

Protecting Your Home from **Bushfire**: **Getting started**

In this guide, the term 'bushfire' refers to both bushfires and grassfires



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Introduction

WHY THIS MATTERS



Living in or near a bushfire-prone area means planning ahead. Not just for fire days, but every day in between.

This information guide is for homeowners, renters, and anyone who wants to reduce their bushfire risk by applying bushfire protection measures to the home. It includes:

- Bushfire basics
- Your **Bushfire Attack Level (BAL) rating** explained
- What to look out for when others do work on your home
- What you can do to improve protection around the house
- And where to start with your bushfire plan

We keep it practical with the things that make a difference and we recommend you dig deeper into your local fire agency website and the following resources:



CSIRO - [Bushfire Basics](#)



BRI **Bushfire Resilience Inc.** - [Resource Hub](#)

Bushfire resilience means protecting lives first and foremost. Your home matters too! It's a valuable asset, a place of stability, and worth protecting. By being prepared and making practical changes, you can reduce the risk for your family, your home and your community.



Bushfire basics

HOW HOMES BURN

Most homes are lost to bushfire because of the following **FOUR** elements:

1) **Embers** entering gaps in the roof, walls, the subfloor and igniting house materials. Embers build up high against the wall, gather in corners of the house and find their way into any gaps. Gaps greater than 2mm can allow embers to enter the home and ignite it from the inside. They also ignite nearby materials like mulches and cause surface fires near your home.

Do a walk around your house looking for gaps and get into the roof space. If you can see daylight coming through, that's where embers will get in.

Embers can be like a sandstorm! They make being outside extremely difficult and when you think you have things under control, embers spark a new fire somewhere else on the house.



Embers can travel several kilometres ahead of a fire and are responsible for 80–90% of house losses. During Black Saturday, they travelled up to 30km - A fire can be at your door before you know it!

2) **Radiant heat** igniting elements of the house and nearby materials like wood piles or furniture. It has a big impact on windows - if you're replacing any, ensure they match the requirements of **your BAL rating**.

Radiant heat can hurt our homes but it's also the biggest killer to us. Radiant heat doesn't travel around corners or through solid walls but it does travel through glass and this can ignite elements in the house. It can also break single pane glass and allow embers to enter the home



Bushfire basics

HOW HOMES BURN

In catastrophic conditions radiant heat can exceed 100 kW/m^2



Radiant heat is directly connected to your BAL rating. For example, BAL-29 means you must build to construction standards designed to withstand radiant heat of 29 kW/m^2 . This doesn't guarantee that a house will survive, but it highlights the importance of the BAL rating. To put that in context, about 2 kW/m^2 is the level of heat you might feel when stepping back from a campfire, at 10 kW/m^2 a person can only survive a few minutes without protective clothing, and at around 12 kW/m^2 common building materials can ignite. See the next page for more information on your BAL.

3) **Surface and consequential fires** are ignited by embers and burn low-lying or combustible fuels that can directly threaten homes when they reach the area around the house.

Consequential fires burn elements like fences, furniture and wood piles. All this adds further heat, flame, and ember exposure to the home.



Consequential fires

4) **Winds** during bushfires (often over 75 km/h in destructive bushfires) can damage buildings by lifting roofing or cladding, or by hurling debris like twigs, branches and tiles. This can create openings that increase a home's vulnerability to ember attack, heat, and flames. High winds also pose a serious risk to us before, during and after a bushfire.

Bushfire Attack Level (BAL) WHAT IT MEANS FOR YOU



What your BAL rating tells you:

If your home was built after 2010 in a bushfire-prone area, it likely has a BAL rating. This shows how much bushfire protection was built into the construction based on the bushfire exposure. It tells you:

- Your home has been built (or upgraded) with some level of bushfire protection
- You need to keep it that way. Even small changes can undo those protections
- Some renovations or extensions must meet the same BAL level and any works such as landscaping, plumbing and electrical should also comply to the BAL rating requirements

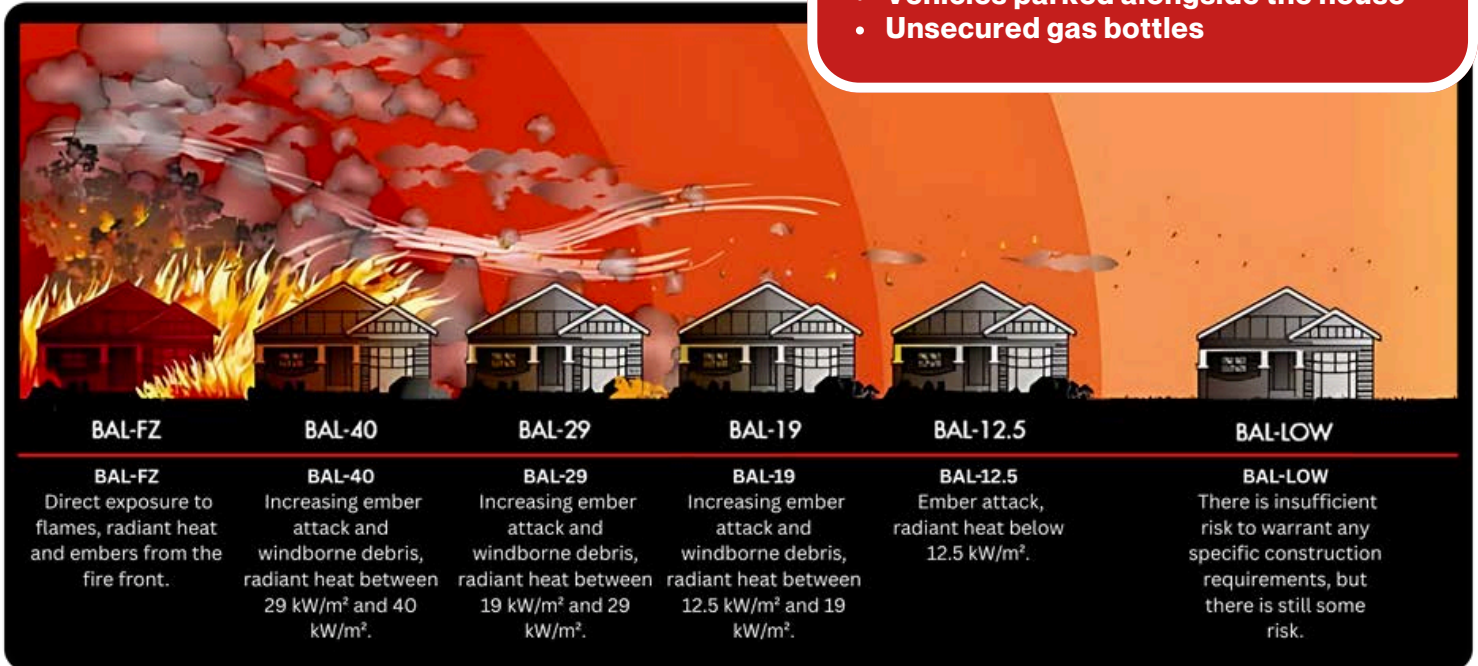
There are **six BAL levels** based on how much radiant heat your home might face in a bushfire. To calculate the BAL, we use Australian Standard AS 3959 (latest version) and look at three things:

- the type of vegetation around the house and beyond the property
- how far away the vegetation is
- and the slope under the vegetation

Sometimes BAL feels like a box-ticking exercise or just more red tape. But when you strip it back, it's a great guide to how your home stands up to fire, how the home could protect you from the impacts of bushfire and what to look out for to keep it that way.

Since your BAL rating was issued, things may have changed. Each of the following factors might seem small or go unnoticed over time, but each can increase your bushfire risk and mean your BAL no longer reflects your home's true level of resilience. Some examples include:

- Trees and shrubs planted against the house
- Garden beds with pine bark mulch
- Build-up of leaves and debris in gutters
- Stacked firewood
- Rotting timbers
- Treated pine retaining walls
- Vehicles parked alongside the house
- Unsecured gas bottles



Not sure of your BAL?

Check your building permit, ask your local council, or contact a Bushfire Planning and Design (BPAD) practitioner. They can assess your site and talk through retrofitting options.



WHAT YOUR BAL RATING DOESN'T COVER

Your BAL rating is a great starting point, but it's not the full picture. It provides a construction standard based on vegetation type, distance to vegetation, and the surrounding slope. However, it doesn't cover everything that could increase your risk during a fire. Every property is different, and there's no guarantee your home will survive. That's why it's just as important to understand what your BAL rating doesn't include.

WHAT YOUR BAL RATING DOESN'T INCLUDE:

- **Windows left open or damaged:** BAL assumes all windows and doors are closed and intact.
- **What's stored near the home:** Gas bottles, boats, caravans, trailers, bins, and firewood can all increase flame contact, radiant heat, and ember attack.
- **Vehicles parked near the house:** Cars, machinery, caravans and trailers close to the home can ignite and spread fire.
- **Gutters full of debris:** BAL assumes regular maintenance, but leaves and debris are common ignition points.
- **Flat surfaces where embers can build up:** Areas like window sills, roof valleys, or where a deck joins the side of the house can trap embers and debris.
- **Air conditioning units and solar systems:** External systems can be vulnerable to heat, embers, flame contact, or wind damage.
- **Emergency access and services:** Limited water supply or pressure, power supply, and escape routes.
- **Changes since assessment:** New sheds or structures, vegetation growth, landscaping and boundary changes can all affect your risk but aren't tracked unless reassessed.

FENCES

Fences aren't included in BAL assessments but they matter. Timber fences that are attached to the house or within 1.5 metres can ignite, add to radiant heat exposure, and deliver a fresh load of embers or flame right to your doorstep.

If you have fences close to your home, consider non-combustible options

NEIGHBOURING PROPERTIES

Your BAL rating considers the vegetation around your home, property and area, but it doesn't take your neighbour's place into account. A shed, deck, firewood pile, caravan, or overgrown garden next door could all add to the flames, heat, or embers reaching your home.

If anything flammable is close to your house or the boundary, have a chat with your neighbour and make a plan together.



HIGH WINDS

High winds are one of the biggest dangers before and during a bushfire, but they're not part of your BAL rating. High wind speeds can turn debris or fencing into projectiles that can damage you and your house. They can lift off roof sheeting or break windows that can allow embers to enter the home.

Your BAL may have been calculated under 'typical' fire weather, but that doesn't mean it'll hold up under extreme or catastrophic conditions. Plan for the worst and consider catastrophic winds. Where possible, upgrade roofs, windows and fences to match cyclonic type ratings.

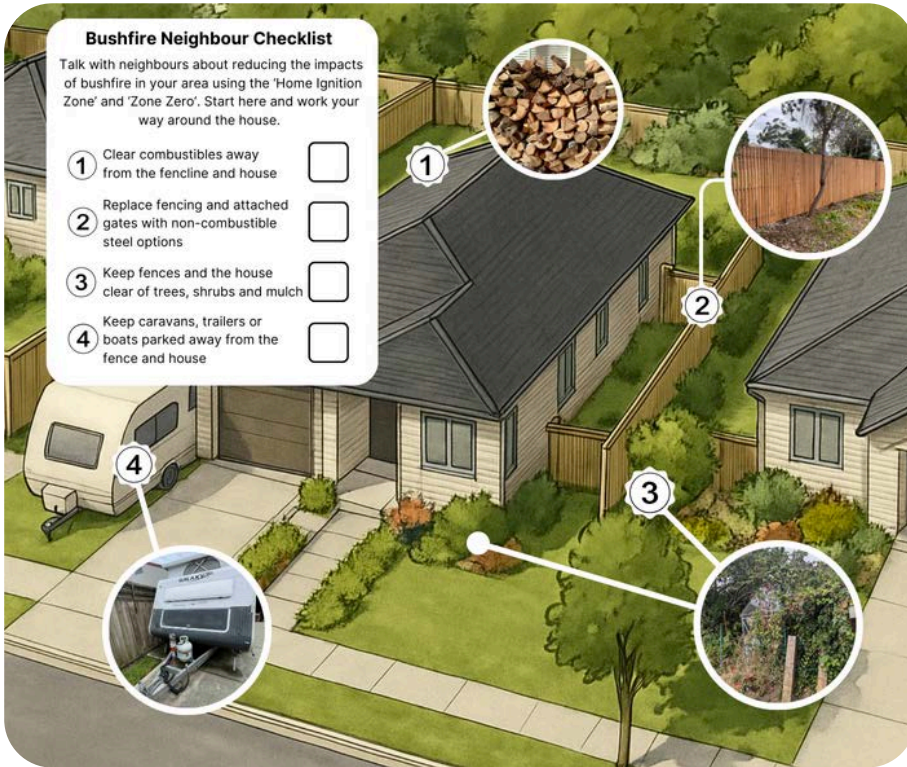


Bushfire protection HELP YOUR BAL, HELP YOUR HOUSE

In Australia, we refer to Asset Protection Zones (APZs) or Defendable Space as the measures designed to lower bushfire risk around homes. These concepts align closely with the Home Ignition Zone (US), which can be thought of in three layers.

ZONE ZERO: The Immediate Zone. Start with 1.5 metres of Clear Space

This is your critical defence zone. From the edge of your house (including decks) out to **1.5 metres**



Keep it clear of anything combustible:

- No garden beds, mulch or firewood
- No boats, trailers, caravans, bins or furniture
- Keep all timber maintained and replace decking, stairs, nearby fences, lattices or gates with non-combustible materials where possible
- Talk to your neighbours about making improvements together

The first 1.5 metres around your home can make a difference. If it can burn, it shouldn't be there! Clear it, relocate it, or replace it. This includes under decks and verandahs too. Zone Zero needs to stay clear. If you don't have 1.5 metres between your house and the boundary, clear whatever space you do have up to the fence.

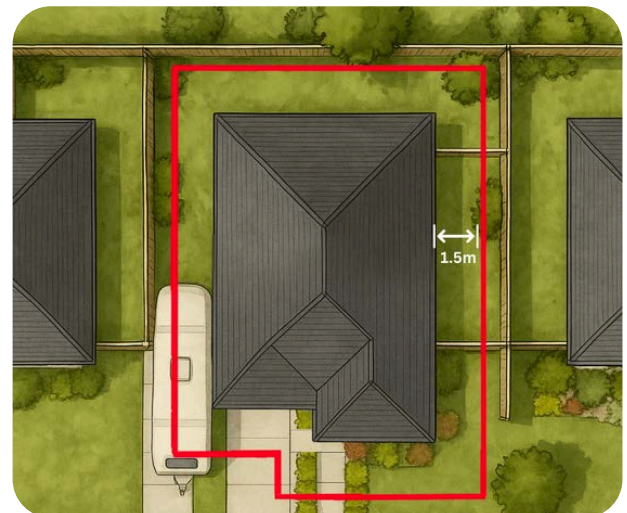
Once Zone Zero is sorted, don't stop there. It's only one part of the 'Home Ignition Zone' so it's time to work your way out into the yard. Managing the garden and what's growing around the house makes a big difference in reducing your risk. On sloping or densely vegetated sites we recommend you consult your local fire brigade or a BPAD practitioner

Intermediate Zone: 1.5m–10m from the home

- Keep lawns low and watered
- Space trees apart.
- Clear vegetation under trees to reduce connection between tree canopies and the ground
- Trim lower branches and any branches overhanging the roof

Extended Zone: 10–30m from the home

- Remove leaf litter and fallen branches.
- Maintain spacing between trees and shrubs
- Keep tree canopies separated
- Manage understorey and grasses



1.5m clearance around the house (including decks)

Can a firetruck get to you? Ensure your house number is visible from all sides and your driveway is clear from overhanging trees.

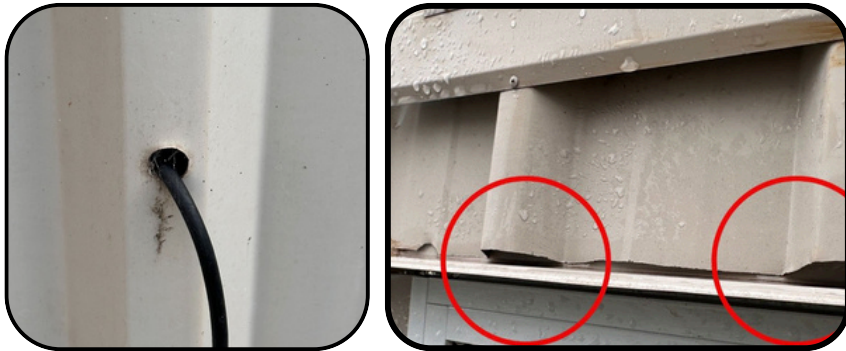
BAL compliant LETTING OTHERS KNOW



When work is done on your home

Building, renovations or additions to your home can unknowingly compromise your BAL rating. Always check the plans, let your trades know the BAL rating and talk through what the house needs to stay bushfire-safe. Some examples include:

- Installing solar panels or TV antennas, air conditioners or internet satellite dishes
- Adding a carport, gazebo, deck, fence, gate or lattice
- Doing roof or wall repairs
- Replacing windows
- Installing lithium-ion battery units or charging stations



Gaps in cable entry points and flashings

TIPS

- **Check any new openings in the roof or cladding. These are often done to allow for new cabling into the house. They should be less than 2mm**
- **Check any new materials are non-combustible or fire-rated - Look at timber, plastics & non-rated cables**
- **Make sure there have been no changes to Zone Zero**

Ask workers: “Is this installation compliant with the BAL and AS3959?”

What else you can do

Roof and Gutters

- Clear gutters regularly (especially in spring and summer)
- Check for gaps or cracks in tiles
- Make sure metal roofing sheets are well sealed at the ends, overlaps, and along **ridge capping**

Eaves and Vents

- Boxed-in eaves reduce ember entry
- Cover all vents and weep holes with metal mesh (maximum 2 mm openings for mesh).

Always consult a qualified builder before carrying out any work, as sealing or modifying the wrong areas of your home or installing unsuitable products can affect ventilation, safety, or compliance. Also check with your local council for any planning or permit requirements.

Walls and Cladding

- Repair cracked render or missing sealant
- Check that all pipe/duct penetrations are sealed with fire-rated sealant

Windows and Doors

- Check for cracks or other damage
- Install metal flyscreens on all windows and doors
- Weather seal all doors, including garage doors which are vulnerable and where we store most flammable items
- Check for gaps in flashings

Decking and subfloor

- Store nothing underneath
- Use metal mesh screening for subfloor if open or has gaps
- Replace timber near the house with fire-resistant alternatives

If all this sounds like a lot of work or too expensive, start with what you can because every action helps. Begin by keeping the first 1.5 metres around your home clear, then work through other improvements over time. Even small steps add up to a safer home.



Bushfire survival

FOCUS ON YOU AND YOUR FAMILY

No home is 100% fireproof. That's why planning is critical.

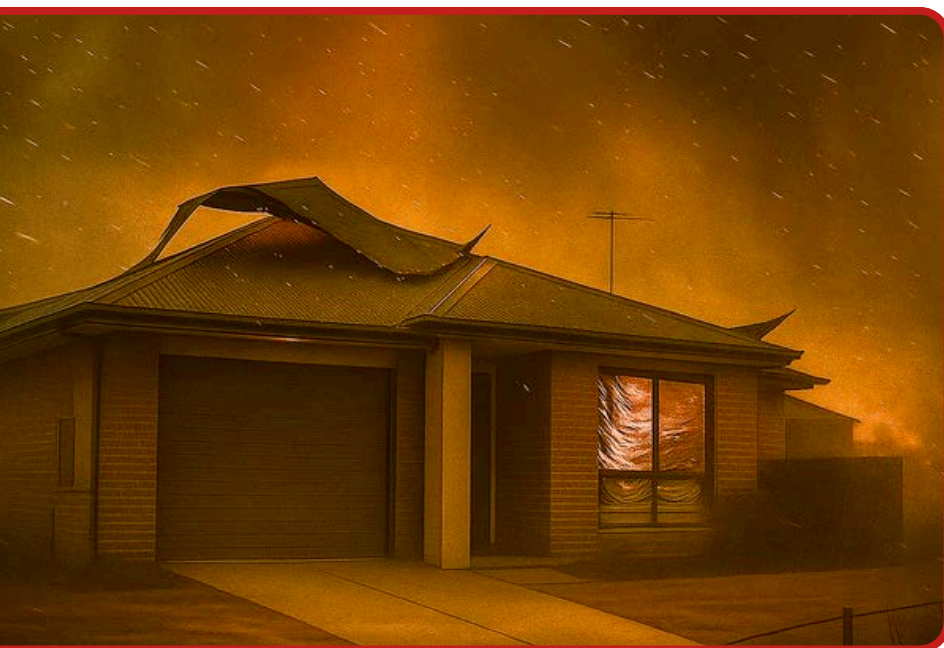
Having a bushfire plan takes the pressure off when it matters most. On high risk days, stress and panic can cloud your judgement, but a clear plan means you have already made the tough decisions ahead of time. It helps you act faster, stay focused, and keep your family safe when every minute counts. But it's more than just having a plan, it's about staying alert, knowing the weather and fire conditions throughout the season, and being ready to act when things change.

The only way to avoid the risks of bushfire is to leave early which means leaving the night before or morning of a bad fire day, not when you see smoke or get an alert. That's a 'wait and see' plan. Driving on the roads in or around bushfires is extremely dangerous!

Use all the resources available on your local fire brigade website and discuss as a family, what you will do during the summer.

Your Bushfire Plan Should Include:

- When will you leave? Establish triggers and actions
- Where will you go and how?
- What if the road is blocked? Always plan as if you will be stuck at your house.
- Who will you check in with?
- Where are your kids, pets, medications and emergency kit?



Homes in Australia are not built to withstand catastrophic bushfire conditions. If you can't leave early, you may need to shelter in your home, on your property, or use safer spots along the road. Driving in a fire is dangerous, but knowing where you might find protection could save your life.

[Refer to the Country Fire Authority Leave Early Bushfire Survival Planning Template](#)



The Australian Fire Danger Rating System

MONITOR CONDITIONS WITH 30/30/30 +L

- Use the 30/30/30 +L rule
- Use local emergency apps to stay updated. Set up watch zones or alerts for your property and nearby areas, and learn what the icons mean.
- Know the daily Fire Danger Rating. Check your emergency app for the rating in your area. Do this each day, 4 days in advance
- Share updates with family, neighbours and anyone vulnerable in the community to help build local awareness and keep others informed
- Work on your bushfire plan and practise it!

Being Ready Takes Practice!

Having a plan in a drawer somewhere isn't enough. Talk it through with your family, friends and neighbours

- Practise in daylight and night conditions
- Include plans for kids, pets and livestock
- Note down how long it takes to pack
- Work out any issues and practise again



Brekky fire check sorted! Get in the habit of checking the fire danger rating and weather conditions each morning during fire season so it becomes part of your routine. Pay attention to wind predictions, direction and changes in weather throughout the day.

Top tips for bushfire resilience - CSIRO

- How you plan to behave in a bushfire matters even more than how well your house is prepared.
- Think of yourself and your home as the centre of an onion and each layer around you needs to be bushfire-ready.
- Understand your location and how it affects fire severity. Steep slopes and dense forests increase risk.
- Clear shrubs near the house, trim overhanging branches, but remember some trees can help shield against wind and heat.
- Have a detailed plan for when to leave **and an equally clear plan if you can't**. Know how to shelter, how to escape, and where to go.
- Always have back-up plans, if one road is blocked, make sure there's another.
- Don't rely on firefighters. Plan as if they won't be there.
- Resilience is ongoing. Keep looking for ways to reduce risk and always search local fire brigade website for updated planning advice

30/30/30 + L Rule

Monitor these conditions every day, 4 days in advance. They are red flags for dangerous fire behaviour but remember, fires can be dangerous in any conditions during the fire season.

- **30 degrees or hotter:** High temperatures dry out vegetation, making it easier to ignite
- **30 percent humidity or lower:** Dry air means vegetation burns faster and fires spread quicker
- **30 kilometre per hour winds or stronger:** Wind drives the fire front, spreads embers, and increases fire intensity. Always check for wind changes
- **+LIGHTNING (L):** When summer storms roll through, check a lightning tracker app or website to see where strikes have hit. Lightning often starts bushfires and knowing the strike locations can help you stay alert to where a fire might begin

Getting ready

YOUR 15 MINUTE CHECKLIST



Checklists

Checklists are powerful tools for getting bushfire ready. They help you keep track of what needs doing, and turn small tasks into real protection. Start by taking 15 minutes to walk around your home and garden:

- Zone Zero clear. 1.5m around the house incl. the deck**
- No overhanging branches**
- Vents, weep holes and roof gaps screened**
- No flaking paint or damaged timber**
- Nothing under house that can burn, including chemicals**
- Outdoor furniture and items stored safely**
- Gas bottles stored securely**
- Solar, air con, and other installs are compliant**
- Grass kept short and watered**
- Gutters clean**

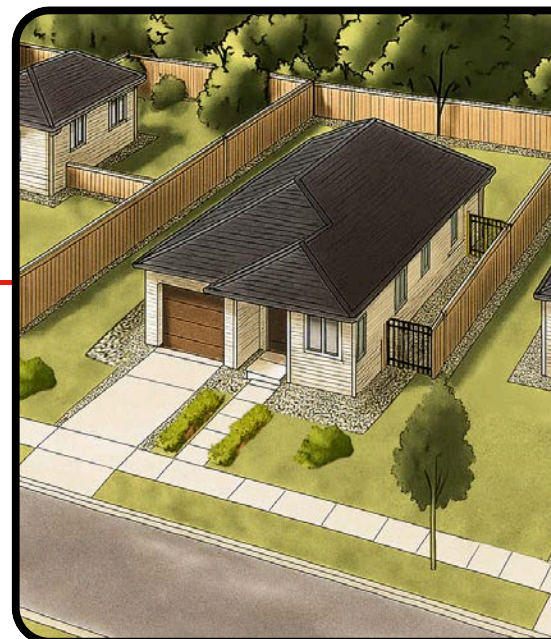
Also have checklists to guide your bushfire plan. Have one for what to pack if you are leaving early, including documents, medications, food, water, and other essentials. Create a separate list for children with clothing, favourite toys, and formula or supplies for babies. Make another for pets and livestock with carriers, leads, feed, transport and water. Finally, include a list of responsibilities so everyone in the household knows their role when it is time to act.

YOUR NEXT STEPS

- Prepare your house and property. Don't delay your Zone Zero prep, and work your way out and around the property
- Check trusted websites like Bushfire Resilience Inc, CSIRO, and local fire agencies for practical guides and resources. Learn more about fires, your house and your BAL
- Talk to your family, friends, and neighbours about your bushfire plan. Include anyone in the community that might need assistance with their plan including the elderly and homes where English is a second language
- Action your morning routine, monitoring fire and weather conditions each day, 4 days in advance
- If you sell your house, pass on your knowledge to the new owner. If you rent, contact your agent or landlord to discuss the bushfire risk and how to reduce it



Before zone zero measures



After zone zero measures

You can't control the bushfire itself, but you can control what's around your home. Regardless of your plan, you might still find yourself trapped and sheltering in your house, so every step you take to prepare makes a difference