

# Planned Burning

Should it be done?

# After Wildfire





## After planned burning





# Wildfire





Planned burning



# Considerations before burning

- Why to burn?
- Age since last fire
- Recommended fire intervals
- Effects on plant communities
- Effects on animal communities
- Can the burn be controlled??



Burnt too frequently?





*Getting the balance right*

To Burn



Not to burn



# Reasons for Planned Burning

- Personal protection
- Asset protection
- Reduce fuel loads
- Strategic protection
- Ecological burns
  - Species diversity
  - Regeneration
  - Landscape manipulation



# Benefits of Planned burning

- Burn is under known conditions
- Ignition is in controlled plan
- Cooler burn
- Less scorch
- Less destructive
- Faster post burn recovery
- Less impact on wildlife



# Effects of Wildfire

- Hotter burn
- High scorch heights
- Crown fires
- Uncontrollable
- Higher wildlife casualty or mortality
- Species decline in some cases
- Fire sensitive species more likely to extinction



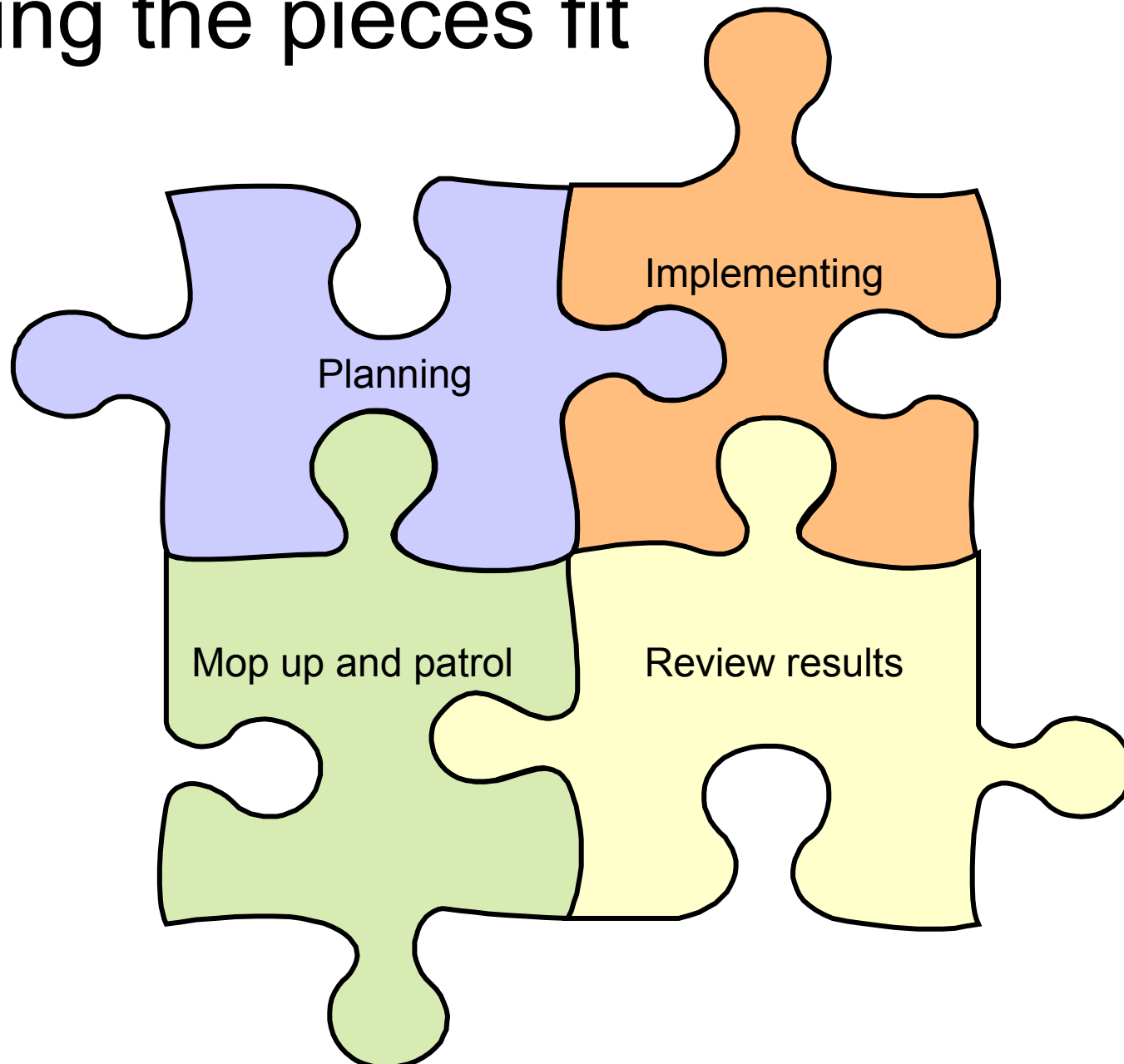








# Making the pieces fit



Planning



# Considerations in burn preparation

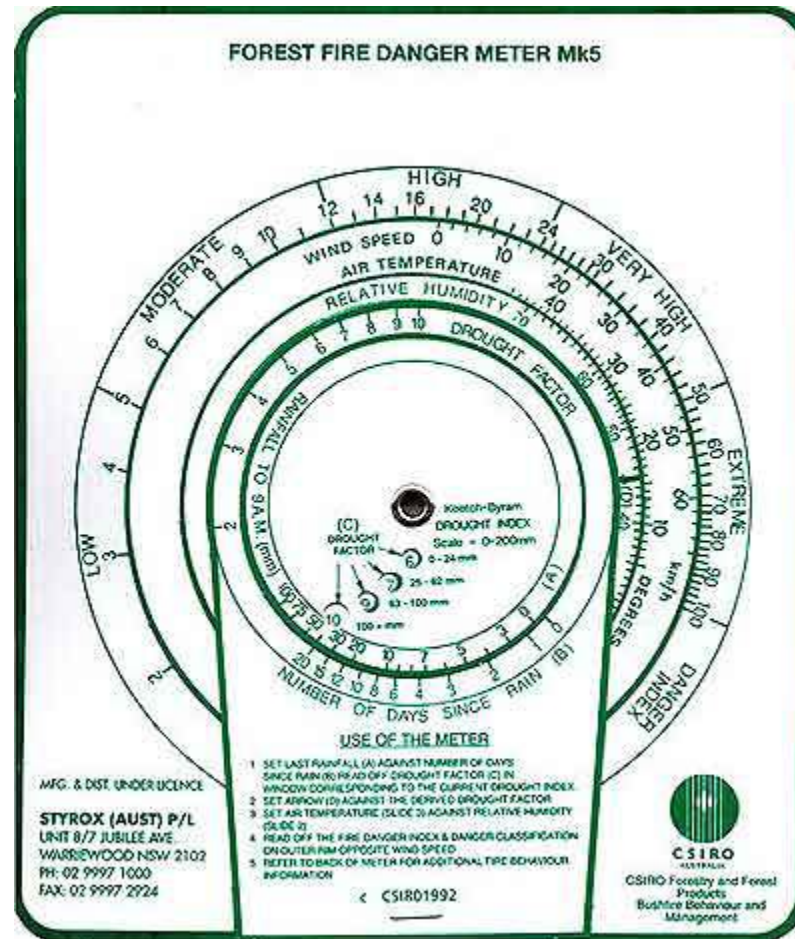
- Make a written plan
- Predicted fire behaviour
- Boundaries
- Neighbours
- Resources
- Burn permit
- Weather conditions
- Ignition points
- Hazards
- Water points

# Written plan

- Show map of the area
  - Identify assets
  - Show water points
  - Show boundaries
- Describe each boundary NSEW
- Describe method and direction of ignition
- Show resources needed
- Show expected results



# Predicted fire behaviour



# 5 Essential things

1. Fuel loading
2. Temperature
3. Relative Humidity
4. Wind speed and direction
5. Topography – slope - aspect
6. Drought factor (optional work on 10)



# Fuel loading

- Assessment of fine fuels
  - fuels 6mm or less (pencil diameter)
  - Arrangement of fuel
    - Ground
    - Elevated
    - ladder
- Approx quantity in tonnes per hectare













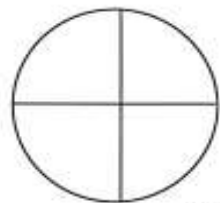


## VEGETATION FUEL ASSESSMENT

**Date Assessed:** .....  
**Location:** ..... **Grid Reference:** | | | | E 5 | | | | N  
**Map Sheet:** ..... **Scale 1:** ..... **Area:** ..... ha.  
**Aspect:** ..... **Geology:** ..... **Slope:** ..... **Last Fire:** .....  
**Grazing History:** .....  
**Overstorey species:** ..... **Height of lower canopy:** ..... m.  
**Ground cover species:** ..... **% Cover** ..... **N/F/IF Class:** .....  
 .....  
 ..... **% Cover** .....  
**Shrubs species:** ..... **% Cover** .....  
 .....  
**Regeneration species:** ..... **Height:** ..... m.

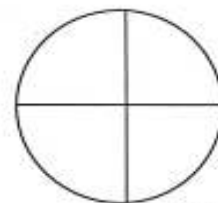
**Ocular estimate on circular 2m diameter plot** (*assess each quadrant and average*)

**1. Litter** (10% = 1t/ha)



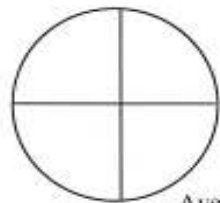
Average = ....t/ha

**2. Ground to knee** (20% = 1t/ha)



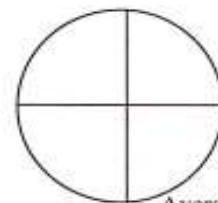
Average = ....t/ha

**3. Knee to hip** (20% = 1t/ha)



Average = ....t/ha

**4. Hip to Shoulder** (20% = 1t/ha)



Average = ....t/ha

**Summary:** 1 .....  
 2 .....  
 3 .....  
 4 .....

**TOTAL:** ..... tonnes per hectare

# Weather conditions

- Advice from BOM
- Local knowledge
- Allow for variable ranges
- **Work within low to moderate FFDR**



# Topography - slope -aspect

- Carefully consider the area to be burnt
- Fire travels faster up slope and slower down slope
- Fire burns quicker and hotter on north facing slopes and slower and cooler on south facing slopes
- Consider local wind effects on topography

# Boundaries

- What will contain the fire?
- Pre burn work?
  - Clearing firetrail
  - Machinery
  - Hand tools



# Neighbours

- Let them know your plans before you burn
- Can they help?
  - Cooperative burns
- Permit requirement





**Implementing**

Implementing

# Resources - people and equipment

- To help lighting
- To watch during burn
- To patrol after burn till considered safe
- To mop up
- To help if things go wrong



# Weather conditions

- Before ignition
  - Are the weather conditions within the prescribed limits?
  - What is the forecast
    - For later in the day
    - For the next day(s)





# Ignition point and lighting pattern

- Burn against any wind
- Burn downslope
- Light a test fire
- Monitor test fire behaviour
- Be prepared to extinguish if not to prescriptions
- Review lighting pattern during light up



**Patrol and mop up**

# Patrol and mop up

- Patrol during time fire is burning until considered safe
- Patrol next day(s) until no signs of fire activity
- Mop up
  - Clear fallen trees and branches from boundaries
  - Extinguish burning stumps, logs and hotspots
  - **Continue until there is zero smoke!!!!**



# Review Results

# Review results

- Did the burn achieve desired results
  - Quantity and types of fuel burnt
  - Scorch heights within acceptable limits?
- Did it stay within boundaries?
- Monitor recovery and seed shed.