



NSW RURAL FIRE SERVICE

# NSW RFS BUSH FIRE HOUSEHOLD ASSESSMENT TOOL

**Are you Prepared?**

Melissa O'Halloran - Senior Project Officer, Community Planning NSW RFS

# Why rebuilt the household assessment tool

- Original tool built in response to Victorian Bushfire Royal Commission
- Feedback from the existing tool
  - Many residents find it difficult to interpret risk
  - Some questions were difficult to understand
- Provide one model suitable for all NSW RFS bush fire exposure calculations



# Existing advice

- Difficult to adapt to specific circumstances
- Not all considerations adequately covered
  - In particular, mental aspects poorly understood
- Perception that partial adoption is OK

## Bush Fire and Your Home

PREPARE YOUR HOME AND PROPERTY FOR BUSH FIRES

These maintenance tips may help prevent burning embers destroying your house:

- Install metal gutter guards
- Repair damaged or missing tiles on the roof
- 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
- Attach a fire sprinkler system to gutters

**DID YOU KNOW**  
Not all homes can be defended - your safety is always the first priority.



### Things to do around your house and garden:

- keep lawns short and gardens well maintained
- cut back trees and shrubs overhanging buildings
- clean up fallen leaves, twigs and debris around the property
- have hoses long enough to reach around your house
- if you have a pool, tank or drip Static Water Supply (SWS) your property entrance
- check that your insurance and up to date
- complete your

PREPARE

## BUSH FIRE SAFETY Staying and



IF YOU ARE NOT PREPARED, STAYING

THERE ARE SOME SITUATIONS WHEN THE NEW RFS RECOMMENDS YOU SHOULD NOT STAY AND DEFEND:

- If it is a Catastrophic fire danger rating day
- If it is an Extreme fire danger day and your home has not been specially designed to withstand a fire
- If your property is not well prepared and defended
- If you are not healthy, emotionally prepared or physically fit

By choosing to stay and defend you and your property may be at risk of injury or death.

PREPARE

DEFEND

EVACUATE

SURVIVE

© State of New South Wales through the NSW FIRE INFORMATION LINE

## BUSH FIRE SAFETY Leaving Early



LEAVE EARLY AND SURVIVE A BUSH FIRE

The safest option in a bush fire is always to leave early, well before the fire structure. You should leave if:

- The Fire Danger Rating is Catastrophic. On these days fires will be so intense it is not safe to defend any home - no matter how well prepared. Embers and burning debris are also very dangerous and leaving early will always be the safest option.
- You have not prepared yourself or your property to defend you and your home the best level of protection from a fire.
- There are children, elderly or disabled people in your home. People who are vulnerable due to age, health or any other reason should always leave early.
- Your house is not defensible. Some houses, because of their location, construction, size, trees, vegetation or its surrounding fire situation are not safe to defend. The NSW RFS Bush Fire Hazard Assessment can help you assess your home's level of risk and make an informed decision. On some days the decision will be defensible.

### Preparing to leave early means:

- Completing a Bush Fire Survival Plan, available at [www.rfs.nsw.gov.au](http://www.rfs.nsw.gov.au)
- Planning where you will go, how to get there, and what you will take in your car and what it means
- Having transport organised for all members of the family, including pets
- Actively seeking information on the fire situation and weather conditions from TV, local radio and the internet as you know when to leave
- Having a back-up plan in case you aren't able to leave early enough. What other safe places are there you could get to?
- Talking to family, friends, and neighbours about your plan to leave early

**DID YOU KNOW**  
Being the first to leave from a bush fire is the ONLY way to ensure your safety.

# Considerations for the resident

- The probability of house survival is increased if the residents stay and defend
- Defending a home risks the life of the resident
- Existing literature verifies increased preparedness decreases risk to life and property



# The new model



# Why are so many questions needed?



**There are many elements to being prepared**





NSW Rural Fire Service

## Bush Fire Household Assessment Tool

Personal Details

Bush Fire Danger

Household Assessment

Report

### Personal Details

Welcome to the NSW RFS Bush Fire Household Assessment Tool. This tool is designed to help you make an informed decision regarding your plan to 'Leave Early or Stay and Defend' for this bush fire season.

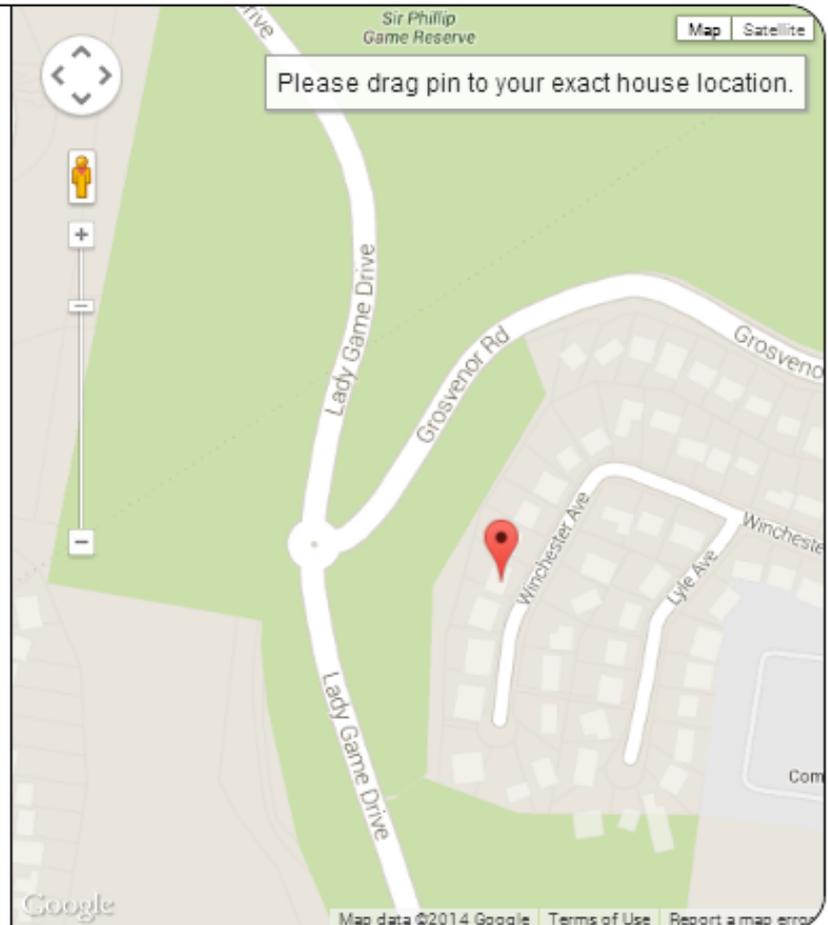
Please enter your address and contact details. This information will be used to evaluate your bush fire risk and send you the details of this assessment. It will not be used by NSW Rural Fire Service for any other purpose.

House Address:

[Show on Map](#)

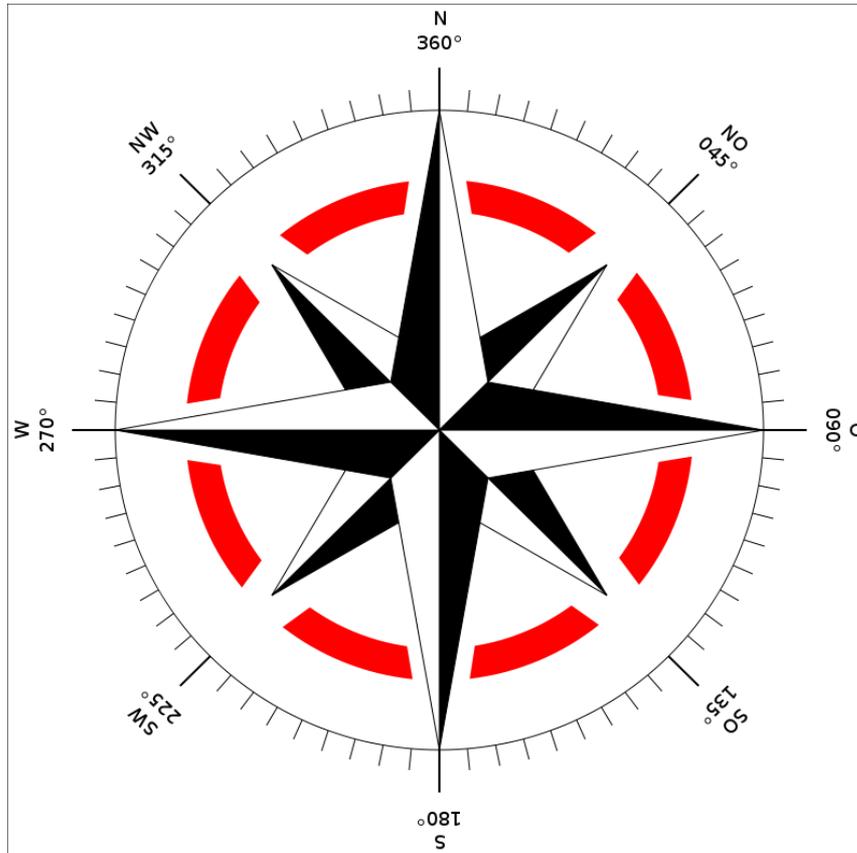
[\(Use My Location\)](#)

Email Address:



[Start Assessment](#)

# Where is the greatest risk?





Personal Details

**Bush Fire Danger**

Household Assessment

Report

## Bush Fire Danger Assessment

The results below have been calculated to assess the fire danger for your location based on mapped information. Are they correct? You can modify any answers that are incorrect to show the relationship between your house and the bush fire hazard that poses the greatest risk. Remember that your greatest risk may not be the vegetation closest to your house, it may be the slope behind your house.

What is your council area?

Ku-ring-gai

What type of bush/grass poses the greatest risk to your home?

Forest

Where is the bush/grass in relation to your house?

Downslope  Flat  Upslope

How steep is the land between your house and the bush/grass?

8 degrees

What is the distance between your house and the bush/grass?

25 meters



Continue



Personal Details

**Bush Fire Danger**

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The results below have been calculated to assess the fire danger for your location based on mapped information. Are they correct? You can modify any answers that are incorrect to show the relationship between your house and the bush fire hazard that poses the greatest risk. Remember that your greatest risk may not be the vegetation closest to your house, it may be the slope behind your house.

What is your council area?

What type of bush/grass poses the greatest risk to your home? ?

Where is the bush/grass in relation to your house? ?

Downslope  Flat  Upslope

What is the distance between your house and the bush/grass? ?

meters



Continue



Personal Details

**Bush Fire Danger**

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## Bush Fire Danger Assessment

The results below have been calculated to assess the fire danger for your location based on mapped information. Are they correct? You can modify any answers that are incorrect to show the relationship between your house and the bush fire hazard that poses the greatest risk. Remember that your greatest risk may not be the vegetation closest to your house, it may be the slope behind your house.

What is your council area?

What type of bush/grass poses the greatest risk to your home? ?

Where is the bush/grass in relation to your house? ?

Downslope  Flat  Upslope

What is the distance between your house and the bush/grass? ?

25 meters



Continue

## Bush Fire Danger Assessment

The results below have been calculated to assess the fire danger for your location based on mapped information. Are they correct? You can modify any answers that are incorrect to show the relationship between your house and the bush fire hazard that poses the greatest risk. Remember that your greatest risk may not be the vegetation closest to your house, it may be the slope behind your house.

What is your council area?

Ku-ring-gai

What type of bush/grass poses the greatest risk to your home? ?

Woodland

Where is the bush/grass in relation to your house? ?

Downslope
  Flat
  Upslope

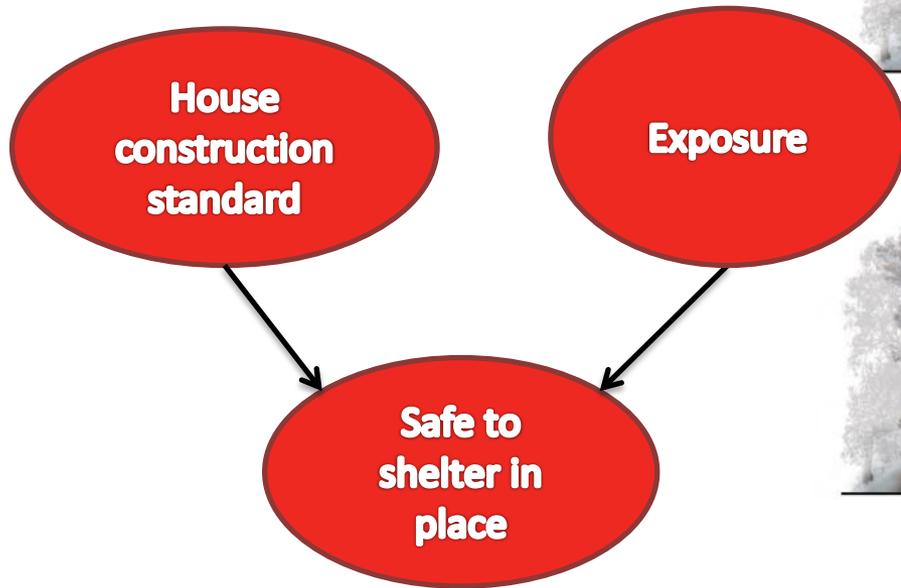
What is the distance between your house and the bush/grass? ?

25 meters



Continue

# Shelter in place



Radiant Heat



Direct Flame Contact



Ember Impact



Personal Details

Bush Fire Danger

Household Assessment

Report

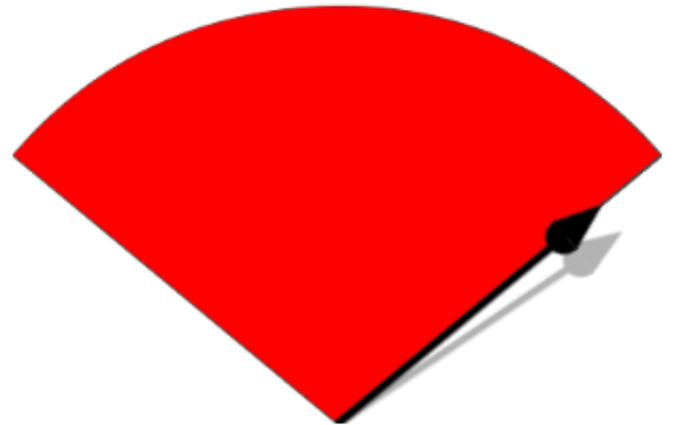
## Stay or Leave Advice: **LEAVE EARLY**

Based on the information you have provided, the potential fire exposure is too high for you to be able to safely stay and defend your property. Your only option is to leave early.

For more information, please read the following links:

[Leaving Early factsheet](#)

[Bush Fire and your Home](#)



Detailed Report



Personal Details

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## Household Construction

If you are unsure, continue the assessment using a low level of bush fire specific protection measures. Check with your local Council if you want to know if bush fire specific measures were required when your house was built.

What year was your house constructed?

Before 2002 ▼



House  
Construction



Personal  
Capacity



Available  
Equipment



Ground  
Condition



Continue



Personal Details

Bush Fire Danger

**Household Assessment**

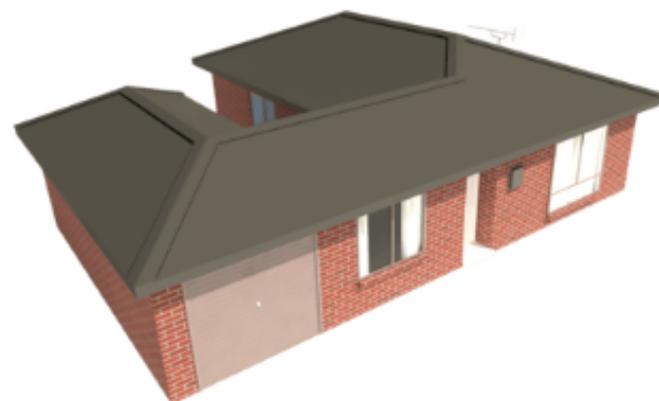
Report

## Household Construction

If you are unsure, continue the assessment using a low level of bush fire specific protection measures. Check with you local Council if you want to know if bush fire specific measures were required when your house was built.

What year was your house constructed?

To what level?

**House  
Construction****Personal  
Capacity****Available  
Equipment****Ground  
Condition**[Continue](#)

Personal Details

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## Household Construction

If you are unsure, continue the assessment using a low level of bush fire specific protection measures. Check with your local Council if you want to know if bush fire specific measures were required when your house was built.

What year was your house constructed?

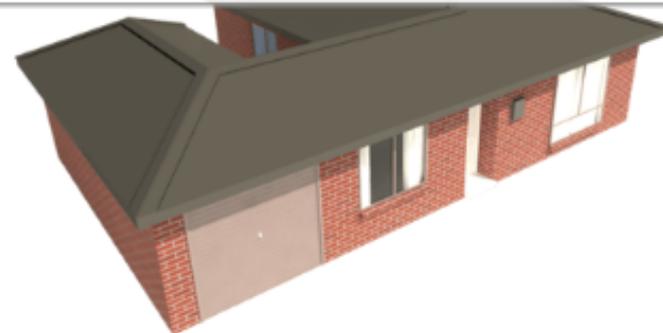
After 2010 ▼

To what level?

BAL-12.5 ▼

House  
ConstructionPersonal  
CapacityAvailable  
EquipmentGround  
Condition

Based on your selection, your house does not conform to a satisfactory construction standard for bush fire protection. Your property cannot provide adequate protection for you to safely stay and defend your property. **Your only option is to leave early.** You can continue to explore this tool to identify ways to better prepare your property in the case of a bush fire or get your final report now.

[Get Report](#)[Continue](#)

# Expert Workshop

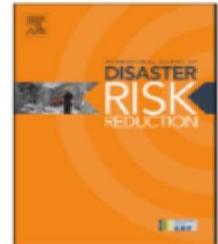
- Online survey results : inconclusive
- Initial workshop aim : to elicit definitions and probabilities
- Revised objective : what it means to be prepared for different exposure to wildfire



Contents lists available at [ScienceDirect](#)

International Journal of Disaster Risk Reduction

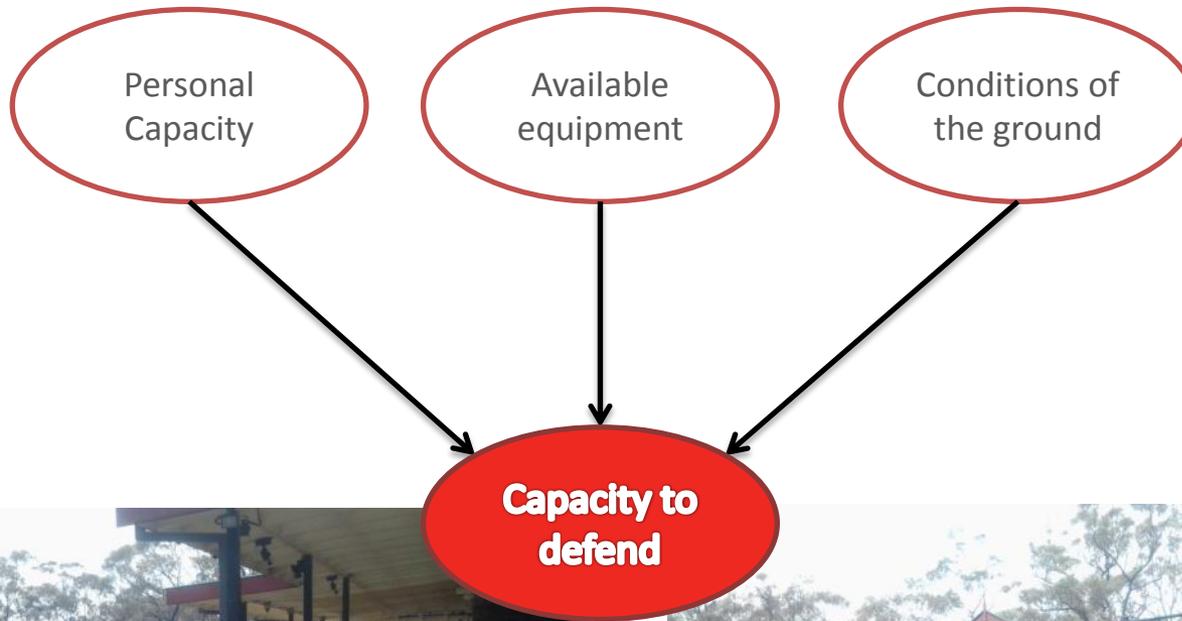
journal homepage: [www.elsevier.com/locate/ijdrr](http://www.elsevier.com/locate/ijdrr)



Defining adequate means of residents to prepare property for protection from wildfire

T.D. Penman <sup>a,\*</sup>, C. Eriksen <sup>a,b</sup>, R. Bianchi <sup>c</sup>, M. Chladil <sup>d</sup>, A.M. Gill <sup>e</sup>, K. Haynes <sup>f</sup>, J. Leonard <sup>c</sup>, J. McLennan <sup>g</sup>, R.A. Bradstock <sup>a</sup>

# Elements of Preparedness



## Personal Capacity

The following questions will help determine whether you are capable of staying and defending your house.

Residents who attempt to defend their property must be aware of the physical and mental demands that the fire will place on them and how this may affect their decision-making processes. The environment in which you will defend your property can be dangerous, with heavy smoke resulting in low visibility, strong winds carrying flying debris, high temperatures and loud noise from the fire.

How would you rate your physical health? ?

- Good  Poor

How would you rate your physical stamina to defend your property from a bush fire for several hours, i.e. work in extreme heat and smoke? ?

- Good  Poor

How would you rate your mobility? ?

- Good  Poor

How would you rate your mental capacity to endure the conditions of a fire? ?

- Good  Poor

How would you rate your ability to make decisions under the stress of defending your property from a bush fire for several hours? ?



House Construction



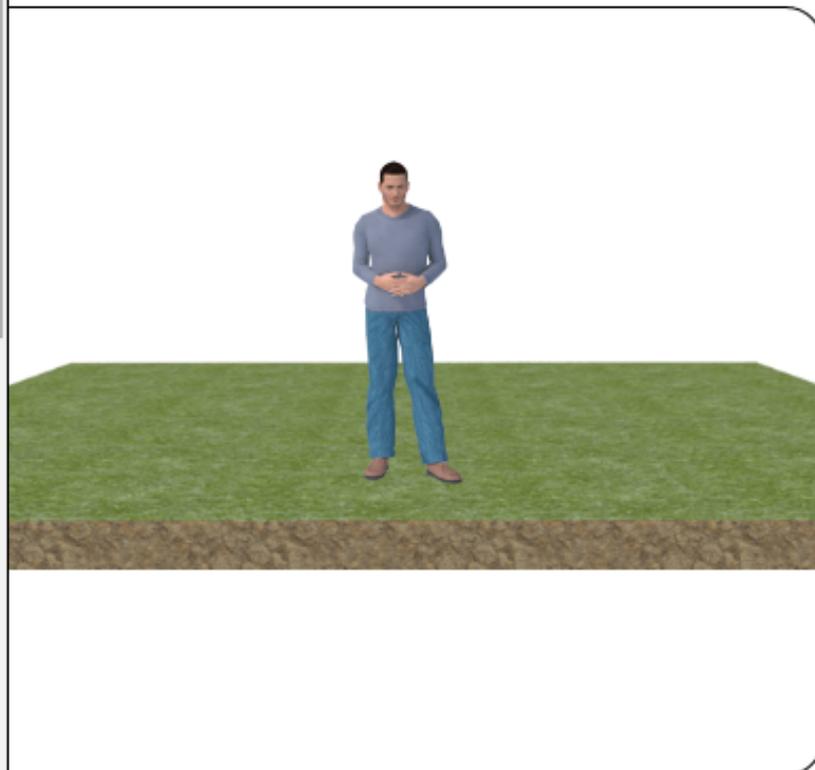
Personal Capacity



Available Equipment



Ground Condition



Continue



Personal Details

Bush Fire Danger

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Report

How many residents will be defending the property in the event of a bush fire?

- One  Two or more

Will the resident responsible for defending the property also have responsibility for any human dependents, i.e. young, elderly or disabled?

- Yes  No

Can you include a leave early option in your Bush Fire Survival Plan for residents that are not capable of defending the property i.e. young, elderly or disabled?

- Yes  No

Will the resident responsible for defending the property also have responsibility for any animal dependents, i.e. commercial stock, horses, domestic pets?

- Yes  No

Can the animal dependents be moved away from areas of bush fire risk?

- Yes  No

Do you have a bush fire survival plan?

- Yes  No

Does the resident with the primary responsibility for defending the property have experience or detailed knowledge of defending property during a bushfire?



House Construction



Personal Capacity



Available Equipment



Ground Condition



Continue



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protected?

 Yes  No

Does the property have multiple points where water can be accessed?

 Yes  No

Does the property have spare hoses kept indoors?

 Yes  No

Does the property expect to have reliable mains water during the course of a bush fire?

 Yes  No

What type of enclosed water pump does the household have?

 None  Electric  Petrol  Diesel

Does the property have an independent water supply of more than 10,000L?

 Yes  No

Do the structures have gutters?

 Yes  No

Is there 10L of drinking water per person defending the property?

 Yes  No

House Construction



Personal Capacity



Available Equipment



Ground Condition



Continue



Personal Details

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## Grounds Condition

The following questions will help determine if your property is adequately prepared for you to be able to stay and defend your property.

Your garden landscaping can have a significant influence on whether your home will survive in a bush fire. Selecting appropriate elements can not only reduce the risk of a fire starting on your property, but can also improve your ability to safely attempt to defend your property from a bush fire.

This preparation is important to your house surviving whether you decide to stay and defend or leave early.

Are dry lawns present within 1m of the house? ?

- Yes  No

Are there any wooden sleepers in gardens within 1m of the house? ?

- Yes  No

Is there leaf or bark mulch in gardens within 2m of the house? ?

- Yes  No

Are there shrubs near to or touching wooden or glass features of the house? ?

- No  Adjacent Brick  Adjacent Timber or Glass

Are there any brushwood fences within a distance of 3 x the height of the ?



House Construction



Personal Capacity



Available Equipment



Ground Condition

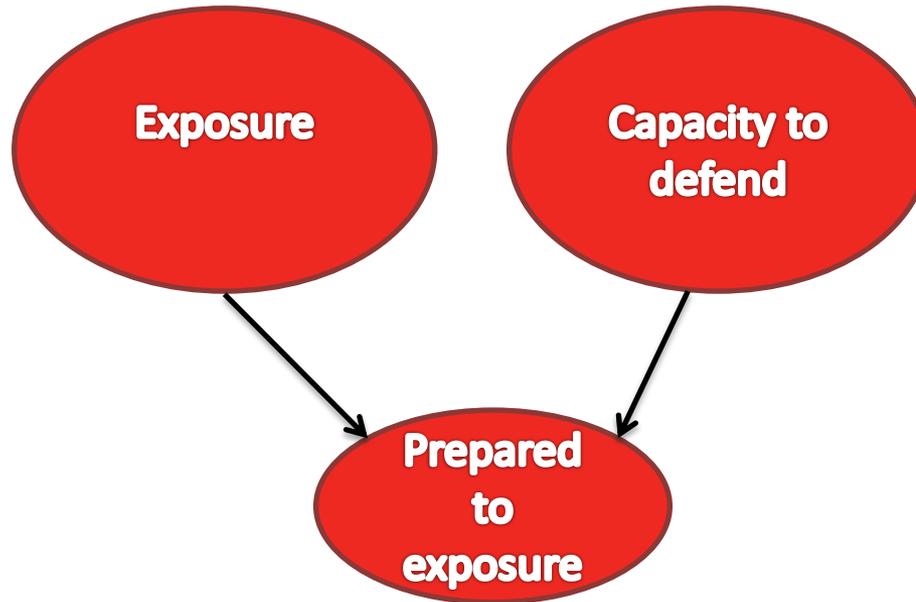


Get Report

# Are all questions equal?



# Prepared to exposure



	Flame Zone	RH Zone	Ember Zone
<b>Personal ability</b>			
Good physical health to work in a fire environment, see section 3.1	Required	Required	Optional
Mobility to move capably around the property unassisted	Required	Required	Required
Physical ability to work in an environment with heavy smoke from wildfires	Required	Required	Required
Mental ability to endure dangerous conditions	Required	Required	Required
Physical stamina to work for at least 6 hours	Required	Required	Optional



Personal Details

Bush Fire Danger

Household Assessment

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## Stay or Leave Advice: **Safe to Stay and Defend**

Based on the information you have provided about your bush fire risk, you are prepared and have the tools to safely stay and defend your property.

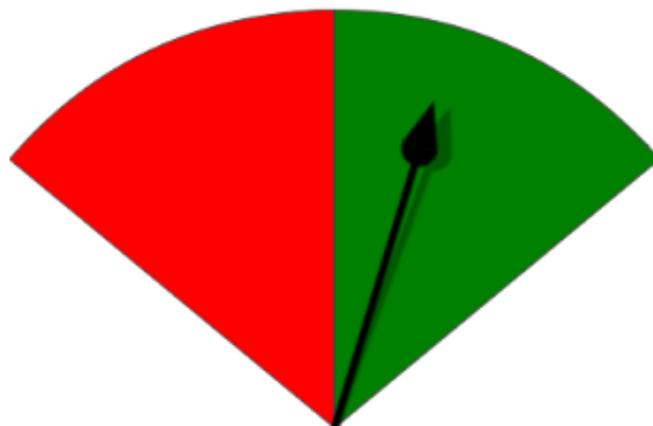
During the assessment you agreed to take additional actions to prepare your house for a bush fire. Please review and print the to do list. If you do not undertake all of these actions you will need to reconsider you ability to stay and defend your property.

[To Do List](#)

Please read the following information to ensure you have considered what is required to safely stay and defend your property:

[Staying and Defending factsheet](#)

[Bush Fire and your Home](#)



[Detailed Report](#)



# NSW RURAL FIRE SERVICE

## TO DO LIST

[Return](#) [Print](#)

- Include a leave early option in your Bush Fire Survival Plan for residents that are not capable of defending the property i.e. young, elderly or disabled.
- Include plans for your animals in your Bush Fire Survival Plan.
- Ensure your lawns are watered and mown on high fire danger days.
- Replace wooden sleepers with non-combustible materials such as brick or stone within 1m of the house.
- Remove leaf or bark mulch from gardens within 2m of the house.
- Remove shrubs near or touching the house.
- Replace brushwood fencing with a non-combustible fence material within 6m of the house.
- Move doormat inside house.
- Move outdoor furniture away from the house or deck.
- Store gas bottle in the garage.
- Make sure the pressure relief valve on LPG cylinders face outwards (so a flame wouldn't be directed towards the house).
- Move flammable to structures that are more than 6m from the house.
- Clean leaves and twigs from underfloor or underdeck areas.
- Cut back any overhanging trees or shrubs and dispose of cuttings appropriately.
- Clean leaves from the roof, gutters and downpipes.

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## What next?

- Final testing and feedback
- Rollout as part of new public website
- Let the community know



## Acknowledgements

- Trent Penman, Bronwyn Horsley and Christine Eriksen
- Steven Mascaro and Owen Woodbury

