

## Plantation Fire Protection



Setting horizons beyond the plantation boundary

*by Paul de Mar*

## Plantation Values



Plantations represent significant capital investments to their owners

Timber product values upwards of \$30,000 /ha can be achieved over the plantation crop-life

Once processed, the sawn timber products from 1 hectare of plantations reach around \$300,000 on domestic markets

Plantations are valuable assets to rural communities as well as their owners, generating significant investment and employment

Therefore, the social and economic impacts of large scale fire losses reach well beyond the owners

# Plantation Fire Risk



Plantations are vulnerable to fire damage and loss

It takes a significant and sustained effort to protect plantations throughout their long crop-life

In Australia, plantations are exposed to some of the highest fire risk situations in the world:

- Long hot dry summers
- In the order of 30 high-extreme fire danger days per year
- Landscapes that support large severe wildfires
- Dry lightning storms that can generate mass ignition scenarios
- Large tracts of eucalypt forests with poor access for fire control





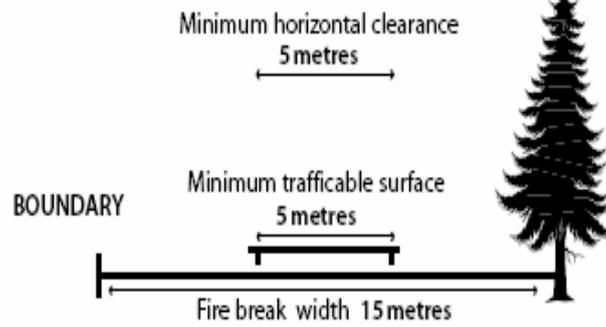
## Plantation Fire Protection Standards

Obviously focuses on features of the plantation site itself:

- Boundary breaks
- Road and fire trail provision
- Water points
- Detection
- Response capability

# Boundary Breaks

Figure 1: Boundary Fire Breaks



# Fire Trails

Figure 2: Internal Fire Breaks





## Fire Prevention Programs





**Fire protection infrastructure in plantations is necessary for protecting the high plantation asset values, particularly for fires starting in the plantation.**

**But what about fire risk from fires starting outside the plantation? What level of risk do these 'external' fires pose?**

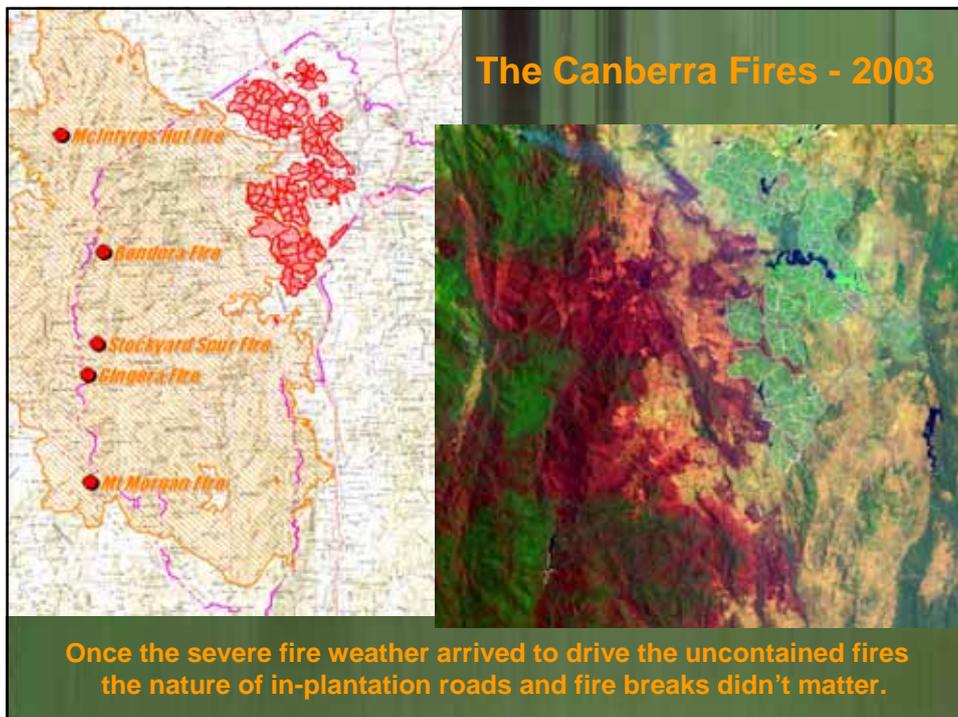


**In Australia, fires entering plantations from outside have resulted in some of our largest plantation losses.**

**The prudent plantation manager will certainly manage for external fire risk.**

## Some Australian plantation loss events:

- Largest on record – Ash Wednesday 1983 – 23,000 ha burnt. Fires burnt into plantations in severe fire weather.
- 2<sup>nd</sup> largest on record – Canberra fires 2003 – 10,500 ha burnt. Fires started some 20km from plantations, entered plantations in severe weather 9 days later.
- 3<sup>rd</sup> largest on record? – Bombala 1983 – 6,457 ha burnt. The fire started 28 km south from the plantation; burnt into the plantation 10 days later driven by a violent southerly change.
- Many others... in fact the greatest proportion of Australian losses is from fires starting outside plantations.



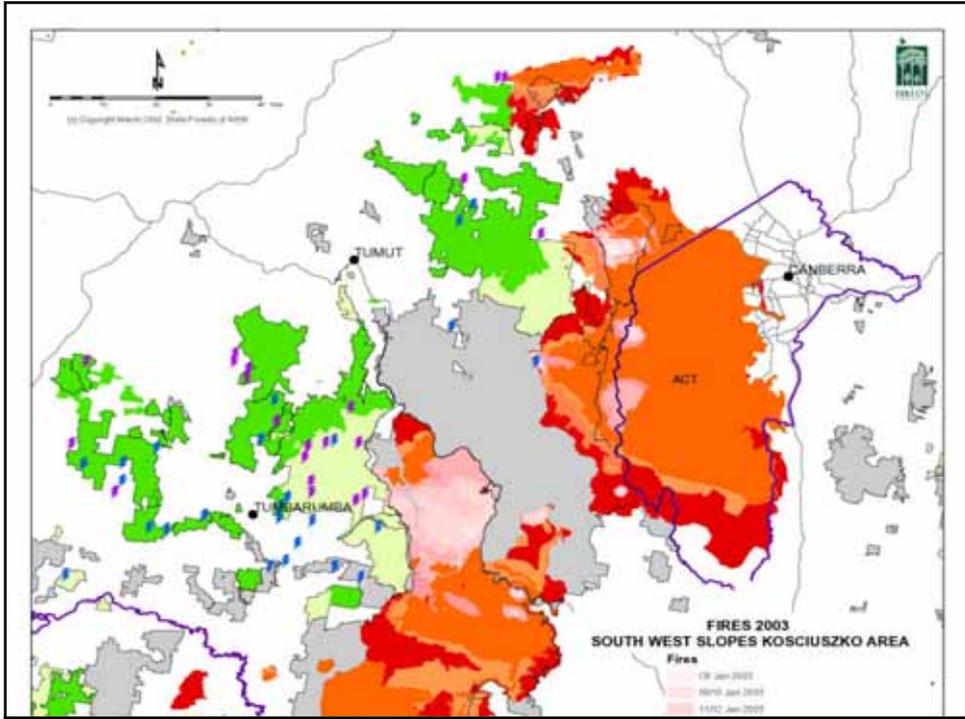
## Reducing the risk of 'wipeout' fires

### Key factors:

- Road and trail access to adjacent land.
- Investment in Hazard Reduction Burning in adjacent forest, or grazing of adjacent grassland.
- Detection coverage over adjacent land.
- Increasing levels of pre-emptive dispersal of Initial Attack Crews in increasing FDI.
- Authority, capability, and willingness to go well outside the plantation to contain fires on other land while they are small.



**Hazard reduction along trails maximises the strategic value and utility of the trail for fire protection when wildfires occur.**



**Thank you**

*Questions?*