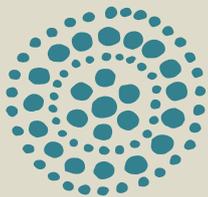


# *Planning and preparing for bushfires* in the Tweed





### **Statement of acknowledgment of the Bundjalung Aboriginal Nation**

We wish to recognise the generations of the local Aboriginal people of the Bundjalung Nation who have lived in and derived their physical and spiritual needs from the forests, rivers, lakes and streams of this beautiful valley over many thousands of years as the traditional custodians of these lands.

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## Important contacts

### To report a fire emergency

- **Call Triple Zero (000)**
- If you are deaf or have a speech or hearing impairment **call 106**

### For information on fires

- Download the free Fires Near Me NSW app. The official application of NSW Rural Fire Service.



- Check Rural Fire Service Fires near me website [rfs.nsw.gov.au/fire-information/fires-near-me](https://rfs.nsw.gov.au/fire-information/fires-near-me)
- **Listen to local media such as TV and radio (ABC Local 94.5 FM)**
- Check social media such as NSW Rural Fire Service Facebook and Twitter pages
- Call the Bushfire Information Line on **1800 679 737**



### Bushfire information for the deaf, hard of hearing or speech impaired

If you are deaf, hard of hearing or have a speech impairment, contact us through the National Relay Service:

- TTY users phone **1800 555 677** then ask for 1800 679 737
- Speak and Listen users phone **1800 555 727** then ask for 1800 679 737
- Internet relay users connect to the NRS then ask for 1800 679 737
- To report a fire or emergency (TTY users only), access **TTY 106**.

### Tweed Shire Council

Visit your Tweed Emergency Dashboard [emergency.tweed.nsw.gov.au](https://emergency.tweed.nsw.gov.au)

Call us: **02 6670 2400**

Email us: [tsc@tweed.nsw.gov.au](mailto:tsc@tweed.nsw.gov.au)

# About this guide

Tweed Shire Council has worked with the NSW Rural Fire Service to create this guide for those living in bushfire prone areas within the Tweed. Its purpose is to help you understand, plan and prepare for bushfires before they happen.

Bushfires are a natural, essential, and complex part of the Australian environment and have been for thousands of years, so it is important to understand that you cannot completely prevent them from happening. Although, you can reduce the risk of a bushfire effecting your home and your safety.

At the back of this booklet there are some handy checklists for you to help with planning and preparing for a bushfire near your home.

## Part 1

Understanding the Tweed's bushfire risk

## Part 2

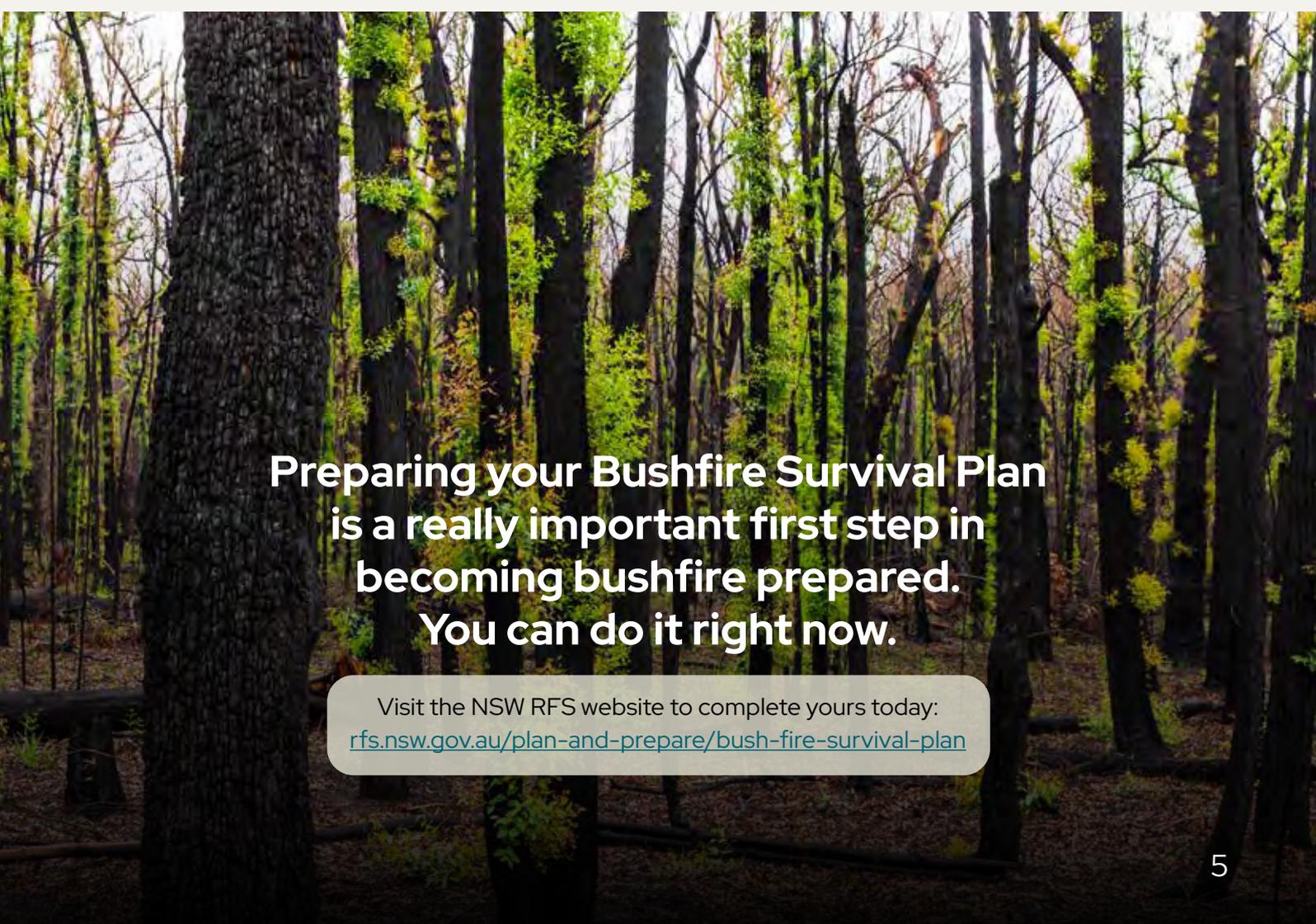
Preparing yourself and your family

## Part 3

Preparing your house and property

## Part 4

Your checklists



**Preparing your Bushfire Survival Plan is a really important first step in becoming bushfire prepared. You can do it right now.**

Visit the NSW RFS website to complete yours today:  
[rfs.nsw.gov.au/plan-and-prepare/bush-fire-survival-plan](https://rfs.nsw.gov.au/plan-and-prepare/bush-fire-survival-plan)

A firefighter in orange gear stands in a charred landscape with a helicopter in the sky.

Part 1

*Understanding  
the Tweed's  
bushfire risk*

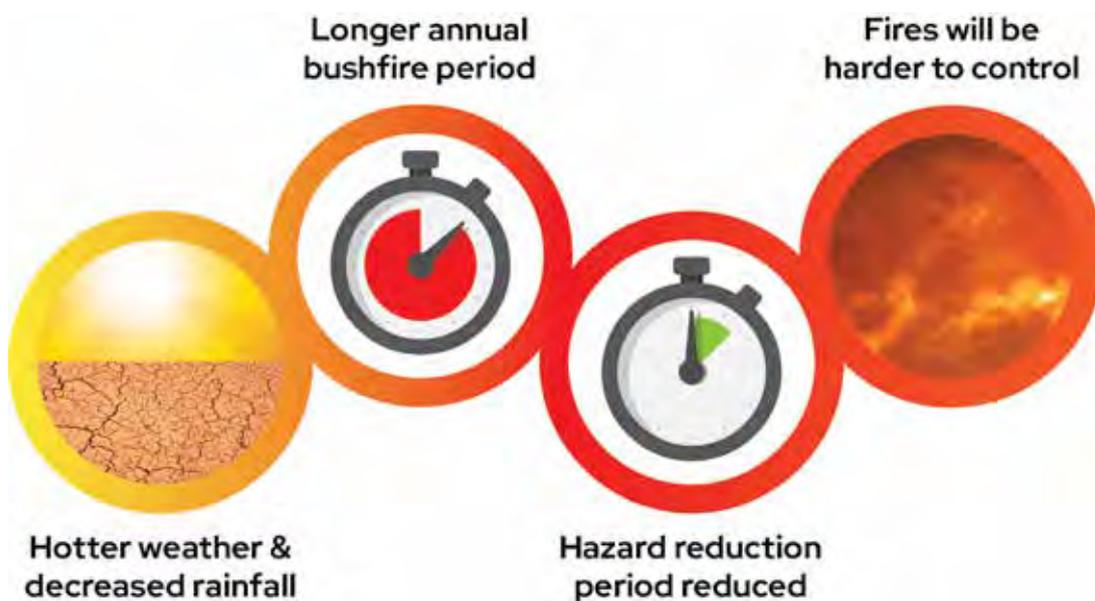
Tweed Shire covers some 1,303 square kilometres that includes natural coastline, wetlands and forests, vast agricultural land and mountainous regions containing three World Heritage listed national parks.

With such expansive natural areas that we know and love, the Tweed has approximately 4,470 hectares of defined bushfire prone land which affects some 16,000 properties or approximately 47% of all Tweed properties.

Within this extensive network of bushland comes significant bushfire risk both for the ecologically rich environment and Tweed residents who live within or next to bushfire prone areas.

The *Enabling Regional Adaptation North Coast Region Report* (OEH 2019) indicates that temperatures will increase, as will the fire weather conditions and length of fire seasons.

Tweed’s bushfire risk has, and will increase. Our growing population means more people will also be living in bushfire prone areas.



Enabling Regional Adaptation North Coast Region Report (OEH 2019) climate projections.

### Check your property’s bushfire risk!

To find out what bushfire risks may be relevant to your property generate your own bushfire risk property report, visit [tweed.nsw.gov.au/bushfire-riskmap](http://tweed.nsw.gov.au/bushfire-riskmap) to use Council’s online mapping tool.

Checking your property’s bushfire risk will mean you will know what steps to take to ensure you and your home are prepared for a bushfire.

## Tweed's bushfire prone areas

The varied landscapes found across the Tweed pose their own bushfire risks. These risks are based on factors such as the type of vegetation in an area, whether there is sloping terrain, proximity of bushfire prone areas to housing and other assets, ease of access into and out of an area and the availability of water and power supply.

It is important to understand your bushfire risks so you can decide how to plan for potential bushfires in the future and make the safest decisions for you and your family.

Below is an overview of some of Tweed's bushfire prone areas.

### Suburban areas close to bushland



#### Risk factors

- Many of Tweed's suburban areas directly adjoin or are surrounded by bushland making those houses at a higher risk of ember attack and radiant heat from fire fronts.
- Due to houses being closer together there is increased risk of house to house ignition.
- There is often limited access or 'defendable space' behind houses to fight fires.
- Access to water, power and telcoms may be cut during fire events and access roads out may become blocked by fire and fallen trees.

### Coastal areas



#### Risk factors

- Some vegetation in these areas can burn very hot, be fast moving and produce a lot of smoke and embers
- Gusty ocean winds can cause fires to behave erratically.
- Evacuations can be hampered by a single route roads that can quickly become congested or blocked by fire.
- Beaches and foreshore areas may not be safe from the intense heat from the fire (radiant heat).

## Agricultural and grassland areas



### Risk factors

- Grasslands and crops can be a substantial fire fuel source and depending on wind and weather conditions can change direction quickly.
- Open farmland provides less places to shelter from approaching fires and radiant heat is a risk to property and life for people and animals caught in it.
- Grass fires burn faster than forest fires and can travel at 25km per hour and so can't be out run.

## Rural bushland areas



### Risk factors

- Rural properties including smaller rural villages and rural residential areas are often surrounded by bushland and have bushland between houses.
- Rural areas generally have less road access, water and power supply which impacts the ability to evacuate, fight and contain fires.
- Rural roads and driveway access can be easily cut off by fallen trees.

## Rural isolated areas



### Risk factors

- Rural isolated properties including multiple occupancy settlements often have very limited road access, water and power supply, making the plan to 'stay and defend' very high risk.
- Forest fires jump between tree canopies and embers can start fires well ahead of the fire front.
- Large continuous tracts of vegetation and limited road access limits the ability to fight fire fronts.



Many of Tweed's suburban areas directly adjoin or are surrounded by bushland making those houses at a higher risk of ember attack and radiant heat from fire fronts.

**For more information, see page 10, Elements of a bushfire.**

## Elements of a bushfire



The Fire Triangle illustrates the three essential elements of a bushfire: heat, oxygen and fuel. If any of these three elements are missing, a fire cannot start or keep burning.

The intensity and speed of a fire depends on a number of factors including vegetation type, terrain and weather.

### Radiant heat



**Radiant heat is the intense heat from a fire. It is the main cause of death for people caught in a bushfire.**

- Radiant heat from a bushfire can reach  $100\text{kW/m}^2$ . The pain threshold for most people is about  $2\text{kW/m}^2$  at which point skin will start to burn in 40 seconds.
- Radiant heat can cause surfaces to catch alight, crack and break windows which then allow embers into your home.
- The best protection from radiant heat is distance and shielding behind a solid object such as a solid fence, wall or building.

### Embers



**Embers are burning tree bark, twigs, leaves and pieces of debris that are carried by the wind and can land many kilometres ahead of the main fire.**

- When embers land they can start multiple spot fires which in turn can create new fire fronts.
- When embers land they burn things such as garden beds, outdoor furniture, and leaves in your gutter.
- Embers are the main reason houses catch on fire during a bushfire event.

### Wind



**Strong gusty winds are typical during bushfires. The higher the wind speed the faster the fire spreads.**

- A change in wind direction is a very dangerous and can change the fire direction and significantly increase the size of the fire front.
- Many people who die in bushfires get caught during or after the wind changes direction. They find themselves in the direct line of a new fire front.
- In our region winds are hottest from the north-west which can be followed by a north-east or south-east wind change.
- A fire will burn faster uphill. For every  $10^\circ$  in slope, the fire will double its speed.

## Bushfire behaviour

Bushfires behave in different ways depending on vegetation type, slope and weather conditions. They can start suddenly without warning and can escalate quickly. Understanding what to expect and having a plan in place will help you better cope in an emergency situation.

### What to expect

- Embers falling from the sky igniting spot fires, often well ahead of the fire front and from multiple directions with swirling winds.
- The arrival of thick smoke, heat, noise and darkness before the fire front hits.
- The thick smoke reducing visibility and making it hard to know where the fire is, its direction and speed.
- Burning embers and spot fires alight around your property for hours even after the fire storm has passed.
- Roads and driveway access blocked by fallen trees, branches, powerlines and emergency vehicles.

### How you might feel

- Confusion, agitation and a state of panic may start to set in about what to do and where to go.
- Disorientated, unable to see or breathe properly due to smoke.
- Scared, tired and emotionally exhausted.
- You may become quickly overwhelmed and change your plan from 'safe and defend' to 'evacuate' which by that stage may be unsafe to do so.

### Service Disruptions

- Disruptions to telephone, internet, mains power and water are common during a fire or on a fire risk day.
- Don't rely on having mains power and water as part of your bushfire survival plan.
- When the power goes out you won't be able to use your phone, remote controls for garage doors and gates, internet and television, air conditioners and coolers or electric and some fuel pumps.

#### What is bushfire fuel?

Bushfire fuel means any vegetation that will burn in a bushfire. Different types of bushfire fuel burn differently. For instance, grasses can burn more quickly, while wood fuel can burn with much greater intensity.

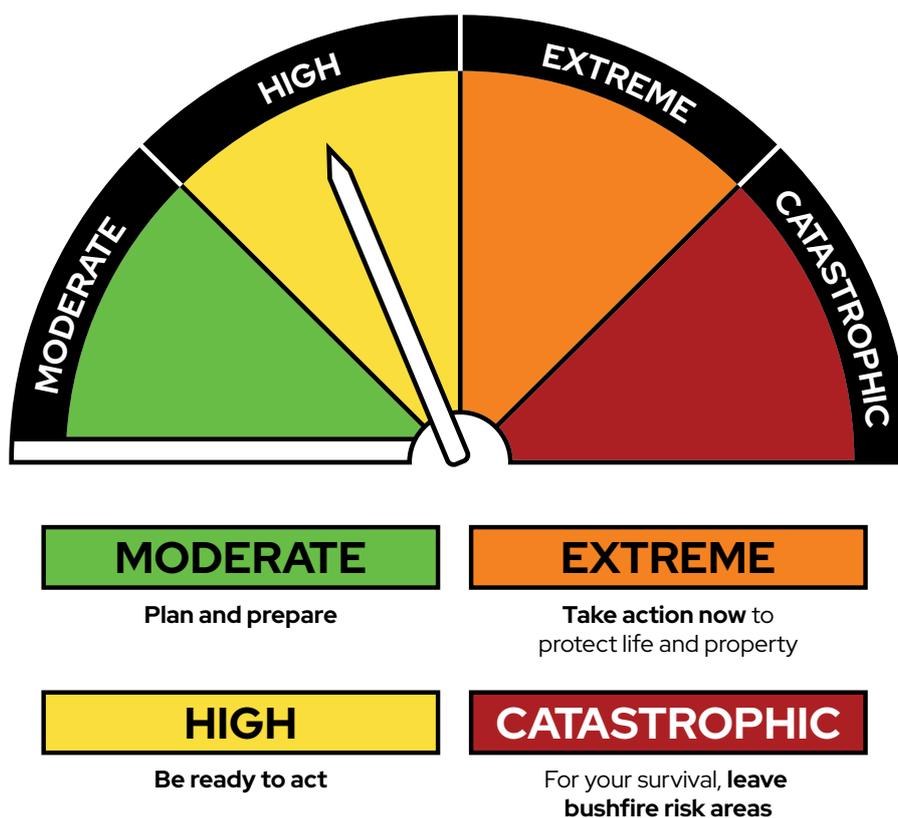
## Know your Fire Danger Ratings

If you live in a bushfire prone area it is important you are aware of Fire Danger Ratings, particularly during the fire season which is between September-April.

Fire Danger Ratings have four levels which give you an indication of the potential for fire danger and severity of a fire if one were to start. The higher the Fire Danger Rating, the more dangerous the potential fire could be.

Use the Fire Danger Ratings to keep informed about the potential for fires in your area, and to activate your Bushfire Survival Plan (see page 16).

**You can check the daily fire danger rating on the RFS website, in the Fires Near Me NSW smartphone app, or look out for the roadside signs.**



*The Australian Fire Danger Ratings (AFDRS) levels.*

Source: NSW Rural Fire Service

Fire Danger Rating	What you should do
<b>CATASTROPHIC</b>	<p><b>For your survival, leave bushfire risk areas.</b></p> <ul style="list-style-type: none"> <li>• These are the most dangerous conditions for a fire.</li> <li>• Your life may depend on the decisions you make, even before there is a fire.</li> <li>• Stay safe by going to a safer location early in the morning or the night before.</li> <li>• <b>Homes cannot withstand fires in these conditions.</b></li> </ul> <p>You may not be able to leave and help may not be available.</p>
<b>EXTREME</b>	<p><b>Take action now to protect your life and property.</b></p> <ul style="list-style-type: none"> <li>• These are dangerous fire conditions.</li> <li>• Check your bushfire survival plan and ensure that your property is fire ready.</li> <li>• If a fire starts, take immediate action.</li> <li>• If you and your property are not prepared to the highest level, go to a safer location well before the fire impacts.</li> </ul> <p>Reconsider travel through bushfire risk areas.</p>
<b>HIGH</b>	<p><b>Be ready to act.</b></p> <ul style="list-style-type: none"> <li>• There's a heightened risk. Be alert for fires in your area.</li> <li>• Decide what you will do if a fire starts.</li> </ul> <p>If a fire starts, your life and property may be at risk. The safest option is to avoid bushfire risk areas.</p>
<b>MODERATE</b>	<p><b>Plan and prepare.</b></p> <p>Stay up to date and be ready to act if there is a fire.</p>
<b>NO RATING</b>	<p>Fire danger ratings are used on days when you need to take action. On days of minimal risk, no rating will be issued.</p>

## Good idea!

Download the **Fires Near Me Smartphone App** to receive important updates on fire danger ratings which affect you.





Part 2

*Preparing yourself  
and your family*

## Plan early to avoid last minute panic

Living in a bushfire prone area means there is a real chance you will experience a bushfire at some point in the future. While you cannot completely stop bushfires from occurring, there are a range of things you can put into action now to be better prepared for when they happen.

One of those most important things to do is to have a Bushfire Survival Plan. When creating your Plan, it's important that you involve your whole household in the discussion.

The elderly and less mobile are more at risk during a bushfire event. If you live close by, check in and make sure that they have a plan in place. **Things you can do right now to be better prepared include:**

### Prepare a Bushfire Survival Plan



- Sit down and work out a Bushfire Survival Plan with your household.
- Decide what the trigger point is to evacuate.
- Refer to the RFS website – [rfs.nsw.gov.au](https://rfs.nsw.gov.au).

### Plan your evacuation route



- Know your main routes including back up routes in case of a fire or a fallen tree blocks your escape.
- Make plans with who you will stay with.
- Talk to neighbours about their evacuation routes especially if farm gates need to be opened.

### Gather important items



- Put together your emergency kit and have it in a location easy to grab and go.
- Scan important documents onto a USB or photograph on your phone.
- Keep a battery operated radio, torch and batteries handy.
- Make sure you have protective clothing for everyone in your family including long sleeved clothing made from natural materials, sturdy boots and P2 masks.
- Keep woollen blankets in your car in case you get stuck on the road.
- Have plenty of food and drinking water.
- Have medications ready.
- If you have pets, have suitable pet carriers and leashes ready.

## Your Bushfire Survival Plan

Your Bushfire Survival Plan will set out what you will do in the event of a bushfire. This plan will help ensure the safety of you, your loved ones, and your home.

In preparing your Bushfire Survival Plan it is important to involve your household in the discussion. That way, everyone will know what to do and be able to respond quickly to prepare and evacuate, depending on your plan.

Make an effort to talk with your neighbours to understand what their plans are and how you can help each other. With the risk of house-to-house ignition during a bushfire, your neighbour's bushfire readiness could also impact you and your home.



- If you live in a bushfire prone area you must have a Bushfire Survival Plan.



- Leaving early is your safest choice when fire danger rating is extreme and catastrophic.



- Remember, it is always too late to leave at the last minute.



- You should only stay to defend your home if you are well prepared.



- Tell others about your plan so they are aware of what may be happening.

Complete your Bushfire Survival Plan now. **Do not put it off. Do it now.**

Visit [rfs.nsw.gov.au/plan-and-prepare/bush-fire-survival-plan](https://rfs.nsw.gov.au/plan-and-prepare/bush-fire-survival-plan)



### More Bushfire Survival Plan information

- [rfs.nsw.gov.au/resources/bush-fire-survival-plan](https://rfs.nsw.gov.au/resources/bush-fire-survival-plan)
- [rfs.nsw.gov.au/plan-and-prepare/farm-fire-safety](https://rfs.nsw.gov.au/plan-and-prepare/farm-fire-safety)
- [myfireplan.com.au](https://myfireplan.com.au)
- [rfs.nsw.gov.au/plan-and-prepare](https://rfs.nsw.gov.au/plan-and-prepare)
- [afac.com.au/initiative/afdrs/afdrs-overview/afdrs-design](https://afac.com.au/initiative/afdrs/afdrs-overview/afdrs-design)

## What to do if fire danger is predicted

If potential fire danger is predicted in your area you must stay alert and aware of what is going on around you.

### Actions to take to stay safe

- Listen to local media such as TV and radio (ABC Local 94.5 FM).
- Check the fire danger rating.
- Remind everyone in your household of your bushfire survival plan.
- Have your emergency kit ready to go (see page 38).
- Let family and friends know what your plans are.
- Attend to and prepare your pets and animals (see page 33).
- Check your pumps, generators and water supply.
- Block drains and fill gutters with water.
- Move flammable items away from the house.
- Shut off gas at meter or bottle. Rotate gas bottle taps away from house.

It is important to know that it **is never safe** to stay with your property if:

- The Fire Danger Rating is Catastrophic.
- There is an Extreme Fire Danger Rating, and your home is not designed, built or modified for bushfires, or if your property is not well maintained.
- You or the people in your home aren't mentally and physically fit to stay. Even trained firefighters can become exhausted fighting fires.

### Never leave at the last minute

Leaving at the last minute is the leading cause of bushfire related deaths. It means you are more likely to encounter hazards such as flames, fallen trees, thick smoke and road accidents.

## What to do if a fire is approaching

When there is a bushfire nearby, your safest option is always to leave early. However, if you are unable to leave and a fire is approaching, there are some steps you can take to stay as safe as possible.

Below is a guide of what to do if you aren't able to leave your property safely.

### When the fire is approaching



- Fill your gutters with water and wet vegetation around your home.
- Hose down the house and areas such as the roof space, window frames and under doors.
- Shut all windows and doors, placing wet blankets and towels around window frames and door edges. This will keep out smoke and embers.
- Masking tape the inside of your windows to prevent them from cracking.
- Remove curtains and move furniture away from windows.
- Stay close to your property, watching for spot fires you will need to put out.
- Secure your pets in a safe place.
- Bring hoses and fittings inside as they can melt and you will need these after the fire passes.
- Drink water and check on others.

### When the fire has arrived



- Move inside the house and take shelter until the fire front passes.
- Shelter in a room on the opposite side of the house to where the fire is and make sure you have an escape route from that room if needed.
- Check for embers and small fires in places like the ceiling space.
- Drink water and check on the wellbeing of others.

### When the fire has passed



- Make sure you are wearing all your protective gear including gloves, non-synthetic face mask and goggles.
- Extinguish spot fires and burning embers.
- Monitor radio for updates to the situation.
- Stay put until you are sure it is safe to leave.
- If you have left, always check if it is safe to return.
- Let people know where you are and what your condition is.



Part 3

*Preparing your  
home and property*

## Making your home bushfire ready

Taking steps to maintain and reduce the things around your property which can easily ignite will increase the likelihood of your home being saved in the event of a bushfire, for the following reasons:

- there will be less chance of an ember attack and spot fires igniting your house. (although ember attacks are still the highest risk).
- more clear space around your property makes it easier for you or a firefighter to defend it.
- you will be less likely to put your neighbour's home at risk
- an adequate asset protection zone (see page 31) will form a buffer to fires and radiant heat.

### Ember attacks, not the fire front, are the main cause of houses and buildings catching fire.

Embers can travel many kilometres and lodge in small nooks and crannies of your home including gutters, under roofs, doorways and under crofts – starting multiple fires which can quickly become unmanageable.

Here is a list of the **top 5** things you can do around your home:



#### 1. Trim

Trim overhanging trees and shrubs. This may reduce the risk of fire spreading to your home.



#### 2. Mow

Mow grass and remove the cuttings. Have a cleared area around your home.



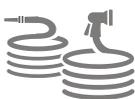
#### 3. Remove

Remove material that can burn around your home (e.g. door mats, wood piles, mulch, leaves, paint, outdoor furniture).



#### 4. Clear

Clear and remove all debris and leaves that have fallen into the gutters surrounding your home. Burning embers can set your home on fire.



#### 5. Prepare

Prepare a sturdy hose or hoses that will reach all around your home. Make sure you've got a reliable source of water.

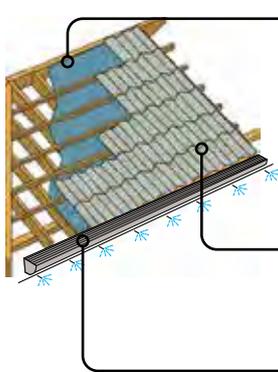
Turn to page 37 for a more detailed home maintenance checklist.

## Suggestions to upgrade your existing home

Many homes within the Tweed were built before today's bushfire regulations and requirements were in place. While there is no legislative requirement for existing buildings to be upgraded to meet the latest bushfire design standards, building upgrades can save your home, your life and those of your loved ones.

### Roofs, gutters and eaves

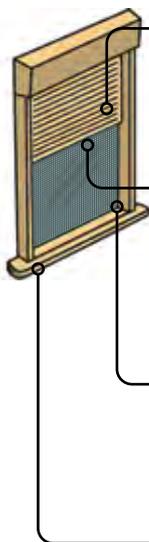
Gaps in the roof pose a high risk of embers getting through - and vegetative matter in gutters can easily ignite.



1. **Roof structure:** Check the state of your roof structure and make any repairs needed to prevent possible structural failure. Check your roof sarking and insulation both of which can prevent embers entering through your roof. Seal vents and penetrations. Wrap combustible roof framing with sarking.
2. **Repair roof and seal gaps:** Replace damaged tiles and roof sheeting and seal up any gaps. Sealing gaps is an effective defense against burning embers.
3. **Leaf guards and sprinklers:** Install leaf guards to prevent the build up of leaf and other vegetative matter which poses a high risk of igniting during a bushfire. In high bush fire risk areas consider installing a sprinkler system around the perimeter of your house.

### Windows

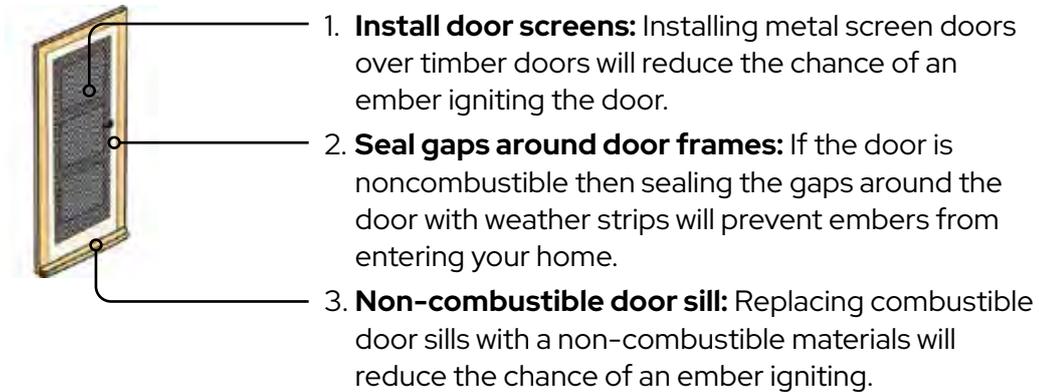
Unscreened windows pose an extreme risk. Ensure window thickness matches the Bushfire Attack Level (BAL) requirement. (See page 28).



1. **Install window shutters:** In very high bush fire risk areas consider installing window and door shutters to protect glass from cracking from radiant heat and flying embers.
2. **Install wire window screens:** In all bushfire prone areas install wire mesh screens (not aluminium) with 1.5 mm holes over both the window and frame can prevent embers touching the glass or timber. This can also be an effective method for reflecting radiant heat.
3. **Seal gaps around window frames:** This is an effective treatment to prevent ingress of embers around existing metal window frames. The sealant should be a fire-retardant product.
4. **Maintenance of window sills:** Embers lodging on combustible window sills pose a high risk. Maintain window sills so there is no flaking paint which can catch fire. Remove cob webs which can catch embers.

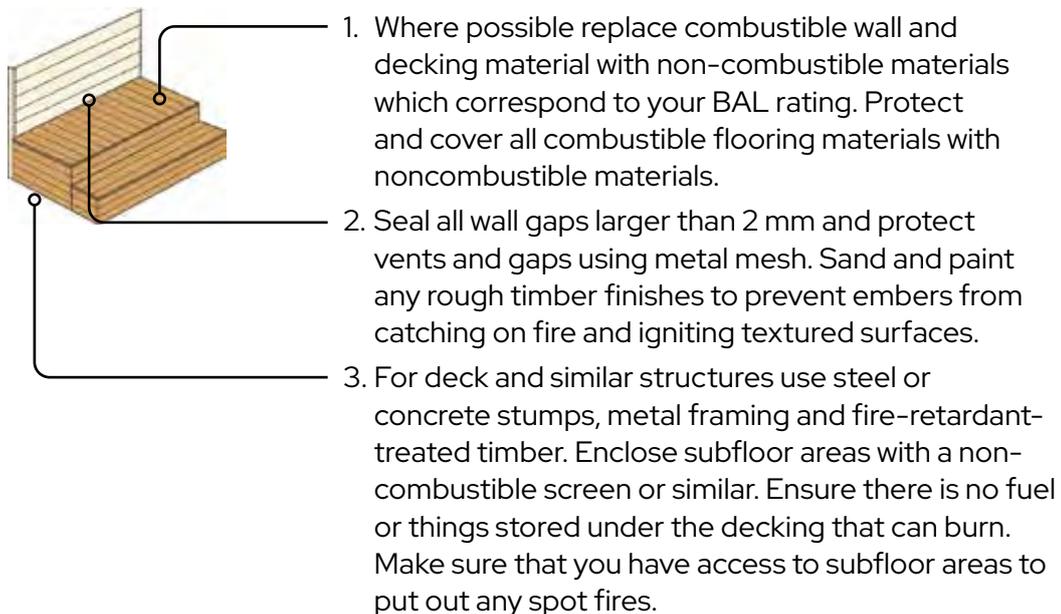
## Doors

Embers lodging on combustible door sills and gaps around door frames pose a high risk. Use bushfire resistant materials.



## Walls and decks

Embers lodging on decks and in subfloor areas pose a very high risk of ignition. Use bushfire resistant timbers for decking and wall material.



Source: CFA – Home Improvements

### Assistance for infirm, disabled and elderly residents

If you cannot access support from family, friends or other services to prepare your property on bushfire-prone land, NSW RFS may be able to provide free assistance to you via the Assist Infirm, Disabled and Elderly Residents (AIDER) program. For more information, contact the AIDER Team on 02 8741 4955 or via email at [aiders@rfs.nsw.gov.au](mailto:aiders@rfs.nsw.gov.au)

## Building in bushfire prone areas

Whether you want to extend your existing home or are planning on building a new home within a bushfire prone area, there are a number of important things to consider to make your home as safe as possible. These include:

- **Location:** Ensure the new building has direct access to a road, avoiding steep terrain and top of ridges. Also, understand environmental constraints such as high value ecological areas which may limit your ability to clear vegetation and maintain an Asset Protection Zone.
- **Site bushfire planning:** In rural areas, have a dedicated fire fighting water tank and ensure access points are well maintained and clear, and are easily accessed by a roadway.
- **Bushfire attack level:** Find out what your bush fire attack level (BAL) is and make sure your building complies with the relevant bush fire construction requirements (AS3959). Your BAL will largely determine the building materials you can use including non-combustible timbers, glazing and metal screens, cladding and roofing.
- **Asset Protection Zone:** Work out what your Asset Protect Zone size needs to be, and prepare and maintain that area. (See page 29).
- **Vegetation clearing:** New building work which involves vegetation clearing will also need to comply with Council's Biodiversity and Habitat Management Development Control Plan (DCP A19). This can require the preparation of appropriate ecological studies. (See more on vegetation clearing page: 29)
- **Building design:** Your building design should consider best practice bushfire design. This relates to your choice of structural system (ie: slab on ground, or suspended system), building and roof form (avoiding lots of small nooks and crannies) and building materials.



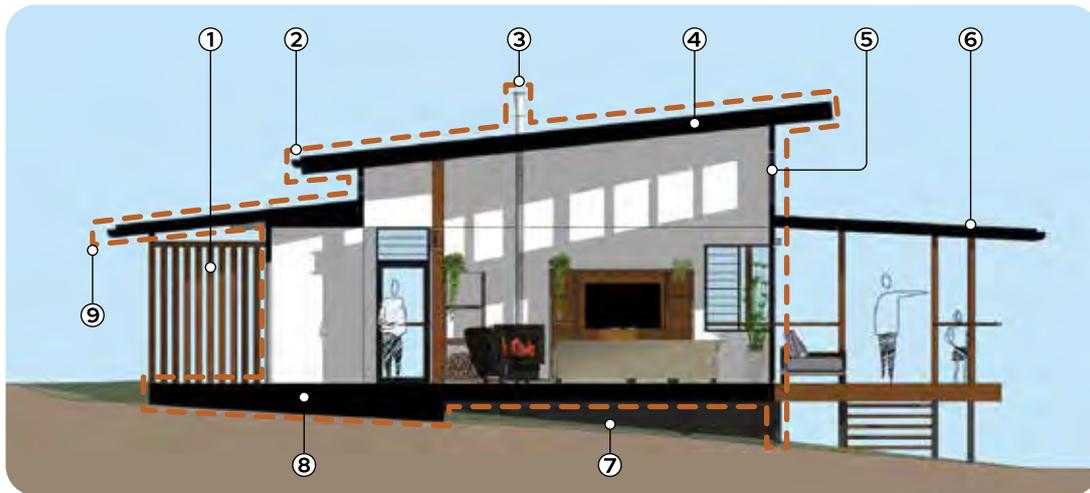
*This house has an enclosed under floor and uses a concrete wall system which is wrapped in a flameproof cladding.*

*Enclosing the undercroft prevents embers getting in under the house. The house also has external metal screens that act as a fire wall and can be lowered in the event of fire.*

### More information

- [rfs.nsw.gov.au/resources/publications/building-in-a-bush-fire-area](https://rfs.nsw.gov.au/resources/publications/building-in-a-bush-fire-area)
- [tweed.nsw.gov.au/bushfire-prone-land](https://tweed.nsw.gov.au/bushfire-prone-land)

To check if you live in a bushfire prone area, Council has a mapping tool:  
[tweed.nsw.gov.au/bushfire-prone-map](https://tweed.nsw.gov.au/bushfire-prone-map)



*New building bushfire design considerations.*

1. All exposed external timbers should be non combustible.
2. Install leaf litter guards to all gutters and regularly check gutters and roof to ensure it is clear of vegetative matter than can ignite.
3. Any roof penetrations such as chimney stacks and vents should be tight fitting and sealed with non-combustible materials. Seal any gaps larger than 2 mm.
4. All roof and external wall materials should be selected on their BAL rating. In high BAL areas consider an irrigation system which will drench the perimeter of the house reducing its risk of ignition.
5. Protect windows from ignition and breakage by specifying the correct thickness. All windows should be covered with screens using metal mesh. Consider non-combustible shutters especially in high BAL areas.
6. Use non-combustible materials for all verandah roof structures, decks, balustrades, bearers and support posts.
7. Embers and surface fires can get in under and ignite subfloors and any materials stored in under floor spaces. For raised floors fully enclose the subfloor with a non-combustible screen.
8. Concrete slab on ground and enclosed subfloor areas eliminates the risk of subfloor fires.
9. Any breach of the building envelope (dashed orange) can result in fire and smoke penetrating to the inside of the home. Consider these vulnerabilities when starting a new build.

### More information

- [rfs.nsw.gov.au/resources/publications/building-in-a-bush-fire-area](https://rfs.nsw.gov.au/resources/publications/building-in-a-bush-fire-area)
- [tweed.nsw.gov.au/bushfire-prone-land](https://tweed.nsw.gov.au/bushfire-prone-land)

## Know your Bushfire Attack Level (BAL)

A Bushfire Attack Level (BAL) is a means of measuring the severity of a building's potential exposure to ember attack, radiant heat and direct flame contact.

When building within a bushfire prone area, you will need to make sure your building work meets the minimum construction standards set out in AS3959 of the Australian Construction Code (Construction of buildings in bushfire-prone areas, 2019). Those construction standards are based on your BAL rating.

BAL levels range from BAL LOW and BAL 12.5 (lower risk) up to BAL 40 and BAL FZ (high and extreme risk).



### How to find out your out your BAL

Your level of bush fire risk is affected by the area you live, the vegetation, the distance from vegetation to your home, and the slope. It is recommended that you seek professional help from an accredited bushfire consultant or Council to determine what your BAL rating is.

A consultant will also help you plan your site, determine your required Asset Protection Zone (APZ) and other elements to mitigate bushfire risk and improve safety.

Source: NSW Rural Fire Service

#### More information

- [research.csiro.au/bushfire/assessing-bushfire-hazards/bal-assessment](https://research.csiro.au/bushfire/assessing-bushfire-hazards/bal-assessment)
- [rfs.nsw.gov.au/plan-and-prepare/building-in-a-bush-fire-area/planning-for-bush-fire-protection](https://rfs.nsw.gov.au/plan-and-prepare/building-in-a-bush-fire-area/planning-for-bush-fire-protection)

## Bushfire planning requirements

In NSW most building works requires some form of consent in the form of a development application approval (DA), construction certificate (CC) or complying development certificate (CDC).

Laws for building and development on bushfire prone land are set out in the Rural Fire Service's (RFS) Planning for Bush Fire Protection (PBP 2019).

If you are building within a bushfire prone area, refer to, and where relevant comply with the following sections of PBP:

- Asset Protection Zones (APZ) (See page 29) (PBP Page 26).
- Building construction, siting and design (PBP Page 29).
- Access arrangements (PBP Page 29).
- Water supply and utilities (PBP Page 30).
- Emergency management arrangements (PBP Page 31).
- Landscaping (PBP Page 31).

In most cases you will be required to submit a Bushfire Threat Assessment Report which is typically prepared by a qualified bushfire consultant.

**Step 01** Undertake a site analysis to determine the best positions for your new home or extension.

**Step 02** Understand your bushfire risk, what your BAL rating is, and what your likely Asset Protection Zone distances will need to be. You may need a consultant to help you.

**Step 03** Design your home or extension to be compliant with your BAL rating.

**Step 04** Lodge your application with Council which is likely to require a *Bushfire Threat Assessment Report*. These are usually prepared by a suitably qualified bushfire consultant (Bushfire Planning and Design BPAD Certified).

## Unauthorised dwellings and structures

Unauthorised dwellings and structures are typically built without being properly inspected or certified to ensure they comply with the relevant construction standards.

**In the event of a bushfire, unauthorised dwellings and structures can pose significant risk to life and property.**

Landlords can be prosecuted for negligence if unsafe conditions on their property results in injuries or death.

If you have an unauthorised dwelling on your property there may be potential approval pathways for you. It is important that:

- If you're still building, stop works and get advice from Council or a consultant regarding the appropriate approvals process.
- Check if the unauthorised building works is permitted in your zone and complies with various development control plans.
- Determine the risk of the unauthorised works in terms of site context, site hazards and potential for environmental impact.
- Establish whether the unauthorised works would be able to satisfy the requirements of a building information certificate process.



*Unauthorised buildings and structures pose significant bushfire risk to occupants.*

## Vegetation management in bushfire prone areas

Vegetation management is just one way you can reduce the risk of a bushfire. When considering any type of vegetation management such as clearing, it is up to the land owner to understand what can and can't be done before works begin. In NSW the rules around vegetation clearing for bushfire protection is dependent on:

- The location of the house and property.
- Whether the clearing is for an existing or new house.
- Whether there is any ecologically significant vegetation or known heritage on the property.

Contact Council or visit the [tweed.nsw.gov.au/trees-private-land](https://tweed.nsw.gov.au/trees-private-land) page of Council's website before you start.

### Establish your Asset Protection Zone

An Asset Protection Zone (APZ) is the area around your property that provides you with a buffer to an approaching bushfire. It is important to reduce bushfire fuel around this area.

Having a well maintained APZ is important for the following reasons:

- It makes it easier for firefighters to defend your house, enabling access for trucks, hoses, equipment and back burning.
- Having less fuel around the house means less chance of ember fires.
- It can reduce the level of radiant heat from a bushfire which can reduce the chance of your house igniting.



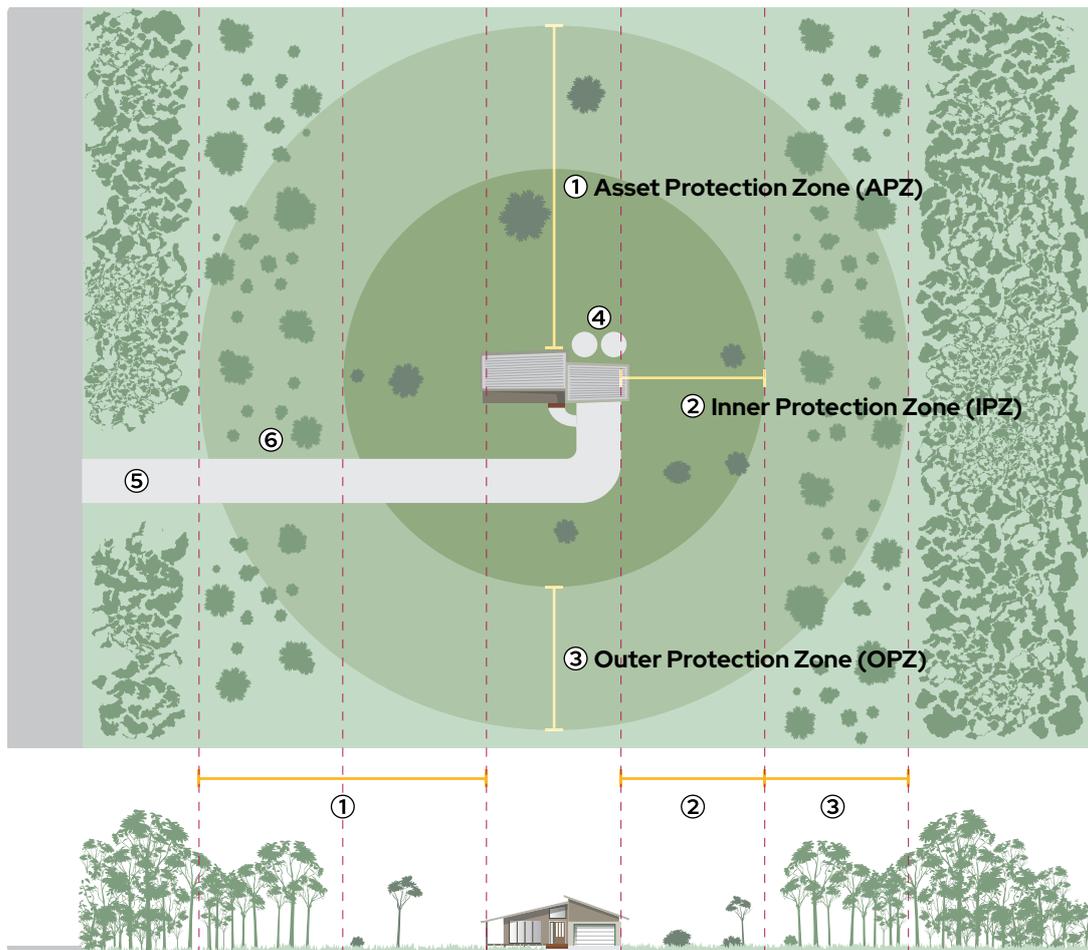
*Example of a well maintained APZ. It has minimal fuel source and is a cleared area.*



*Example of an unmaintained APZ. The house is surrounded by thick vegetation and the roof and subfloor areas could ignite in an ember attack.*

#### More information

- [tweed.nsw.gov.au/bushfires#assetprotectionzones](https://tweed.nsw.gov.au/bushfires#assetprotectionzones)
- [rfs.nsw.gov.au/resources/publications/hazard-reduction](https://rfs.nsw.gov.au/resources/publications/hazard-reduction) (Standards > Standards for Asset Protection Zones)
- [rfs.nsw.gov.au/resources/publications/hazard-reduction](https://rfs.nsw.gov.au/resources/publications/hazard-reduction) (Bushfire Hazard Reduction Certificate)



*Things to consider in maintaining your APZ around your home.*

1. The APZ width/distance is determined by the type of vegetation, slope and forest fire danger index (FFDI 80 for Tweed).
2. Inner protection zones should have a canopy cover of less than 15% and canopies should be separated by 2 to 5 m.
3. Outer protection zones should have a canopy cover of less than 30% and canopies should be separated by 2 to 5 m.
4. If in a rural area have a fire fighting water supply (20,000L).
5. Maintain 4 m clearance (width/height) on access ways to ensure a fire truck can access and trim overhanging branches near access ways
6. Avoid planting trees that, in the event of a bushfire, may fall across your driveway, blocking access. Also, remove dead trees which may do the same.

## The 10/50 Vegetation Clearing Scheme

The 10/50 Vegetation Clearing Scheme has been developed by the Rural Fire Service and allows property owners in Tweed and NSW that meet specific criteria to:

- Clear trees on their property within 10 metres of a home without seeking approval.
- Clear underlying vegetation such as shrubs (but not trees) on their property within 50 metres of a home, without seeking approval.

You must check to see if your property falls within a designated area before commencing any clearing on your property, which you can do so using an online mapping tool supplied by the RFS (see more information below).

You can check your 10/50 scheme eligibility and learn more about the scheme at [rfs.nsw.gov.au/plan-and-prepare/1050-vegetation-clearing/tool](https://rfs.nsw.gov.au/plan-and-prepare/1050-vegetation-clearing/tool)



*The 10/50 scheme is supported by the 10/50 Vegetation Clearing Code of Practice.*

### More information

- [rfs.nsw.gov.au/plan-and-prepare/1050-vegetation-clearing](https://rfs.nsw.gov.au/plan-and-prepare/1050-vegetation-clearing)
- [rfs.nsw.gov.au/plan-and-prepare/1050-vegetation-clearing/tool](https://rfs.nsw.gov.au/plan-and-prepare/1050-vegetation-clearing/tool) (for mapping tool)

## Bushfire Hazard Reduction Certificates

A Bushfire Hazard Reduction Certificate allows landowners to carry out bushfire hazard reduction work on their properties. This can include vegetation maintenance, clearing, and burning. Hazard Reduction Certificates are administered and issued by the NSW RFS.

How to apply: you will need to complete an application form which is available at your local NSW RFS Fire Control Centre or from the NSW RFS website at [rfs.nsw.gov.au/resources/publications/hazard-reduction](https://rfs.nsw.gov.au/resources/publications/hazard-reduction)

## Rural Boundary Clearing Code

The Rural Boundary Clearing Code allows rural landowners to clear some types of vegetation on their property within 25 metres of their property boundary. Clearing needs to be done with consideration of environmental impacts.

There are certain vegetation types that cannot be cleared such as preferred koala habitats along the Tweed Coast. Landowners need to understand these exclusions and determine whether any of those excluded vegetation types exist on their property prior to clearing.

You can check your Rural Boundary Code eligibility and learn more at [rfs.nsw.gov.au/plan-and-prepare/boundary-clearing-tool](https://rfs.nsw.gov.au/plan-and-prepare/boundary-clearing-tool)

## Cultural burning (cool burning)

Cultural burning or cool burning is the Aboriginal practice of deliberately burning a landscape by authorised Traditional Owners of that Country for a variety of purposes. This includes but is not limited to, ceremony, protection of cultural and natural assets, fuel reduction, regeneration and management of food, fibre and medicines, flora regeneration, fauna habitat protection and healing Country's spirit.

The central idea of cool burns is fire management using a 'cool' fire. The practice involves lighting low fires in small areas on foot, with matches or, traditionally, with fire sticks.

These fires are closely monitored, ensuring that only the underbrush is burnt. They not only clear areas of land of dangerous understorey fuel loads, they also ensure that seeds and nutrients in the soil are not baked and destroyed.

The NSW RFS in consultation with the Nature Conservation Council has a program called Hotspots that seeks to provide private landholders and land managers with the skills to actively participate in fire management for the protection of life and property, while at the same time ensuring biodiversity is protected and maintained. This program has included demonstration of cool burns undertaken.

Visit [rfs.nsw.gov.au/plan-and-prepare/prepare-your-property/hotspots](https://rfs.nsw.gov.au/plan-and-prepare/prepare-your-property/hotspots) for more information.

## Pets, animals and wildlife

Our pets and animals are extremely vulnerable during natural disasters. During a disaster such as a bushfire, you remain responsible for your animals and have a legal duty of care, although what that demands changes during emergency situations.

### Pets

**In NSW, owners are advised to keep their pets with them in an emergency.**

Contained animals, such as dogs on a leash or cats in a carrier, may be taken to animal friendly evacuation centres.

You should prepare a disaster kit of essential items. This includes pet food and water for several days, medication, registration and vaccination details, bedding and other equipment.

If you are separated from your pet it's also a good idea to have a recent photo available. Micro chipped pets will be more readily reunited with their owners.

**When taking your pets with you in the case of evacuation, try to also take as many of the following pet items as you can with you:**

- Registration certificates and vaccination certificates.
- Cat litter and tray for cats.
- Poo bags for dogs.
- ID tags (including pets name and your mobile phone number), collars, leads.
- Food and water bowls, and at least one week's supply of non-refrigerated food.
- Pet medications and clear instructions for treatment of any medical conditions.
- Pet blankets/bedding/nesting material and a few of your pet's toys.



*The care and transportation of pets and animals before, during and after a fire should be considered as part of your Bushfire Survival Plan. Ensure you can transport animals and prepare a relocation kit.*

## Livestock and horses

Livestock, horses and large companion animals are harder to manage than smaller pets – but you must still have a plan in place of where you will move them. Ensure you have access to suitable transport ahead of time.

If your animals cannot be moved off your property, move the animals to a low-risk area (such as an open paddock with less fire fuel) that is stocked with food and water for several days.

For identification write a contact phone number on horse hooves and also cut their mane and tail so they don't catch alight.

Report injured animals to Agricultural and Animal Services Hotline on 1800 814 647.

### How should I prepare for an emergency if I have horses and livestock?

- If you decide to relocate your animals, you must do this long before the bushfire is in your area. Your options will depend on the size of your property, the number of stock you have and where your animals are normally kept.
- You should identify the safest paddock on your property or neighbouring property. This paddock should have a water supply, clear access, be well grazed (avoiding adding fuel to fires) and have secure fencing. Ideally it will also be well shaded.
- You will also need to make sure your animals are clearly identifiable. Remember, write phone number on hooves and cut horses mane and tail so they don't catch alight.
- In a severe ember attack, place animals under solid cover e.g. a shed or barn. Do not place synthetic blankets on your horses, as these may melt during extreme heat. Provide a minimum of five day's food/hay or ensure access to pasture.
- Work with your neighbours to develop a plan for all your livestock and work together to execute this plan if and when a bushfire emergency arises.



*Have a plan in place of how and where you will evacuate your pets and animals to. If you can't evacuate horses and livestock, identify a safer area of your property and stock with food and fresh water.*

## Wildlife

Wild animals face unique challenges in bushfire disasters. They cannot be systematically evacuated and are highly dependent on natural habitat for their survival.

Please refrain from handling any wildlife you may come across. Remember, these are wild animals which are often dangerous.

### What should I do if I see an injured native animal during a bushfire?

- If you come across an injured wildlife call the WIRES hotline on 1300 094 737 or the Tweed Valley Wildlife Carers on 02 6672 4789 immediately.
- Take note of the exact location where the animal was found and tell the rescuer so, after rehabilitation, it can be released back into the wild.
- If you rescue an animal that has been burnt, do not attempt to feed it. Wrap it loosely, ideally in 100% cotton fabric, place it in a ventilated box with a lid and keep it in a dark, quiet place whilst waiting for a rescuer or for transport to the nearest vet.
- Do not approach injured snakes, flying-foxes, large macropods, raptors or monitors as these must be rescued by trained specialists.

## Useful contacts

Agricultural and Animal Services Hotline: **1800 814 647**

WIRES: **1300 094 737**

Tweed Valley Wildlife Carers: **02 6672 4789**

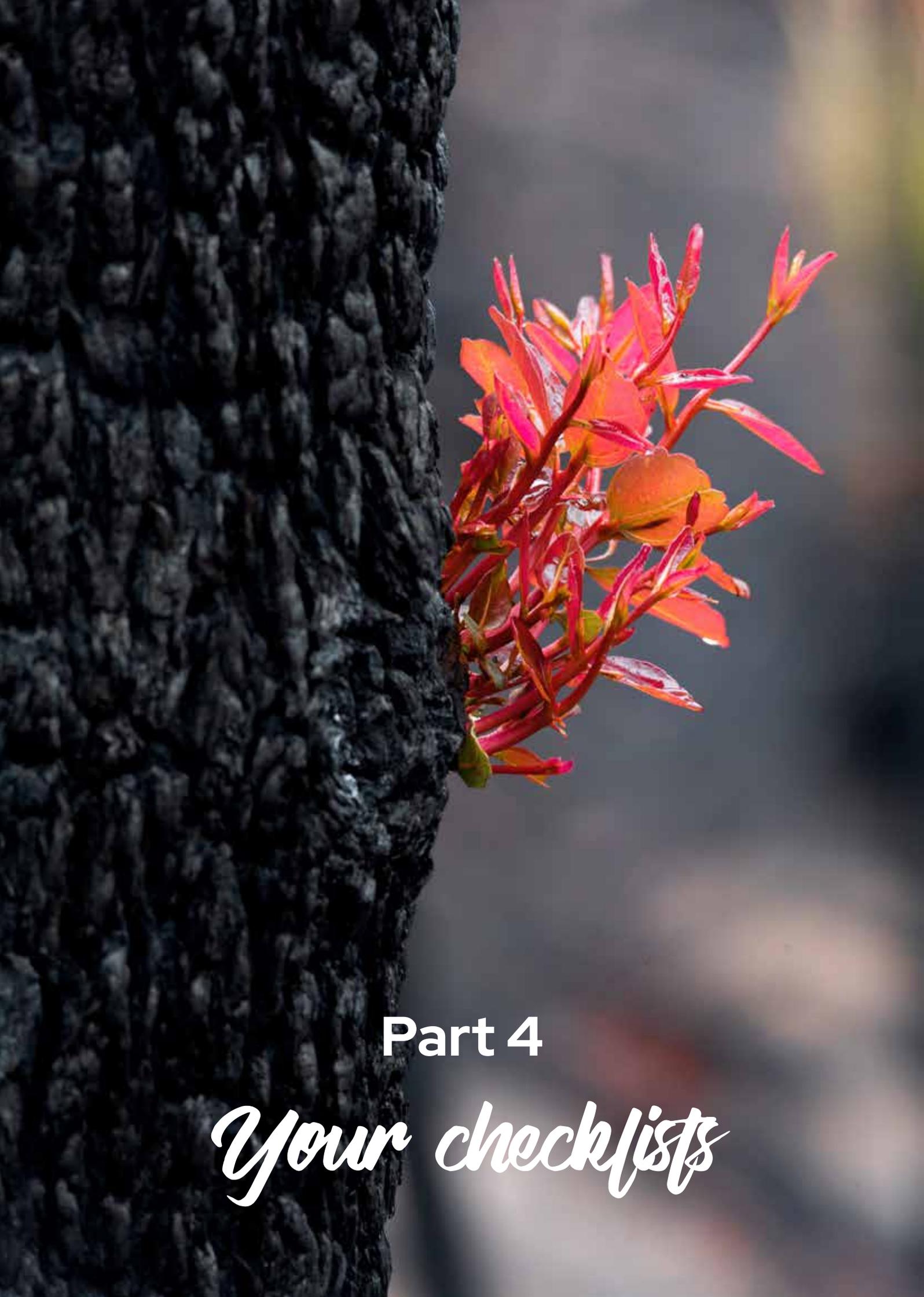
Animal Welfare League: **0436 845 542**

NSW Department of Primary Industries (Murwillumbah): **02 6672 2770**

RSPCA: **1300 278 3589**

### More information

- [rfs.nsw.gov.au/resources/factsheets](https://rfs.nsw.gov.au/resources/factsheets) (Fire Safety for Your Pets)
- [rfs.nsw.gov.au/resources/factsheets](https://rfs.nsw.gov.au/resources/factsheets) (Livestock and Large Animals)



Part 4

*Your checklists*

# Home maintenance checklist

## Around the garden



- Keep lawns short and gardens well maintained.
- Trim shrubs and branches, keep lawns short and gardens well maintained.
- Cut back trees and shrubs overhanging buildings.
- Clean up fallen leaves, twigs and debris around the property.
- Remove items such as outdoor furniture that can burn away from your house (nothing within 2 metres).
- Talk to your neighbours if they have overhanging trees and branches which need to be removed.
- Check to see if approvals are required before removing trees and vegetation.

## Around the house



- Clean your gutters of leaves and twigs.
- Install metal gutter guards.
- Repair damaged or missing tiles or roof sheeting on the roof.
- Check equipment such as hoses and water pumps.
- Install fine metal mesh screens on windows and doors.
- Fit seals around doors and windows to eliminate gaps.
- Enclose the areas under the house.
- Repair or cover gaps in external walls.
- Replace combustible external materials with non-combustible.

## Fire fighting



- Have hoses long enough to reach around your house.
- Install firefighting water tanks and pumps.
- Consider installing a fire sprinkler system around the house perimeter.
- If you have a pool, tank or dam, put a Static Water Supply (SWS) sign on your property entrance, so firefighters know where they can get water.

## Your emergency kit checklist

Each household should have an emergency kit ready in the event of an emergency evacuation. This kit will hold important items and documents you will need once you leave your home.



### *Good idea!*

In your Emergency pack keep important contact information handy like:

- Emergency services
- Doctor
- Council
- Power company
- Insurance company

**Notes:**

*Contact and connect*

**02 6670 2400**

[tweed.nsw.gov.au](http://tweed.nsw.gov.au)

[tsc@tweed.nsw.gov.au](mailto:tsc@tweed.nsw.gov.au)

PO Box 816 Murwillumbah NSW 2484

