

Silvicultural Systems Trial



Alternatives to Clearfelling

In dry eucalypt forests, where the lower density of vegetation allows operators clear visibility and freedom to move, it is possible to select and fell individual trees. In tall wet eucalypt forests, this is dangerous – that's why clearfelling is preferred. But there are other variable retention systems that can be used in Tasmania's wet eucalypt forests. Several have been trialled in the Warra silvicultural systems trial in the Warra Long Term Ecological Research site, which encompasses working production forests and the World Heritage Area in southern Tasmania.

These systems have been developed partly in response to public concerns over clearfelling of tall old-growth forests. Research at Warra has shown that variable retention silvicultural systems can be a practical alternative to clearfelling, allowing an economic level of wood production as well as retaining old-growth trees for wildlife habitat and biodiversity.

Variable Retention

Variable retention systems leave more than half the total area of a coupe within one tree height of the base of an old-growth tree or group of trees for at least one rotation.

Dispersed Retention

In the dispersed retention method, individual trees are left standing across the full area of the coupe. Workers in the forest have safety concerns about this system. A preferred approach is aggregated retention, which leaves larger patches of forest rather than individual trees.

Another issue is the management of the slash left on the forest floor. A fierce fire across the whole coupe would kill the retained trees, but a clear seedbed still needs to be created for the regenerated areas of new forest. This can be achieved by limited and careful burning – other options can include recovery and re-use, perhaps for the production of biomass energy.

The retained groups of trees need to be protected while the new forest grows – the rotation period before the next harvest can be as long as 90 years.

2010 & Beyond

These are all issues being actively addressed, because under the Tasmanian Community Forest Agreement (TCFA), 80 per cent of the annual old-growth harvest will be by non-clearfell silviculture from 2010. Scientific research such as the Warra trials are the key to new management and harvesting strategies that balance the environmental, social and economic values of our forests.