EBE Burn Plans for You – Frequently Asked Questions

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Fire and Fuel Behaviour Questions

What is fine fuel? Dead or decaying fuel that is smaller than 6mm or live fuel (grasses, shrubs and ferns etc.) that is smaller than 3mm.

What is available fuel? Fuel or vegetation that is dry enough to burn, can be up to 10mm thick.

What is a backing fire? A 'backing fire' is a fire used in prescribed burning, generally back towards the dominate wind direction.

'Back-burning' is the technique used in wildfire suppression to burn the fuels back towards of a spreading bush fire.

What is a flank fire? The side of the fire, opposed to the heel (rear) and fire front (fast moving front of a fire).

How does atmospheric stability or instability impact fire behaviour?
When undertaking a prescribed burn, you are aiming to burn under consistent weather conditions, such as a slight breeze in one direction. During periods of high levels of atmospheric stability (refer to mixing heigh and C-haines below) weather at surface level can become unpredictable and running fire behaviour can become unpredictable. Atmospheric instability can be thought as windy days.

Alternatively, if you are undertaking a pile burn you are looking for a high level of atmospheric stability, as you are not reliant on wind direction or introducing running fire.

Fire Ecology Questions

For vegetation mapping, if I notice the classification is wrong how do I get that changed? An ecologist report would be required to be submitted to council to update vegetation mapping. You are welcome to make changes to your own maps for your own reference, and if you notice large differences, it is worth letting council know as it may be of interest to a future project.

For the fire intervals, what do the minimum and maximum guide relate to? The threatened species and obligated seeders in different vegetation formations are identified and based on their requirements, such as minimum age of producing seed or expected life span, the requirements of these species are used to guide the minimum and maximum intervals. The minimum interval is designed to allow fire sensitive or vulnerable species to reach maturity and fruit/ seed. The maximum interval is designed to mitigate senescent (aging/ being old) in the vegetation community. The minimum threshold is more understood than the maximum threshold.

Why is MC2T Landcare presenting this workshop/ working in this space? Landowners have a responsibility to control and manage fire within the landscape they manage. The program is aimed at increasing rural landowners' knowledge in fire management and increase active fire management back into these areas in line with the changing practices of other land management bodies. Landcare thinks it is vital landholders receive this capacity training in an ecologically sensitive way that balances both risk and ecological conservation.

Australian Government
NSW GOVERNMENT
Landcare New South Wales
Mid Coast 2 Tops Landcare Connection
PEOPLE LED PREVENTION PROJECT
Landcare NSW's People Led Prevention project empowers communities across regional NSW in developing disaster resilience and preparedness skills. Jointly funded by the Australian and NSW Governments.

Using Fire as a Land Management Tool – Prescribed Burns General Questions

Why do mosaic burning? Mosaic burning introduces a range of age structures within the vegetation. Different species utilise different age structures throughout their life time and home range requirements. Mosaic burning adds the resilience and redundancies required for ecological function through the landscape. In addition, patches of similar age often have consistent fuel loads, meaning smaller mosaic patterns reduces fuel load consistency across the landscape, and reduce the potential intensity of any resulting fire.

Why not leave the vegetation to turn into old growth forest? Leaving areas not burnt is a process within mosaic burning and should be considered within the landscape, especially in rainforest gullies. However, if all vegetation was left to age past its required fire intervals, we would eventually lose all our obligate seeders, and the overall biodiversity, and therefore resilience of our ecosystems would be reduced.

What is the legal pathway for burning? The preferred mechanism is obtaining a Hazard Reduction Certificate (HRC) from NSW RFS. The HRC brings the ability to light a fire and the environmental approvals in one process. You will need to discuss this with your District RFS office.

HRC Application instructions

HRC Application Form

If a HRC is not possible, that the landowner is required to contact the Local Land Services and Council to determine if the burn can be undertaken as 'Environmental protection works', and if any requirements under the *Environmental Planning and Assessment Act 1979* and/or *Protection of the Environment Operations (Clean Air) Regulation (2021)* are required. Documentation will be required to support the application to Local Land Services and Council.

The Mid Coast Council 'Control of Open Burning' Policy (2022) provides direction to undertake burning in consideration of Air quality and Local Environmental Plans. The policy does not provide approval to harm/remove vegetation through the application of fire. Landowners are required to contact the relevant Local Land Services t obtain authority to harm/remove vegetation, possibly through an allowable activity process.

How close does it have to be to an asset for a HRC to be accepted? There is no quantifiable distance provided by RFS. You are encouraged to discuss this directly with RFS.

What's the difference between a permit and a HRC? A permit is required during bushfire season which for the Mid Coast is between 1st September and 30th March, a Hazard Reduction Certificate (HRC) is authority to burn and authority to undertake environmental damage caused by the burn.

What are the few main things to remember when burning?

- Have mineral/ bare earth control lines.
- Have vehicle access around the perimeter of the burn and surrounding slash lines.
- Burn against the wind – backing fire.
- Burn from the top of the hill to the bottom.
- Use dot ignition technique until fire activity/behaviour is determined.
- Burn like you don't have any water – you can always add more fire, but can't take it away.
- Have appropriate water appliances on the fire ground, 2 units from each burn edge at a minimum. Only ignite what you can extinguish with the assets on the fire ground.
- Wear appropriate PPE – not singlet and thongs

What classifies cool and moderate burns in terms of flame heights or heat (kw)? The intensity of the burn is related to the severity of impact on the broad vegetation type of grasslands, heathlands and forest. Any fire in grasslands and heathlands is a high intensity for that vegetation community as the canopy of the vegetation community is consumed in the fire. In forest, Lower intensity burns usually have a average flame height < 2mts, releasing around 1 – 2 kilowatts of heat. Moderate intensity burns (usually required to crack seed husks and melt seed coatings) have a flame height between 2m to 10m and high intensity burning is canopy fire within the forest.

<u>Using Fire as a Land Management Tool – Prescribed Burn Plans Questions</u>

Where should a landholder choose a location to burn? Ideally close to assets as this is where an overlap of objectives (ecological and risk reduction) can be achieved.

How big should we plan the burns to be? The answer depends on your confidence, the resources you have available, what sort of vegetation you have and how much of it. Start as small as you are comfortable with.

How big should the control line be? Control line should be wide enough for vehicle movement and establish areas that vehicle can pass each other. The preference is to have a mineral earth (soil/dirt) control line, if not slashing the grass to as low as possible. The control lines should >4.5m with 10m optimum, but rarely achievable.

How many days after the burn should you patrol for? The patrol requirements increases with the amount of fallen timber and trees within the burn area. Patrols should occur for many days, even weeks until substantial rain and windy days have tested the containment of the burn.

After this burn, where should we look at burning next on my property? Your property plan should guide that strategic approach to mosaic burning. Ideally, using the previous burn on one side of the next burn provides some level of risk mitigation (as the fire fuel are reduced). Establishing a patch mosaic burnt areas cross the landscape is the ultimate aim. Ideally burning around assets in lightly timbered areas and grass paddocks being a focus, using existing containment lines like drive ways and fire trails etc where possible.)

In terms of prescriptions, what does FMC, grass curing, mixing heights, DF and C-Haines mean?

- FMC stands for fuel moisture content. The way to check how dry your fuel is to do a scrunch test or burn leaf moisture test.
- Grass curing refers to how much of the grass has died-off following frost or hot weather.
- DF stands for drought factor, and this refers to accumulated soil moisture deficiency. This relates to the amount of available fuel for the fire to burn.

- Mixing heights refers to the height above the surface the atmosphere mixes. The higher the mixing height the more stable the conditions on the ground, although once the mixing height is > 2,500mts the weather conditions on the surface become predictable, and running fire behaviour can also become unpredictable.
- C-Haines is an indicator of atmospheric instability and dryness (relates to mixing height). A high c-Haines index signals greater potential for a fire's plume to rise high into the atmosphere.