

How residents can help?

- **Prepare your Bush Firewise Action Plan.** A comprehensive guide to completing one is available from the RFS website. Decide now whether to stay and defend or to leave early.
- **If you have a pool, dam or water tank, obtain a Static Water Supply sign for your property.**
- **Join bushcare.** We can show you how to control weeds.
- **Don't dump garden waste and lawn clippings in the bush.** It creates a fire hazard and weed problems. Compost, mulch or put it out in bulky waste pickup.
- **Join a Community Fire Unit (CFU) or ask NSW Fire Brigade about setting one up in your street.** Learn how to prepare your property for the summer fire season, and make informed decisions about whether to leave early or stay and protect your property from spot fires and ember attack in the event of a fire.

The CFU program trains and equips local residents who live on streets close to the bush. To find out if there are Community Fire Units in your local area or if your local street is eligible visit www.fire.nsw.gov.au or call 1300 238 238



Council maintaining an APZ



Council Staff maintaining fuel loads

IMPORTANT: Don't attempt any work (planting, weeding, mowing etc.) in a Council reserve unless you are a registered bushcare volunteer and it is part of an approved bushcare project.

How to find out more

NSW Rural Fire Service or NSW Fire Brigades can provide you with more advice about preparing your property and developing the best fire plan for you and your family. Contact Council to find out more about what Council is doing to manage the risk of bushfire or to discuss any clearing or other works you would like on public land adjacent to your property before doing anything.

Rural Fire Service The Lakes Team - Wyong & Lake Macquarie Districts (02)4393 6222 www.rfs.nsw.gov.au
NSW Fire Brigades www.fire.nsw.gov.au or call your local fire station
Wyong Shire Council (02) 4350 5555 16 Hely St, Wyong PO Box 20 NSW 2259 www.wyong.nsw.gov.au
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Wyong Shire Council Bushland Reserves



Managing the Risks of Bushfire

A partnership between Wyong Shire Council, NSW Rural Fire Service and NSW Fire Brigades
Information for residents living close to nature reserves.

what are we doing to reduce
the risk of bushfire?

and what can you do?



Why we need to act

We can't rely on our previous luck.

No major bushfires have occurred in our reserves in recent years, but fire is a part of life in Australia, so we need to be prepared when it happens.

Community preparation. Despite the intense fires that occur in Wyong Shire, very few houses and lives are lost and we aim to keep it that way. Recent local fires such as that at Chittaway Reserve remind us of the need to prepare. Fortunately, knowledge and experience of bushfires and how houses burn shows us what has to be done.

A lot to look after. The Open Space and Recreation Unit within the Shire Services Department of Council are the responsible land managers for implementing fire mitigation operations in consultation with the NSW Rural Fire Service on land under the care and control of Council.

Council manages an estimated 2,500 hectares of bushland composed of 50 reserves considered to be of high conservation value. This includes 47km of bushland/urban boundaries that affect 6,200 houses located in bushfire prone areas. With an average of 2.5 people per house, there are about 15,500 people living adjacent to bushland. This program is about their safety and protection.

Firefighters can't be everywhere

Our emergency services are well organised and resourced, but in a major fire there won't be enough trucks to have one protecting every house. So we need to prepare our bushland, and residents need to prepare their properties. For more information on

how you can prepare your property visit www.rfs.nsw.gov.au or www.fire.nsw.gov.au. You need to make a decision whether you will prepare to stay and defend or leave early. Managing risk and reducing loss is a shared responsibility between government, householders and land managers.

Fire patterns are changing. In recent decades, due to more frequent and severe droughts, and human factors such as arson, fires have become more frequent and less predictable.

Responsibilities. The NSW Rural Fire Service is the authority responsible for issuing Bushfire Hazard Reduction Certificates that authorise the carrying out of bush fire hazard reduction work on private land. They also answer any enquiries regarding bushfire hazards on private land.

The NSW Fire Brigades are responsible for the Community Fire Unit (CFU) program. Both the NSW Rural Fire Service and NSW Fire Brigades are responsible for the Static Water Supply (SWS) program.

Wyong Shire Council is responsible for undertaking bushfire hazard reduction works on public land under the care and control of Council.

Council have tractor slasher units responsible for the mechanical maintenance of Asset Protection Zones and one Fire Mitigation Team Leader responsible for supervising up to three persons manually maintaining APZs.

Facts about fire and fuel

Fuel management is about reducing the intensity of a fire. We don't expect to stop a large fire, but we can slow it down and create a defensible space to fight it from.

Fire is a chemical reaction. It only happens when its three components: oxygen, heat and fuel are available, as shown in the fire triangle. If one of these is reduced the fire will slow down and if one is removed it will stop.

Fire blankets work by cutting off the oxygen supply. When managing bushfire risk we manage fuel - it's the only one we can have any control over.



Fire Triangle

Q & A

There is a fire hazard near my house can you clear it?

Council gets a lot of requests to burn the bush or clear patches thought to be hazardous. We take all requests seriously. Expert staff quickly assess them and include the necessary action in our works program.

We have a responsibility to direct resources where they are most needed, high risk hazards will get quick attention, others may have to wait.

People are sometimes unnecessarily fearful about fire hazards, so we are always happy to discuss neighbours' concerns and the reasoning behind our assessment.

What makes fuel a hazard?

- **Size:** smaller fuel such as leaves and sticks under about 8cm burn easily, but larger fuel such as logs or smooth tree trunks take more energy to ignite so are less hazardous.
- **Quantity:** less fuel = a less intense fire.
- **Arrangement:** bits of fuel must be close enough for the fire to travel from one to the other, like the network of small sticks and leaves in a Tea-tree. If they are too densely packed (like wood chip) the fire won't get enough oxygen, or too open, like lantana and the fire might not have enough energy to jump from one stem to the next.
- **Connectivity:** continuous fuel creates a path for a fire - isolated patches of fuel are safer.
- **Moisture content:** a fire burns faster through dry fuel and moist fuel can slow or stop it.
- **Type:** some fuels, such as Eucalypt leaves, contain chemicals that make them ignite more easily.

How houses catch alight

1. Ember attack: burning bark, etc is carried by the wind and dropped (mostly within a few blocks from the fire front), causing spot fires. Most property lost in bushfires is caused by embers. Residents who prepare their properties and decide to stay and defend their homes can extinguish these fires and save their houses.

2. Radiant heat: the fire is so intense or close that its heat ignites flammable material directly exposed to it.

3. Direct flame contact: a continuous supply of fuel allows flames to reach the house.

Prescribed burning: Burning in patterns



Regrowth 3 months after a local fire



There is science and planning behind the way we burn the bush. We don't burn an entire reserve all at once; instead it's divided into sections and burned over a number of years. It's called a mosaic (patches of bush in different stages of recovery from fire.) The aim is to keep fuel levels low and maintain a range of environments within each reserve to best meet the needs of the different plants and animals that use it.

Q & A

Can you burn the bush, it's two years since the last burn?

No. It's too soon to burn again. There is a planned burning program in place simulating natural fire cycles. Frequent burning can increase fuel loads by encouraging a thick understorey of Bracken and Blady Grass, which burns easily. It can eliminate shrubs such as Banksias, Wattles and Peas and leave the bush open to weed invasion.

The bush has been burned, what can I replant?

Nothing. It's going to grow back. The bush has burned regularly for thousands of years and the plants have evolved ways to cope with it. Many need a fire to help them reproduce e.g. Banksia cones that only open after heating.



Prescribed burning simulates natural fire cycles

Banksia ericifolia



Home Bushfire Preparation

Preparing your home for the bushfire season:

If you follow these simple guidelines you can reduce the threat of embers and bushfire affecting your home:

- Clear ground fuels (such as long dry grass, thick undergrowth and dead leaves and branches) from around the house.
- Clean out gutters.
- Ensure the roof is firmly fixed and cleaned of dry leafy debris.
- Prepare fire breaks (a short green lawn can act as a fire break).
- Install screens or shutters and enclose underfloor areas if possible.
- Ensure vents in the floor space are screened with mesh wire.
- Remove flammable items from around the house (e.g. Woodpile and obvious flammable materials such as paper, boxes, crates, hanging baskets and wooden garden furniture).
- Point LPG tanks and pressure relief valves away from the house.

Decide what you will do in a bushfire

This decision needs to be made long before a bushfire reaches your area because most people who die in bushfires die as a result of last-minute, unplanned evacuations. If you are well prepared and able-bodied, consider staying. Water and power may be cut off, so have a battery powered radio and stored water.



NSW Fire Brigade and Rural Fire Service reducing ground fuels

When the fire approaches:

- Listen to the radio for news of the fires progress rather than calling the emergency services for information.
- Dress in protective clothing and drink water frequently.
- Wet down the roof, house and garden, especially on the side of the approaching fire and turn on the sprinkler service if you have one.
- Fill baths, sinks and buckets with water for drinking and extinguishing small fires.
- Block downpipes and fill gutters with water.
- As the fire approaches, go inside and remain inside until the fire has passed.
- Close windows and doors, place wet towels and blankets against gaps under doors and windows and close heavy curtains and shutters if you have them.
- After the fire has passed and for the next several hours, patrol your property and put out spot fires started by flying embers (check the roof cavity frequently).

Managing Risk in the Bush

Three main strategies are used to manage the risk of bushfires:

1) Asset Protection Zones (APZs)

- fuel reduced areas on bushland edges



An APZ at Woodbury Park Drive, Mardi

2) A planned program of prescribed burns

- to manage fuel and keep the bush healthy



A local prescribed burn

3) A system of access ways, incident control lines and fire trails

- providing opportunities for managing fuel and fire fighting.



Francis Byrnes Fire Trail, Jiliby

Protecting our heritage

Bushland is a valuable asset of great scientific importance and home to many plants and animals that add colour and interest to our lives. Many Aboriginal and European heritage sites and artefacts also survive in our bush reserves.



How can we protect all this for future generations and still manage fuel?

- extensive fieldwork and research to identify natural and cultural heritage features
- designing Asset Protection Zones (APZs) specifically for each site to avoid disturbing significant features, such as habitat trees
- using skill and strategy to get the best effect from minimal clearing
- employing only trained and experienced staff
- maintenance weeding of vulnerable areas to stop weeds colonising

Threatened species.

There are 28 threatened plant species and 12 endangered ecological communities in the Shire. 76 threatened animal species live in or visit local bush land. These are heading for extinction unless more is done to protect them and their habitat. We have legal obligations to ensure our fuel management work does not harm them unnecessarily.

A threatened species on site doesn't prevent burning. As part of the local bushland, most threatened plants are adapted to fire, so "protecting" them from fire would be wrong. Special care is taken however to ensure that burning is strategic and undertaken at the right intensity and frequency. The pattern of the burn is also managed to ensure that some cultural and ecological assets are protected.

Asset Protection Zones

Most bushland/ urban boundaries require an asset protection zone of some kind. The appropriate width varies from a few metres to 50 metres depending on site conditions such as slope.

Creating an APZ involves:

- removing most of the shrub layer
- removing the more hazardous ground fuel e.g. fallen branches under 8cm thick
- reducing leaf litter - most groundcover plants and some leaf litter must be kept to stop weeds and erosion
- removing some trees so the canopy is not continuous
- canopy lifting - removing lower branches from trees to stop fire climbing into the canopy.



Priorities for fuel removal:

First - weeds

Next - dead material such as ground litter, shrubs and branches

Last - living native plants

Cut material is disposed of by:

- spreading on the ground and burning
- mulching and spreading on areas needing erosion protection
- stacking in piles for burning

Q & A

Will clearing damage the bush?

Asset protection zones are not cleared zones. We use our knowledge of fuel and fire behaviour to modify the bushland structure in a strategic way and tailor the works precisely to each location. For example, clumps of shrubs, isolated trees and larger logs can be left.

We identify habitat features (such as trees with hollows) and threatened species, and where possible, avoid removing them.

Left: A new APZ construction at Geoffrey Rd, Chittaway Point. Pictured below: A tree with hollow

