

**BUSH FIRE
ASSESSMENT
REPORT**

**Subdivision
Two (2) x Lots**

**Lot 1 DP 726095
No 14-22 Smiths Road
Emerald Beach**

May 2021

Amended July 2021

1.0 INTRODUCTION

A Bush Fire Assessment has been carried out for a proposed subdivision at Lot 1 DP 726095 No 14-22 Smiths Road, Emerald Beach.

It is proposed to subdivide the lot into two (2), with existing dwellings on proposed Lots 1 and 2.

The report assumes that the existing dwellings were constructed prior to the introduction of PBP.

This report is based on a site assessment carried out in April 2021 and provides a basis for compliance with respect to NSW Rural Fire Services, Planning for Bush Fire Protection 2019 (PBP, 2019) and AS3959 (2018).

The subdivision is an integrated development and has a requirement for a Bushfire Safety Authority under Section 100B of the *Rural Fires Act 1997*.

NOTE

The report has been prepared with all reasonable skill, care and diligence.

The information contained in this report has been gathered from field survey, experience and has been completed in consideration of the following legislation.

1. Rural Fires Act 1997.
2. Environmental Planning and Assessment Act 1979 No 203.
3. Building Code of Australia.
4. Council Local Environment Plans and Development Control Plans where applicable.
5. NSW Rural Fire Services, Planning for Bushfire Protection, 2019 (PBP, 2019).
6. AS 3959-2018 Construction of Buildings in Bushfire Prone Areas.

The report recognizes the fact that no property and lives can be guaranteed to survive a bushfire attack.

The report examines ways the risk of bushfire attack can be reduced where the subdivision site falls within the scope of the legislation.

The report is confidential and the writer accepts no responsibility of whatsoever nature, to third parties who use this report or part thereof is made known.

Any such party relies on this report at their own risk.

1.1 Objectives

The objectives of this report are to:

- Ensure that the proposed subdivision and the existing dwellings meet the aims and objectives of NSW Rural Fire Services, *Planning for Bushfire Protection*, 2019 and has measures sufficient to minimize the impact of bushfires; and
- Reduce the risk to property and the community from bushfire; and
- Comply where applicable with AS3959 – 2018.

1.2 Legislative Framework

In NSW, the bushfire protection provisions of the BCA are applied to Class 1, 2, 3, Class 4 parts of buildings, some Class 10 and Class 9 buildings that are Special Fire Protection Purposes (SFPPs).

The BCA references AS3959 – 2018 as the deemed-to-satisfy (DTS) solution for construction requirements in bushfire prone areas for NSW.

All development on bushfire prone land in NSW should comply with the requirements of the bushfire protection measures identified within NSW Rural Fire Service, Planning for Bushfire Protection, 2019.

It should be noted that the Rural Fire Service (RFS) does produce guidelines for upgrading existing buildings, which will be referenced later in the report.

The proposed subdivision is required to obtain a bushfire safety authority from the NSW Rural Fire Service.

1.3 Location

The site is located at Lot 1 DP 726095 No 14-22 Smiths Road, Emerald Beach.

Locality – Emerald Beach

Local Government Area – Coffs Harbour City Council

Closest Rural Fire Service – Moonee Brigade

Closest Fire Control Centre – Coffs Harbour

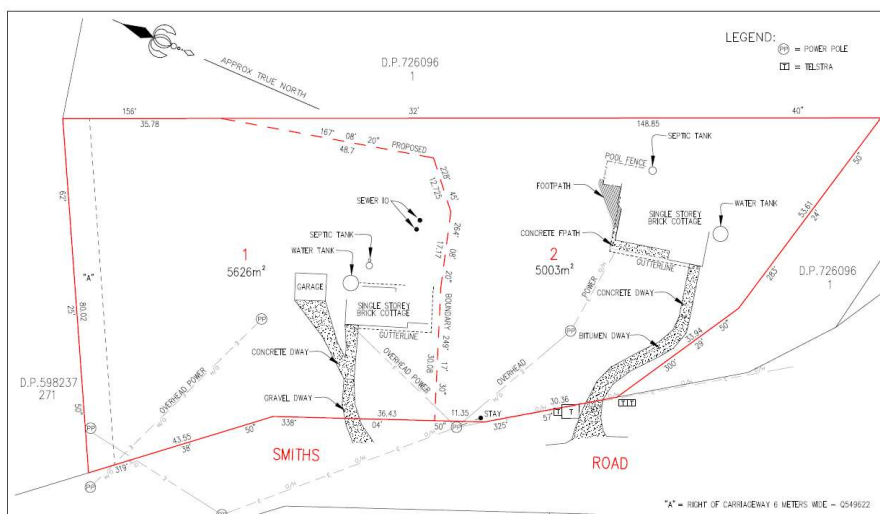
Figure 1 – Topographic Map



Figure 2 – Aerial View



Figure 3: Aerial View Close Up



1.4 Development Proposal and History

The subject site is approximately 1.065 hectares in size.

It is proposed to subdivide the lot into two (2), with the existing dwellings on proposed Lots 1 and 2.

1.5 Bushfire Risk Management Planning

Figure 4 for the bushfire mapping.

Figure 4: Bushfire Mapping



2.0 BUSHFIRE ASSESSMENT

2.1 Assessment Methodology

An assessment was completed with respect to the subdivision.

Several factors need to be considered in determining the bushfire hazard.

These factors are slope, vegetation type, and distance from hazard, access/egress and fire weather.

Each of these factors has been reviewed in determining the bushfire protection measures.

The assessment of slope and vegetation being carried out in accordance with NSW Rural Fire Service, Planning for Bushfire Protection, 2019.

2.2 Slope Assessment

Slope is a major factor to consider when assessing the bushfire risk.

The slopes were measured using a Suunto PM-5/360 PC Clinometer.

The dominant hazard vegetation on the subject lot and the adjacent land was identified and the slopes within the vegetation measured.

The following table shows the results:

Table 1 – Hazard Vegetation Slopes

Hazard Aspect	Slope	Upslope/Downslope or Flat
East	0-5°	Downslope

2.3 Vegetation Assessment

The vegetation on and surrounding the subject site was assessed over a distance of 140m.

The vegetation formations were classified using the vegetation formation as detailed in Planning for Bush Fire Protection, 2019.

2.3.1 Vegetation on the Subject Lot

The vegetation on the subject lot consists of mostly managed land however there is an area of unmanaged land to the east of the existing dwellings.

The existing dwelling on Lot 1 has an unmanaged area of approximately 20m in depth and the existing dwelling on proposed Lot 2 has an unmanaged area of approximately 5m in depth.

These areas have the characteristics of forest vegetation.

2.3.2 Vegetation adjacent and adjoining the Subject Lot

The proposed lots are located in an existing rural residential area where there are mostly areas of managed land however, there are some pockets of unmanaged land.

Directly to the east is mostly managed ground cover and shrub layer however, there are areas where the canopy and gardens may not meet the requirements of an Asset Protection Zone (APZ).

Table 2 – Hazard Vegetation

Hazard Aspect	Vegetation
East	Forest

Photo 1 – Showing the forest vegetation to the east behind the existing dwelling on proposed Lot 1



Photo 2 – Showing the forest vegetation to the east behind the existing dwelling on proposed Lot 2



Photo 3 – Showing the vegetation behind both existing dwellings



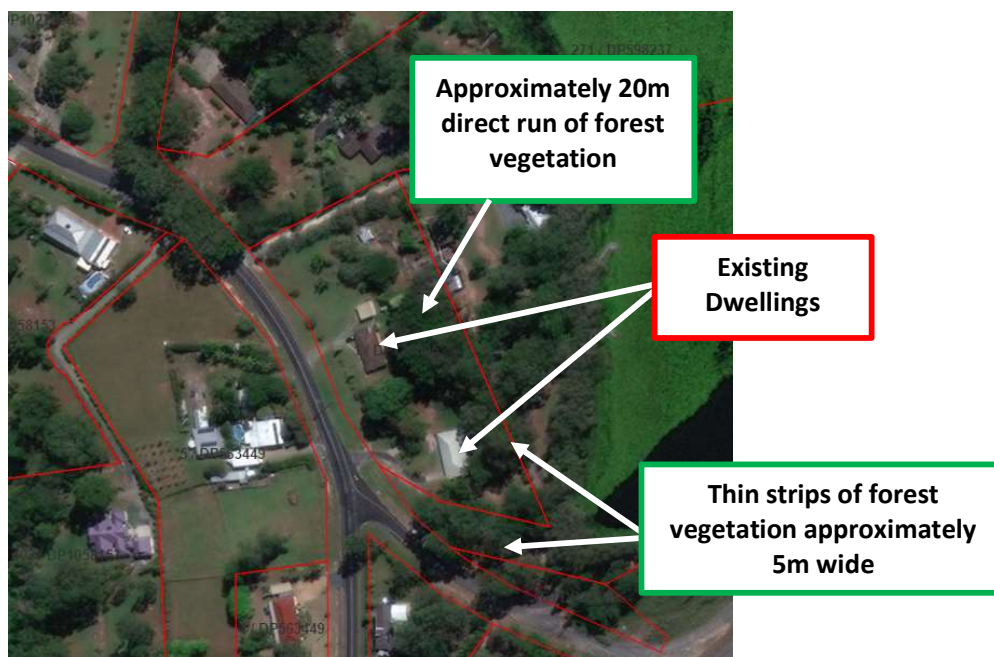
Photo 4 - Looking to the south of the existing dwelling on proposed Lot 2



2.4 Hazard

The hazard is located to the east of both proposed lots.

Figure 5: Hazards



For the purposes of the report, the forest vegetation on and adjoining the subject lot (direct run of fire 20m and 5m) has been considered similar to rainforest hazard in accordance with A1.11.1 of PBP, 2019.

The hazard to the south, See **Figure 5**, has been compared to a garden hazard and will be considered in the Construction Section 3.2, referenced later in the report.

Table 3 – Summary of Hazard Characteristics

Hazard Aspect	Hazard	Slope	Upslope/Downslope or Flat
East	Similar to Rainforest	0-5°	Downslope

2.5 Fire Danger Index

The fire weather for the site is assumed on the worst-case scenario. In accordance with NSW Rural Fire Service the fire weather for the site is based upon the 1:50 year fire weather scenario and has a Fire Danger Index (FDI) of 80.

3.0 BUSHFIRE THREAT REDUCTION MEASURES

3.1 NSW Rural Fire Services, *Planning for Bushfire Protection*, 2019

The following provisions of NSW Rural Fire Service, *Planning for Bushfire Protection*, 2019 have been identified:

3.1.1 Defendable Space/Asset Protection Zone (APZ)

To ensure that the aims and objectives of NSW Rural Fire Services, PBP, 2019, a defendable space between the asset and the hazard should be provided. The defendable space provides for, minimal separation for safe firefighting, reduced radiant heat, reduced influence of convection driven winds, reduced ember viability and dispersal of smoke.

The proposed subdivision is not considered to be subject to the Special Fire Protection Purpose requirements which are applicable to schools, (the proposed development is not a school).

It is recommended that the defendable space be based upon the minimum requirements for Asset Protection Zones as set out in *Planning for Bush Fire Protection*, 2019.

Table 4 - APZ Requirements (PBP 2019) on Proposed Lot 1

Hazard Aspect	Vegetation Type	Slope	IPA	OPA	Total Minimum APZ Required (IPA + OPA)	Total APZ existing
East	Similar to Rainforest	0-5° Downslope	12m	-	12m	Approx 23m

Table 5 - APZ Requirements (PBP 2019) on Proposed Lot 2

Hazard Aspect	Vegetation Type	Slope	IPA	OPA	Total Minimum APZ Required (IPA + OPA)	Total APZ existing
East	Similar to Rainforest	0-5° Downslope	12m	-	12m	Approx 17m

It is recommended that the existing grassland/managed area of the lots is to be managed as Inner Protection Area (IPA).

Inner Protection Area (IPA) Requirements

Inner: The IPA is the area closest to the building and creates a fuel managed area which can minimise the impact of direct flame contact and radiant heat on the development and act as a defensible space. Vegetation within the IPA should be kept to a minimum level. Litter fuels within the IPA should be kept below 1cm in height and be discontinuous.

In practical terms the IPA is typically the curtilage around the building, consisting of a mown lawn and well-maintained gardens.

When establishing and maintaining an IPA the following requirements apply:

Trees

- Tree canopy cover should be less than 15% at maturity;
- Trees at maturity should not touch or overhang the building;
- Lower limbs should be removed up to a height of 2m above the ground;
- Tree canopies should be separated by 2 to 5m; and
- Preference should be given to smooth barked and evergreen trees.

Shrubs

- The creation of large discontinuities or gaps in the vegetation, to slow down or break the progress of fire towards buildings, should be provided;
- Shrubs should not be located under trees;
- Shrubs should not form more than 10% ground cover; and
- Clumps of shrubs should be separated from exposed windows and doors by a distance of at least twice the height of the vegetation.

Grass

- Grass should be kept mown (as a guide grass should be kept to no more than 100mm in height; and
- Leaves and vegetation debris should be removed.

An APZ should be maintained in perpetuity to ensure ongoing protection from the impact of bushfires.

3.1.2 Operational Access and Egress

The two (2) existing dwellings, access and egress, is from Smiths Road.

3.1.3 Services - Water, Gas and Electricity

As set out in Section 6.8.3 of NSW Rural Fire Services, Planning for Bushfire Protection, 2019, developments in bushfire prone areas must maintain a water supply for firefighting purposes.

Reticulated water supply is not available to the site however each dwelling has a 20,000 concrete litre tank and the owners also advise that Brigade does draft water out of the large dams.

Electricity supply is connected to the site.

Reticulated gas services are not available to the site; however, any reticulated or bottled gas is to be installed and maintained in accordance with AS 1596 and the requirements of the relevant authorities. Metal piping is to be used. All fixed gas cylinders are kept clear of all flammable materials to a distance of 10m and shielded on the hazard side of the installation.

If gas cylinders need to be kept close to a building, the release valves are to be directed away from the building and at least two (2) metres away from any combustible material, so that they do not act as a catalyst to combustion. Connections to and from gas cylinders need to be metal. Polymer sheathed flexible gas supply lines to gas meters adjacent to buildings are not to be used.

Figure 6 - Showing the large dams

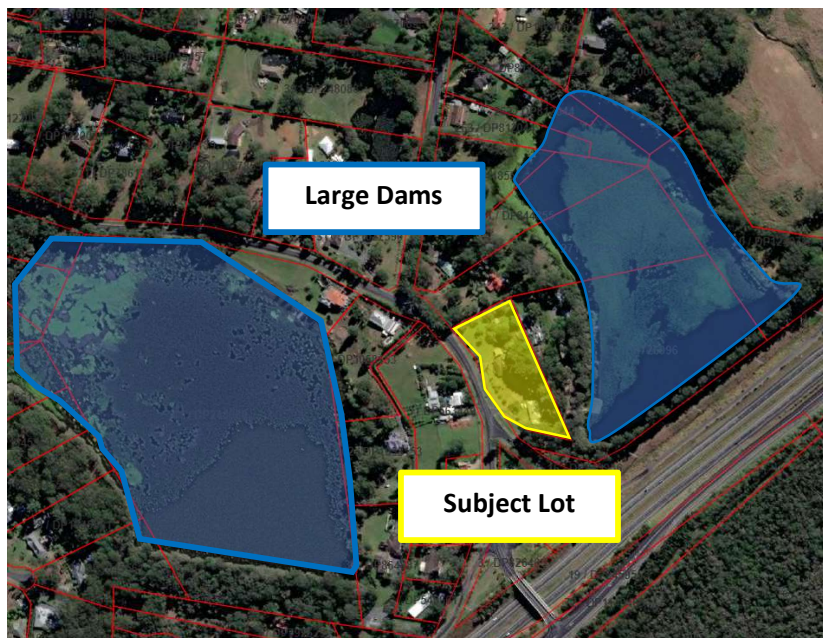


Photo 5 - Showing the dam to the east



3.1.4 Landscaping

Landscaping is a major cause of fire spreading to buildings, and therefore any landscaping will need consideration when planning, to produce gardens that do not contribute to the spread of a bushfire.

When planning any future landscaping surrounding any proposed building or subdivision, consideration should be given to the following:

- The choice of vegetation – consideration should be given to the flammability of the plant and the relation of their location to their flammability and on-going maintenance to remove flammable fuels.
- Trees as windbreaks/firebreaks – Trees in the landscaping can be used as windbreaks and also firebreaks by trapping embers and flying debris.
- Vegetation management – Maintain a garden that does not contribute to the spread of bushfire.
- Maintenance of property – Maintenance of the property is an important factor in the prevention of losses from bushfire.

Appendix 4 of NSW Rural Fire Services, *Planning for Bushfire Protection*, 2019, contains standards that are applicable to the provision and maintenance of Asset Protection Zones.

For a complete guide to APZs and landscaping download the NSW RFS document Standards for Asset Protection Zones at the RFS www.rfs.nsw.gov.au.

3.1.5 Fences and Gates

Fences and gates may play a significant role in the vulnerability of structures during a bush fire. With regard to new fences and gates:

- a) All new fences in bush fire prone areas should be made of either hardwood or non-combustible material.
- b) Where the fence is within 6m of the building or in areas of BAL 29, they should only be made of non-combustible material.

3.1.6 Emergency Evacuation Planning

It is recommended that the owners develop a bushfire survival plan with respect to the site.

Any bushfire survival plan should consider the advice offered by the RFS website www.rfs.nsw.gov.au.

3.2 Construction of Buildings

3.2.1 General

The deemed-to-satisfy provisions for construction requirements are detailed in AS 3953-2018.

The relevant Bushfire Attack Level and construction requirements have been determined in accordance with PBP, 2019 and AS 3959-2018.

3.2.2 AS3959 – 2018 Construction of Buildings in Bushfire Prone Areas

The following construction requirements in accordance with AS 3959 – 2018 Construction of Buildings in Bushfire Prone Areas is required for the bushfire attack categories.

Table 6

Bushfire Attack Level (BAL)
BAL - LOW No construction requirements under AS 3959-2018
BAL - 12.5
BAL - 19
BAL - 29
BAL - 40
BAL - FZ

The following table indicates the Bushfire Attack Levels applicable once the recommended APZs have been established:

Table 7 – Categories of Attack/Construction Standard Assessment for the Dwelling on Proposed Lot 1

Aspect	Hazard Vegetation	Slope	Min Distance to Hazard once APZ Applied	AS 3959-2018 Bushfire Attack Level (BAL)
East	Similar to Rainforest	0-5° Downslope	23m	BAL 12.5

Table 8 – Categories of Attack/Construction Standard Assessment for the Dwelling on Proposed Lot 2

Aspect	Hazard Vegetation	Slope	Min Distance to Hazard once APZ Applied	AS 3959-2018 Bushfire Attack Level (BAL)
East	Similar to Rainforest	0-5° Downslope	17m	BAL 19 (See Note)

Note: It should be noted that there is an eastern and southern hazard for Lot 2. The eastern hazard has been considered above however, it is noted that it is a strip of forest vegetation with a fire run of approximately 5m; with both the eastern and southern hazards, thin strips of forest vegetation. The southern hazard has not been considered, it has less of a fire run and more likely to act as a garden hazard; there is 7m of managed land between the hazard and the carport.

It is recommended that consideration be given to the upgrading the existing dwellings in accordance with the Rural Fire Services: Best Practice Guide to Bushfire Protection-Upgrading of Existing Buildings (minimal Protection Measures) can be seen in **Appendix 2**.

5.0 RECOMMENDATIONS

The following recommendations are made:

1. An Asset Protection Zone as detailed in Section 3.1.1 of this report is provided.
2. Services are considered as detailed in Section 3.1.3 of this report.
3. Adopt landscaping principals in accordance with Section 3.1.4 of this report.
4. It is recommended that consideration be given to the existing dwelling in accordance with the Rural Fire Services: Best Practice Guide to Bushfire Protection-Upgrading of Existing Buildings.
5. In addition to the requirements of this report it is recommended that a bushfire survival plan be developed and implemented for the subject site. In this regard your attention is drawn to the Rural Fire Service website.

6.0 CLAUSE 44 CONSIDERATIONS

Table 9

Environmental/Heritage Feature	Comment
Riparian Corridor	Not considered in this report
SEPP 14 – Coastal Wetland	Not considered in this report
SEPP 26 – Littoral	Not considered in this report
SEPP 44 – Koala Habitat	Not considered in this report
Areas of geological interest	Not considered in this report
Environment protection zones	Not considered in this report
Land slip	Not considered in this report
Flood prone land	Not considered in this report
National Park Estate or other reserves	Not considered in this report
Threatened Species, populations, endangered ecological communities and critical habitat	Not considered in this report
Aboriginal Heritage	Not considered in this report

7.0 CONCLUSION

It is suggested that with the implementation of this report, and its recommendations, that the bushfire risk is manageable and will be consistent with the acceptable bushfire protection measure solutions, provided for in NSW Rural Fire Services, PBP, 2019.

The report details the available defendable space between the hazard and the existing dwellings and recommends building upgrades. See **Appendix 2**.

This report is however contingent upon the following assumptions and limitations:

Assumptions

1. For a satisfactory level of bushfire safety to be achieved, regular inspection and testing of proposed measures, building elements and methods of construction, specifically nominated in this report, is essential and is assumed in the conclusion of this assessment.
2. There are no revegetation plans in respect to hazard vegetation and therefore the assumed fuel loading will not alter.
3. It is assumed that the building works will comply with the DTS provisions of the BCA including the relevant requirements of Australian Standard 3959 – 2018.
4. The proposed subdivision is constructed and maintained in accordance with the risk reduction strategy in this report.
5. The vegetation characteristics of the subject site and surrounding land remains unchanged from that observed at the time of inspection.

Limitations

1. The data, methodologies, calculations and conclusions documented within this report specifically relate to the proposed subdivision and existing dwellings and must not be used for any other purpose.
2. A reassessment will be required to verify consistency with this assessment if there are any alterations and/or additions, or changes to the risk reduction strategy contained in this report.

Regards



Tim Mecham
Midcoast Building and Environmental

8.0 DISCLAIMER

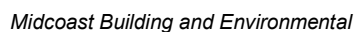
This report is not intended for or to be used where aluminium composite panels are proposed. The report is not to be construed as an assessment of the building material or compliance with the recommended bushfire attack level/s.

9.0 REFERENCES


NSW Rural Fire Services, **Planning for Bushfire Protection**, 2019
AS 3959-2018 **Construction of Buildings in Bushfire Prone Areas**
Keith David 2004, Ocean **Shores to Desert Dunes, The Native Vegetation of New South Wales and the ACT**, Department of Environment and Conservation
NSW State Government (1997) Rural Fires Act 1997
NSW Rural Fire Service – **Guideline for Bushfire Prone Land Mapping 2002**

Midcoast Building and Environmental





APPENDIX 2

**NSW RURAL FIRE SERVICE**

DEVELOPMENT ASSESSMENT & PLANNING
Upgrading of Existing Buildings

WORKING TOWARDS A SAFER COMMUNITY



INTRODUCTION

Bush fire is a major challenge for the community. It has been a natural part of our landscape for thousands of years and remains an ever-present threat.

Due to historic settlement patterns and the need to provide housing for people, development has occurred in areas that are bush fire prone placing lives and property at risk.

The NSW Rural Fire Service (NSW RFS) has a statutory obligation to protect life, property and the environment through fire suppression and fire prevention. Improved land use planning and construction of buildings in bush fire prone areas are intrinsic to the fire management strategies of the NSW RFS.

Through a working relationship with local Councils and the NSW Department of Planning, the NSW RFS has been able to refine and implement bush fire protection for new developments through the NSW

planning system. Since the introduction of these planning and building regulations in August 2002, all new development on bush fire prone land in NSW must comply with the requirements of *Planning for Bush Fire Protection 2006* and Australian Standard 3959-2009 – *Construction of buildings in bushfire-prone areas* (AS3959).

This means that people who are building or renovating have a clear direction on how to design and build their homes to be better protected from the impacts of bush fires. The types of protection measures include asset protection zones (vegetation management), access, landscaping, water supply, building design and construction. These measures assist building survival during a bush fire. They also contribute to the safety of fire-fighters and members of the community occupying buildings during the passage of a bush fire front.

Unfortunately, the majority of buildings in bush fire prone areas pre-date these regulations, meaning that most existing houses are at an increased risk of damage or loss from a bush fire.

BUSH FIRE INFORMATION LINE
1800 NSW RFS
1800 679 737
www.rfs.nsw.gov.au

NSW RFS DEVELOPMENT ASSESSMENT 0914

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With this in mind, the NSW RFS has developed a practical guide for those living in bush fire prone areas who may wish to take the opportunity to upgrade their existing building to increase its resilience from bush fire attack.

The guide provides a range of options that homeowners may wish to consider in determining the level of protection appropriate for their circumstances and risk. These include minimal protection measures such as basic ember proofing, establishment of Asset Protection Zones (APZs) to higher level protection measures such as re-building or upgrading construction elements of the building.

While this guide identifies protection methods, it is vital that such building enhancements are considered in conjunction with any upgrade works undertaken, consideration of other bush fire protection measures such as maintenance of Asset Protection Zones, services and landscaping.

The guide is not intended to be a comprehensive bush fire assessment of the risk to your property or an indication of compliance with *Planning for Bush Fire Protection 2006* and AS3959-2009. In this regard, home owners are advised to seek professional advice with regards to further upgrades or reconstruction to improve their resistance to bush fire attack.

For further assistance, details regarding suitably qualified consultants can be found on the NSW RFS website www.rfs.nsw.gov.au

IS UPGRADING MANDATORY?

Upgrading of existing elements of the building to *Planning for Bush Fire Protection* is not mandatory. However, in the interests of achieving a better bush fire outcome, the NSW RFS strongly recommends improvement of existing elements including upgrade of buildings.

Anyone whose land is bush fire prone should have regard to this document for practical guidance in protecting your property against bush fire attack. For all new developments on bush fire prone land, following the Development Application process or the Exempt and Complying Development process, the advice in this document should be applied as a minimum standard to the existing situation. This is in addition to any other bush fire protection measures that may be required by the development consent or complying development certificate.

These upgrading measures will contribute to making your home safer against the impact of the different elements of attack in the event of a bush fire; however, they form only part of the solution. Undertaking routine property maintenance and preparing a Bush Fire Survival Plan are other important parts to your bush fire protection and survival.

UPGRADE PROVISIONS

85% of houses are lost from ember attack.


The following provisions are designed to give existing buildings improved protection from ember attack during a bush fire event. Ember attack can occur over distances greater than 100 metres from the bush fire front. Any gaps, cracks or areas where embers and fuel can lodge (leaves, twigs, debris) significantly reduces a building's resistance to bush fire attack.

To mitigate against ember attack you should consider the minimal upgrades as detailed in the table below. Additional protection measures may also be considered and this will be dependent on the individual circumstances of the building commensurate with the level of threat from bush fire attack. The potential level of threat to the property from bush fire attack should also be taken in to account when deciding what level of protection should be used. Factors to be taken in to consideration include the isolation of the development and how easily you can react in the event of a bush fire.

Owners are cautioned that existing buildings may contain materials made from asbestos or have painted surfaces that contain lead. These materials should be handled in accordance with appropriate guidelines.



BUILDING ELEMENT	MINIMAL PROTECTION MEASURES	ADDITIONAL PROTECTION MEASURES
GENERAL	Seal all gaps (>3mm) around the house (excluding subfloor) with: <ul style="list-style-type: none"> • appropriate joining strips; • flexible silicon based sealant; or • mesh with a maximum aperture of 2mm, made from corrosion resistant steel, bronze or aluminium. 	<ul style="list-style-type: none"> • Install a bush fire sprayer system. (Please contact a bush fire consultant or relevant industry expert to discuss options) Seal all gaps (>3mm) around the house (excluding subfloor) with: <ul style="list-style-type: none"> • appropriate joining strips • flexible silicon based sealant; or mesh with a maximum aperture of 2mm, made from corrosion resistant steel, bronze or aluminium.
WALLS	Install sarking with a flammability index of not more than 5 behind weatherboards or other external cladding when they are being replaced for maintenance or other reasons.	<ul style="list-style-type: none"> • Replace wall materials with non-combustible materials • Install sarking with a flammability index of not more than 5 behind weatherboards or other external cladding.
SUBFLOOR	Removal of combustible materials and keeping areas clear and accessible.	<ul style="list-style-type: none"> • Enclose subfloor with non-combustible material.
DOORS	Install weather strips, draught excluders or draught seals at the base of side-hung doors.	<ul style="list-style-type: none"> • Replace external doors with non-combustible or solid timber doors with minimum thickness of 35mm. • Replace or over-clad parts of door frames less than 400mm above the ground, decks and similar elements or fittings with non-combustible material. • Install weather strips, draught excluders or draught seals at the base of side-hung doors.
VENTS & WEEPHOLES	Seal vents and weepholes in external walls with mesh (with an aperture size of 2 mm) of corrosion resistant steel, bronze or aluminium.	<ul style="list-style-type: none"> • Seal vents and weepholes in external walls with mesh (with an aperture size of 2 mm) of corrosion resistant steel, bronze or aluminium.
ROOFS	Seal around roofing and roof penetrations with a non-combustible material. Install sarking with a flammability index of not more than 5 beneath existing roofing when it is being replaced for maintenance or other reasons. If installed, gutter and valley leaf guards shall be non-combustible.	<ul style="list-style-type: none"> • Replace fascia and roof materials with non-combustible materials. • Seal around roofing and roof penetrations with a non-combustible material. • Install sarking with a flammability index of not more than 5 beneath existing roofing. • If installed, gutter and valley leaf guards shall be non-combustible.
WINDOWS	Install mesh with a maximum aperture of 2mm, made from corrosion resistant steel, bronze or aluminium to all external doors and openable windows	<ul style="list-style-type: none"> • Installing appropriately tested shutters to doors and windows • Install mesh with a maximum aperture of 2mm, made from corrosion resistant steel, bronze or aluminium to all external doors and windows • Replacing glass with toughened or laminated safety glass • Replace overhead glazing with 'grade a' safety glass
EXTERNAL STRUCTURES		<ul style="list-style-type: none"> • External structures to be located >10 metres from the main dwelling.
DECKING		<ul style="list-style-type: none"> • Replace decking with non-combustible material



OTHER REQUIREMENTS

ASSET PROTECTION ZONES

Development on bush fire prone land requires suitable separation from the bush fire hazard. This separation is referred to as an asset protection zone (APZ) and should be located wholly within the development property.

The APZ separates the building from the hazard. It is designed to minimize the presence of fuels, which could burn in a fire. Therefore, the impact of direct flame contact, radiant heat and ember attack on the development is reduced.

In order to ensure appropriate levels of safety, the NSW RFS recommends that an APZ is always provided. Where a building has been newly developed or alterations and additions have been undertaken, recommended levels of construction are reliant upon the ongoing maintenance of the APZ. In this regard, the suitability of the design and construction of the building will be significantly compromised should the APZ not be maintained or implemented as intended.

APZ should be managed in accordance with section 4.1.3 and Appendix 5 of 'Planning for Bush Fire Protection 2006' and the NSW Rural Fire Service's document *Standards for asset protection zones*.

SERVICES

During major bush fire events, the preparedness of the dwelling and its occupants may be seriously jeopardised with the loss of basic services, particularly water and electricity.

Adequate water supply is critical for any firefighting operation, particularly where property protection is envisaged. A reticulated water supply should be provided which is easily accessible and located at regular intervals. Where no reticulated water supply is available, a water supply of 5,000L reserve (i.e. water tank or dam) dedicated to firefighting purposes should be installed and maintained.

Electricity services should be located so that the possibility of ignition of the surrounding bushland or fabric of the buildings is limited. Regular inspection of the electricity lines should be undertaken to ensure they are not impacted by branches.

The location of gas services should vent facing away and not lead to the ignition of surrounding bushland or the fabric of the buildings.


LANDSCAPING

Vegetation can burn during a bush fire. With this in mind, careful attention must be paid to species selection, their location relative to their flammability, avoidance of continuity of vegetation (horizontally and vertically), and ongoing maintenance to readily remove flammable fuels (leaf litter, twigs and debris).

Homeowners are advised to contact their local Council before undertaking any work that involves modifying or removing existing trees.

The following additional information relating to landscaping is available at www.rfs.nsw.gov.au:

1. Standards for Asset Protection Zones
2. Appendix 5 of *Planning for Bush Fire Protection 2006*.



For more information please visit www.rfs.nsw.gov.au
or contact Development Assessment & Planning on **8741 5175**
or email development.assessment@rfs.nsw.gov.au.

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