 100ha for location of species, age and quality using GPS, handheld mini computers and electronic callipers. This data will allow for an estimate of a sustainable yield of all products, harvesting should never exceed the sustainable yield. Accurate planning of harvesting schedules takes into account growth rates and efficient filling of special orders. The information is collated with photo interpretation and data processing technology already available within Forestry Tasmania and will form the basis for future operations on twenty-year intervals.

Put in an all-weather gravel road to a central location and clear a landing of about .5ha for sorting, stacking, marketing and loading of timber.

Construct a series of fairways about 50metres or one tree height wide, (this width provides a safe working face for felling and opens a wide enough area to enable good growing conditions for eucalypt as well as special species timbers). The fairways will extend throughout the coupe covering as much mature trees, while avoiding immature timber and leatherwood as is practical. If possible orient the fairways north-south to maximise midday sun to maximise growing conditions. The total area of fairways, roads and landing should not exceed 20% of total area. This large first cut will enable future work in the coupe to be easily and cheaply accomplished.

Cautiously remove all potentially marketable timber from the fairways to the landing for sorting and sale. Create a narrow, permanent track to the ends of the fairways mostly on the northern (shadow) side and heavily cord with slash. Push some of the remaining small branches etc to the ground using a machine like an excavator for quick rotting, reduce fire risk and form natural shelters to prevent browsing by animals, a percentage of slash will need to be piled into central heaps for burning when conditions are safe in Autumn. Some burnt and rotted timber, which is essential for biodiversity, is left on the forest floor.

Larger pieces of unsaleable timber may be pulled to the landing and removed for mulching or pulp.

As you pull out of the coupe for the first time expose mineral soil to provide ideal areas for regrowth or planting. A low intensity autumn burn in some areas will stimulate eucalypt regrowth without preventing special species regeneration.

The remaining slash, before it rots down is slightly more of a fire hazard than a clearfell coupe but is much less a hazard than a highly flammable even age immature eucalypt regrowth forest.

Allow the forest to regenerate naturally, browsing will need to be monitored, netting may be needed but should be installed in small cells to minimise losses if a portion of the fencing were to be damaged. Alternatively branches can be spread over the burnt ground to act as organic covers to stop animals getting to trees in their vital first years growth.

At the next harvest cycle (every twenty years) re enter the coupe using the already existing snig tracks, remove a proportion of trees in the standing forest that have achieved their maximum saw log potential (optimum DBH) by using a variety of methods such as, for smaller species using portable petrol powered remote operated winch, which when attached to a selected tree, using a portable extension ladder, will help control the felling direction. After removing the head, pointing the end for low impact towing and cutting to length, pull the timber, using a series of snatch blocks and the winch to a permanent track for later towing to the landing. Larger trees can be pulled with a large machine with a mounted winch without leaving the snig track using snatch blocks attached to suitable trees or stumps. Some very large / unsafe trees may need to be felled using explosives into the standing forest for safety reasons creating 'tennis racket' shaped cleared areas for unassisted regrowth, forming an important component in the natural succession cycle / habitat cycle. If OH&S disallow, in the future, felling of trees into standing forest then harvest by targeting small pockets of mature trees or areas of poor quality/potential forest near the snig tracks these cells will need a diameter of at least 50 meters to allow for good regrowth.

At every cycle re-open the tracks, reassess the stand situation/ market stock take, extract more mature trees and undertake thinning, pruning and planting (where appropriate)

After a suitable period (100-200 years) allow the fairways to completely regenerate and create new ones. Future forest managers should make valid decisions on management strategies as knowledge and equipment improves.

Continue to manage this coupe so that there is no significant change in the species mix or loss of timber quality while harvesting at a rate that can be maintained forever.

Ian Johnston      03 62671434

[ianjohnstonmarine@bigpond.com](mailto:ianjohnstonmarine@bigpond.com)