

Smoke Management



Key points

Sustainable Timber Tasmania undertakes planned burns for two main reasons:

- To improve the safety of the community by reducing fuel loads in production forests and other identified high priority areas
- To regenerate harvested forests in a similar manner to natural regeneration following bushfire.

Sustainable Timber Tasmania plans and conducts its burns based on evaluation of weather and site conditions to optimise burn outcomes and smoke dispersion away from population centres.



Forestry Officer lighting the edge of a fuel reduction burn using a drip torch.

Fuel reduction burns

Fuel reduction burns are generally carried out in spring and autumn to take advantage of optimal weather conditions.

Fuel reduction burns are used to:

- Protect communities and assets from bushfire; and
- Maintain the health of fire-dependent vegetation communities.

Smoke from fuel reduction burning typically remains near the ground and can cause pollution, so wind conditions and direction must be right before a fuel reduction burn can be carried out. Weather conditions must also be right: not too hot, not too dry or wet and ideally with a light wind to blow smoke away from any local communities.

Regeneration burns

Tall wet eucalypt forests are most successfully regenerated if a major event occurs to replace the whole stand of trees; leaving an exposed mineral earth layer. This allows new seedlings to germinate. In nature, this is produced by bushfire. Over the past 20 years scientists have researched ways to produce these conditions but to date, no acceptable alternative to clearing and burning has been found.

Regeneration burns are undertaken in a way that creates an intense convection current to take the smoke produced into the upper atmosphere and away from local communities at ground level. They are typically done in autumn.

Regeneration burns are used:

- To regrow harvested wet eucalypt forests by reducing fuel levels and creating a nutrient-rich seedbed for seed germination (mimicking natural conditions); and
- For site preparation as part of plantation establishment, to reduce fuel levels and increase planting space.

While the smoke columns from these burns can sometimes be visible from local communities, they rarely cause pollution at ground level.

A significant amount of planning is undertaken to conduct burning with suitable site and weather conditions to achieve an effective regeneration burn.

Coordinated Smoke Management Strategy

Sustainable Timber Tasmania has been instrumental in improving smoke management in Tasmania. This has led to the development of the Coordinated Smoke Management System now in place across the State.

This program, which was developed with the Environmental Protection Authority and is run by the Forest Practices Authority, sets a maximum amount of smoke that can be released each day into 11 defined Tasmanian 'airsheds'.

Key principles of the Coordinated Smoke Management Strategy include:

- Planning for burns to take place when forecast weather conditions indicate the smoke will be dispersed away from communities;
- Minimising or not conducting burns on days when poor smoke dispersion is likely; and
- Not conducting burns that may affect significant public events.

Other agencies and private landowners who also conduct burns, may do so outside of these arrangements.



A controlled forest regeneration burn in progress. This method removes harvest debris and prepares the site before sowing locally collected seed to regenerate a healthy new forest.



A planned regeneration burn showing smoke being drawn into the centre and rising high in a convection current minimising smoke at ground level.