

MANAGING NATIVE VEGETATION

REDUCE THE IMPACT OF BUSHFIRE

SEPTEMBER 2009



Government
of South Australia

PREPARE. ACT. SURVIVE.



Foreword

We cannot escape the fact that we live in a bushfire prone environment. Bushfires will happen but we can reduce their impact by being *Bushfire Ready*. It is everyone's responsibility to be adequately prepared for, and know what to do, in the event of a bushfire.

Fuel management is a key part of being *Bushfire Ready*. If we manage the fuel we improve the chances of controlling the intensity of a bushfire. As a component of this, managing native vegetation presents us with particular challenges as we try to conserve significant natural assets and act to protect life and property.

This Guide, which has been developed by the South Australian Government, the South Australian Country Fire Service, and the Native Vegetation Council, outlines the actions you may take to manage native vegetation to reduce the impact of bushfires.

You can remove native vegetation around homes and buildings, strategically reduce fuel across the landscape, and construct fuel breaks and fire access tracks, as part of your overall preparedness. You can also discuss with your local CFS how to manage bushfire risks while minimising the affects on native plants and animals.

Please take the time to read the Guide as part of preparing yourself for the next bushfire season. We also urge you to become *Bushfire Ready* by developing a Bushfire Action Plan in consultation with the SA Country Fire Service.



Dennis Mutton
Presiding Member
Native Vegetation Council



Euan Ferguson
Chief Officer
SA Country Fire Service

This Guide has been developed collaboratively by the Department of Water, Land and Biodiversity Conservation, Native Vegetation Council, SA Country Fire Service and Department for Environment and Heritage.

Published by the South Australian Government
Department of Water, Land and Biodiversity
Conservation, Adelaide, September 2009.

Also published on
www.cfs.sa.gov.au

© Department of Water, Land and Biodiversity
Conservation 2009.

This document, or part thereof, may be
reproduced for non-commercial purposes.

Disclaimer

The Department of Water, Land and Biodiversity Conservation, its employees and servants do not warrant or make any representation regarding the use, or results of use of the information contained herein as to its correctness, accuracy, currency or otherwise. The Department of Water, Land and Biodiversity Conservation, its employees and servants expressly disclaim all liability or responsibility to any person using the information or advice contained herein.

Contents

Foreword

- 4 Managing Native Vegetation for Bushfire Safety: A summary**
- 5 Managing Native Vegetation for Bushfire Safety: What you can do**
- 5 Managing native vegetation to avoid or contain fire in emergency situations
- 6 Managing native vegetation to protect a building
- 7 Managing native vegetation to protect a structure
- 8 Managing native vegetation to reduce fuel strategically
- 9 Managing native vegetation to construct a fuel break
- 10 Managing native vegetation to construct a fire access track
- 11 Managing native vegetation to improve ecological processes
- 12 Application to manage Native Vegetation to reduce the impact of Bushfire**
- 18 Do you want to know more about native vegetation and bushfire safety?**
- 18 Why should native vegetation be managed to reduce the impact of bushfires?
- 19 Who is responsible and why?
- 20 Bushfire risk management planning and 'zones'
- 21 Other relevant documents
- 22 Contacts
- 23 Appendices**
- 23 Appendix 1
Protecting your house and assets: Recommended distances to manage native vegetation around your property
- 25 Appendix 2
Fuel breaks in Mallee regions
- 26 Appendix 3
Guidelines for constructing fire access tracks
- 29 Appendix 4
Guiding principles for bushfire management in native vegetation
- 31 Glossary**

Managing Native Vegetation for Bushfire Safety: A summary

BUSHFIRE PREPAREDNESS IS A SHARED RESPONSIBILITY.
REDUCE THE IMPACT OF BUSHFIRE TODAY.
PREPARE. ACT. SURVIVE.

The table below provides a brief summary of some of the actions you can do to manage native vegetation on your property for bushfire safety. Use the page references to find out more detailed information that you will need to consider BEFORE undertaking any activities on your property.

Reason?	What can be done?	Is approval needed?	For more information go to...
To avoid or contain a bushfire in emergency situations	Reduce fuel loads for the control of a 'going' bushfire	Yes	Pg 5
	Reduce, modify or remove native vegetation hazards that are not currently identified in a bushfire prevention plan and may result in a risk to life	Only initiated by the Chief Officer of SA CFS or SA MFS	Pg 5
To protect a building	You can reduce, modify or remove native vegetation within 20m of a building (including overhanging limbs)	No	Pg 6
	You can modify or remove native vegetation further than 20m from a building to reduce fuel loads	Yes	Pg 6
To protect a structure	You can reduce, modify or remove native vegetation within 5m of a structure (including overhanging limbs)	No	Pg 7
	You can modify or remove native vegetation further than 5m from a structure to reduce fuel loads	Yes	Pg 7
To reduce fuel strategically	Fuel loads can be strategically reduced or modified on any private or public land	Yes	Pg 8
To construct a fuel break	You can remove vegetation to construct a fuel break up to 5m wide	No	Pg 9
	In some regions you can remove native vegetation to construct a fuel break up to 7.5m wide (see Appendix 2 for a list of the regions)	No	Pg 9
	On a property used for primary production, you can remove native vegetation to construct a fuel break up to 20m wide	Yes	Pg 9
	You can remove native vegetation to construct fuel breaks greater than 20m wide	Yes	Pg 9
To construct fire access tracks	You can remove native vegetation to construct fire access tracks that are consistent with the standards detailed in Appendix 3	Yes	Pg 10
To improve ecological processes	Prescribed burning to improve ecological outcomes	Yes	Pg 11

This Guide has been prepared in accordance with the *Native Vegetation Act 1991* and therefore only permits you to manage native vegetation in accordance with the *Native Vegetation Act 1991* or *Native Vegetation Regulations 2003*. Some activities you may want to undertake to manage native vegetation on your property may require approval under different legislation, for example the *Development Act 1993* and the *Environment Protection and Biodiversity Conservation Act 1991*.

Managing Native Vegetation for Bushfire Safety: What you can do

Managing native vegetation to avoid or contain fire in emergency situations

This section outlines what you can do to manage native vegetation for bushfire safety. Throughout this Guide, there is mention made of different Bushfire Management Zones. These zones are applied during bushfire planning as a useful way to devise a strategy that assists in protecting your property or community. The zones also define the primary purpose for fire management in a given area of land. The three Bushfire Management Zones identified throughout this Guide are the Asset Protection Zone, Bushfire Buffer Zone, and Conservation Land Management Zone (see 'Bushfire risk management planning and zones' on Page 20).

In the case of a 'going' bushfire, an authorised officer of the South Australian Country Fire Service (SA CFS) or South Australian Metropolitan Fire Service (SA MFS)¹ may give permission for, or direct, the removal of native vegetation to help to control the bushfire.

At any time, the Chief Officers of the SA CFS and SA MFS may authorise the modification, reduction or removal of native vegetation. They may only do this in *exceptional circumstances* where they have identified that a particular bushfire hazard may result in a risk to life. This applies to hazards that have not already been identified in any bushfire prevention plan.

¹ Exercising powers under sections 42 or 97 of the *Fire and Emergency Services Act 2005*.

Managing native vegetation to protect a building

(See separate information sheet on 'managing native vegetation to protect a structure')

IT IS YOUR RESPONSIBILITY TO FIND OUT IF THE ACTIONS YOU ARE PROPOSING TO UNDERTAKE REQUIRE APPROVAL UNDER OTHER LEGISLATION.

Things you will need to consider:

- If you want to remove or modify a Regulated or Significant Tree* you will need approval as outlined in the *Development Regulations 2008*. You need to identify if you have a Significant Tree and contact your Local Council for further information on how to apply.
- If you want to remove a large overhanging limb you should contact an arborist for advice.



Bushfire is a real risk for all South Australians and you can't predict when a bushfire will strike. But your chances of survival are increased if you are prepared.

The State Government, SA Country Fire Service, the Native Vegetation Council and Local Councils are working together to protect life and property, while still recognising the value of native vegetation.

Are you Bushfire Ready?

Actions you can take today:

- Reduce
- Remove
- Dispose
- Replace

What can I do without approval?

You can reduce, modify or remove native vegetation within 20 metres (m) of a building to help protect your home in a bushfire. This type of fuel management is part of the Asset Protection Zone and when combined with other measures will help to reduce the impact of radiant heat during a bushfire.

If you want to remove or modify a large* Red Gum (*Eucalyptus camaldulensis*) or Black Box (*E. largiflorens*) that is situated within the 1956 flood plain area of the River Murray (other than where it is within a city or township) you will need to apply to the Native Vegetation Council for approval (see Page 22 for contact details).

You can also undertake any activity that is compliant with an approved bushfire prevention plan.

The definition of a building is provided on Page 31. To find out more about the Asset Protection Zone go to Page 20.

You may love your native trees and plants and want to retain as much as possible on your property. Discuss this with the SA CFS and you will receive good advice on the most suitable activities to reduce fuel on your property. In some circumstances, fuel loads can be reduced by simply removing weeds. In others, retaining trees in strategic areas offers protection for your building.

What activities do I need approval for?

You may be concerned about the fuel load in native vegetation that is further than 20m from your building. In these instances you will need approval to reduce, modify or remove native vegetation if there is no bushfire prevention plan in place, or if your proposed fuel reduction activities are not incorporated under the plan. You can download the application form (see www.cfs.sa.gov.au) to apply to the SA CFS for approval.

In considering your application the SA CFS will refer to the Australian Standard *Construction of buildings in bushfire prone areas AS3959 2009* that recommends distances to manage native vegetation around a building dependent upon the surrounding type of vegetation and slope (see Appendix 1 of this Guide). Again, the intention is to reduce the impact of radiant heat during a bushfire. The SA CFS will also consider ways to manage bushfire risks whilst minimising the impacts on native plants, animals and their ecosystems. As an example, removing weeds may be the most suitable method to reduce the fuel load on your property.

* Definitions provided in the Glossary on Page 31.

Managing native vegetation to protect a structure

(See separate information sheet on 'managing native vegetation to protect a building')

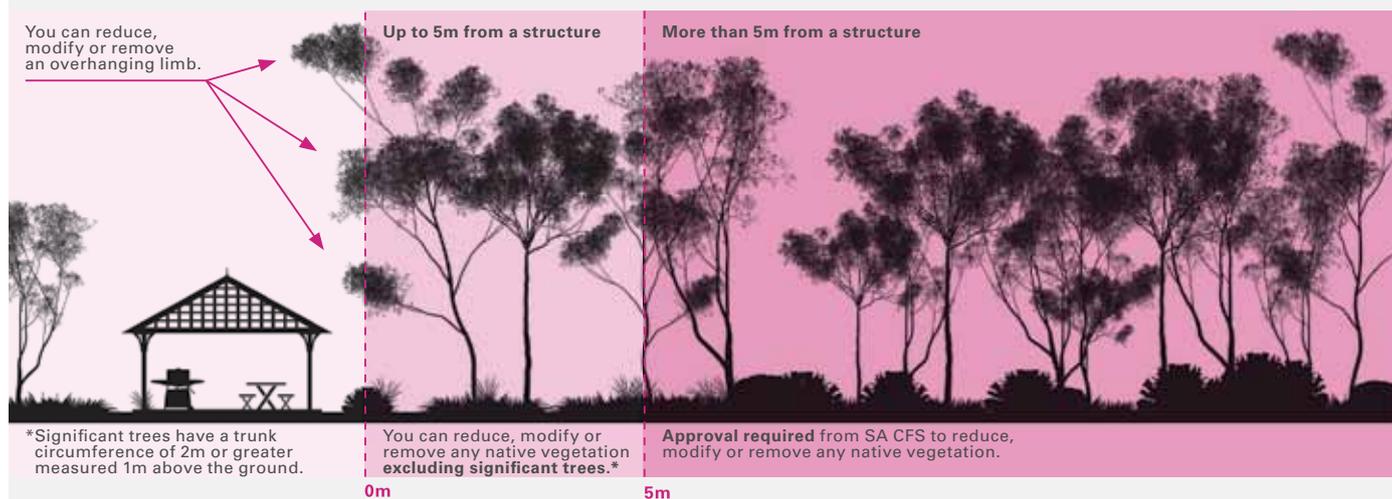
Bushfire is a real risk for all South Australians and you can't predict when a bushfire will strike. But your chances of survival are increased if you are prepared.

The State Government, SA Country Fire Service, the Native Vegetation Council and Local Councils are working together to protect life and property, while still recognising the value of native vegetation.

Are you Bushfire Ready?

Actions you can take today:

- Reduce**
- Remove**
- Dispose**
- Replace**



What can I do without approval?

You can reduce, modify or remove native vegetation within 5m of a structure to help protect it in a bushfire. This type of fuel management is part of the Asset Protection Zone and when combined with other measures will help to reduce the impact of radiant heat during a bushfire.

If you want to remove or modify a large* Red Gum (*Eucalyptus camaldulensis*) or Black Box (*E. largiflorens*) that is situated within the 1956 flood plain area of the River Murray (other than where it is within a city or township) you will need to apply to the Native Vegetation Council for approval (see Page 22 for contact details).

You can also undertake any activity that is compliant with an approved bushfire prevention plan.

The definition of a structure is provided on Page 31. To find out more about the Asset Protection Zone go to Page 20.

You may love your native trees and plants and want to retain as much as possible on your property. Discuss this with the SA CFS and you will receive good advice on the most suitable activities to reduce fuel on your property. In some circumstances, fuel loads can be reduced by simply removing weeds. In others, retaining trees in strategic areas offers protection for your structure.

What activities do I need approval for?

You may be concerned about the fuel load in native vegetation that is further than 5m from your structure. In these instances you will need approval to reduce, modify or remove native vegetation if there is no bushfire prevention plan in place, or if your proposed fuel reduction activities are not incorporated under the plan. You can download the application form (see www.cfs.sa.gov.au) to apply to the SA CFS for approval.

In considering your application the SA CFS will refer to the Australian Standard *Construction of buildings in bushfire prone areas AS3959 2009* that recommends distances to manage native vegetation around a structure dependent upon the surrounding type of vegetation and slope (see Appendix 1 of this Guide). Again, the intention is to reduce the impact of radiant heat and during a bushfire. The SA CFS will also consider ways to manage bushfire risks whilst minimising the impacts on native plants, animals and their ecosystems. As an example, removing weeds may be the most suitable method to reduce the fuel load on your property.

Things you will need to consider:

- If you want to remove or modify a Regulated or Significant Tree* you will need approval as outlined in the *Development Regulations 2008*. You need to identify if you have a Significant Tree and contact your Local Council for further information on how to apply.
- If you want to remove a large overhanging limb you should contact an arborist for advice.

IT IS YOUR RESPONSIBILITY TO FIND OUT IF THE ACTIONS YOU ARE PROPOSING TO UNDERTAKE REQUIRE APPROVAL UNDER OTHER LEGISLATION.

* Definitions provided in the Glossary on Page 31.

Managing native vegetation to reduce fuel strategically

Are you Bushfire Ready?

Actions you can take today:

Reduce
Remove
Dispose
Replace

Bushfire is a real risk for all South Australians and you can't predict when a bushfire will strike. But your chances of survival are increased if you are prepared.

The State Government, SA Country Fire Service, the Native Vegetation Council and Local Councils are working together to protect life and property, while still recognising the value of native vegetation.



What can I do without approval?

You can undertake any activity that is compliant with an approved bushfire prevention plan.

Fuel reduction activities that do not fall under a bushfire prevention plan need to be approved by the SA CFS.

What activities do I need approval for?

Strategic fuel reduction activities are often included in a Bushfire Buffer Zone, generally occurring on larger areas of land, and can be undertaken on any private or public land. To find out more about the Bushfire Buffer Zone go to Page 20.

If you want to strategically reduce the amount of fuel on your property, you need to do so according to a relevant approved bushfire prevention plan for the area. If there is no bushfire prevention plan in place, or if your proposed fuel reduction activities are not incorporated under the plan, you can download the application form (see www.cfs.sa.gov.au) to apply to the SA CFS for approval.

You may want to conduct a prescribed burn to reduce fuel on your property. To do so you will need to apply to the SA CFS for a permit to burn using the application form (see www.cfs.sa.gov.au). You can use the same application form to apply for approval for your fuel reduction works and to apply for a permit to undertake a prescribed burn.

In considering your application the SA CFS will look at ways to manage bushfire risks whilst minimising the impacts on native plants, animals and their ecosystems. As an example, removing weeds may be the most suitable method to reduce the fuel load on your property.

IT IS YOUR RESPONSIBILITY TO FIND OUT IF THE ACTIONS YOU ARE PROPOSING TO UNDERTAKE REQUIRE APPROVAL UNDER OTHER LEGISLATION.

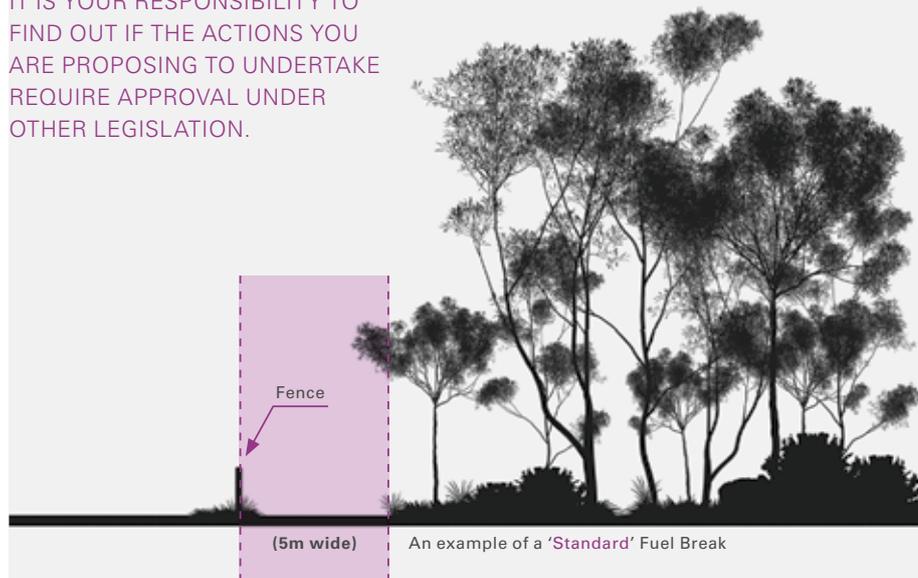
Things you will need to consider:

If you want to remove or modify a Regulated or Significant Tree* you will need approval as outlined in the *Development Regulations 2008*. You need to identify if you have a Significant Tree and contact your Local Council for further information on how to apply.

* Definitions provided in the Glossary on Page 31.

Managing native vegetation to construct a fuel break

IT IS YOUR RESPONSIBILITY TO FIND OUT IF THE ACTIONS YOU ARE PROPOSING TO UNDERTAKE REQUIRE APPROVAL UNDER OTHER LEGISLATION.



Bushfire is a real risk for all South Australians and you can't predict when a bushfire will strike. But your chances of survival are increased if you are prepared.

The State Government, SA Country Fire Service, the Native Vegetation Council and Local Councils are working together to protect life and property, while still recognising the value of native vegetation.

What can I do without approval?

You can undertake any activity that is compliant with an approved bushfire prevention plan.

In the two circumstances below, you can also remove native vegetation to construct fuel breaks, so that bushfires burning into them can be more readily controlled, without approval:

1. 'Standard' fuel breaks

'Standard' fuel breaks can be constructed up to 5m in width. They may only be constructed along an existing fence-line and should be done so in accordance with a bushfire prevention plan. When measuring the width of the fuel break, you should include any immediately adjoining land where the vegetation has been removed as this reduces the amount of native vegetation you may need to remove overall.

2. Fuel breaks in mallee regions

You can construct a fuel break if a substantial amount of the vegetation you want to clear is mallee scrub, and your property is located in one of the regions listed in Appendix 2 of this Guide.

A fuel break in a mallee region can be constructed up to 7.5m in width. When measuring the width of the fuel break, you should include any immediately adjoining land where the vegetation has been removed as this reduces the amount of native vegetation you may need to remove overall. In addition, a fuel break in a mallee area may only:

- be constructed on a boundary between land owned by different people, and
- the fuel break must be at least 200m from another fuel break, except for fuel breaks that run at approximate right angles.

What activities do I need approval for?

If you want to construct a 'Primary Production' fuel break you need to do so according to a relevant approved bushfire prevention plan for the area. If there is no bushfire prevention plan in place, or your proposed fuel break is not incorporated under the plan, you can download the application form (see www.cfs.sa.gov.au) to apply to the SA CFS for approval.

3. 'Primary Production' Fuel Breaks

A 'Primary Production' fuel break may only be located within the area of a rural council as defined in the *Fire and Emergency Services Act 2005* and on a property where one of the main uses is for primary production.

A 'Primary Production' fuel break can be constructed up to 20m in width, and:

- the fuel break must be at least 200m from another fuel break, except for fuel breaks that run at approximate right angles, and
- when measuring the width of the fuel break, you should include any immediately adjoining land where the vegetation has been removed as this reduces the amount of native vegetation you may need to remove overall.

4. Any other fuel break

You can remove native vegetation to construct a fuel break that is more than 20m in width, only if the fuel break is specified within an approved bushfire prevention plan.

You may want to conduct a prescribed burn to construct a fuel break on your property. To do so you will need to apply to the SA CFS for a permit to burn using the application form (see www.cfs.sa.gov.au). You can use the same application form to apply for approval for your fuel break construction works and to apply for a permit to undertake a prescribed burn.

In considering your application the SA CFS will look at ways to manage bushfire risks whilst minimising the impacts on native plants, animals and their ecosystems.

Things you will need to consider:

If you want to remove or modify a Regulated or Significant Tree* you will need approval as outlined in the *Development Regulations 2008*. You need to identify if you have a Significant Tree and contact your Local Council for further information on how to apply.

Are you Bushfire Ready?

Actions you can take today:

- Reduce
- Remove
- Dispose
- Replace

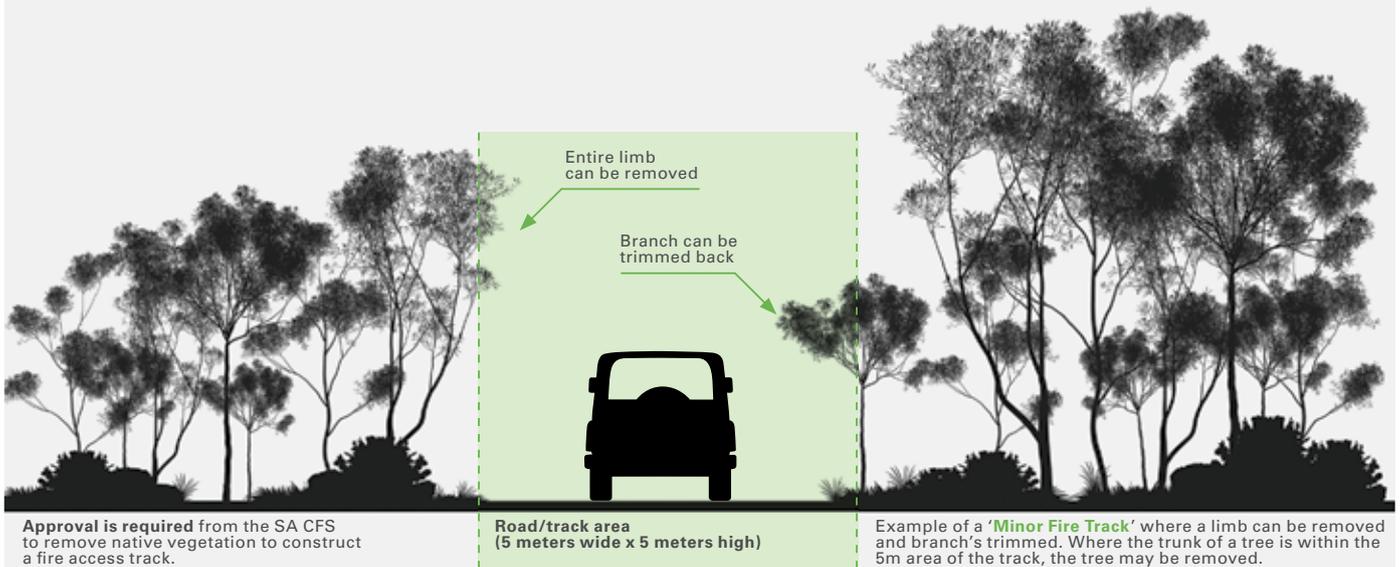
* Definitions provided in the Glossary on Page 31.

Managing native vegetation to construct a fire access track

IT IS YOUR RESPONSIBILITY TO FIND OUT IF THE ACTIONS YOU ARE PROPOSING TO UNDERTAKE REQUIRE APPROVAL UNDER OTHER LEGISLATION.

Bushfire is a real risk for all South Australians and you can't predict when a bushfire will strike. But your chances of survival are increased if you are prepared.

The State Government, SA Country Fire Service, the Native Vegetation Council and Local Councils are working together to protect life and property, while still recognising the value of native vegetation.



Approval is required from the SA CFS to remove native vegetation to construct a fire access track.

Road/track area (5 meters wide x 5 meters high)

Example of a 'Minor Fire Track' where a limb can be removed and branch's trimmed. Where the trunk of a tree is within the 5m area of the track, the tree may be removed.

What can I do without approval?

You can undertake any activity that is compliant with an approved bushfire prevention plan.

Activities to construct a fire access track that do not fall under a bushfire prevention plan need to be approved by the SA CFS.

What activities do I need approval for?

You can remove native vegetation to construct a fire access track. Fire access tracks differ from 'standard vehicle access tracks' because they are constructed and maintained to allow the safe passage of firefighting vehicles. Fire access tracks should be constructed according to the standards included in Appendix 3 of this Guide and any relevant approved bushfire prevention plan for the area. You will need to apply to the SA CFS for approval and can download the application form (www.cfs.sa.gov.au).

You may want to conduct a prescribed burn in association with a fire access track on your property. To do so you will need to apply to the SA CFS for a permit to burn using the application form (see www.cfs.sa.gov.au). You can use the same application form to apply for approval for your fire access track construction works and to apply for a permit to undertake a prescribed burn.

In considering your application the SA CFS will look at ways to manage bushfire risks whilst minimising the impacts on native plants, animals and their ecosystems.

Things you will need to consider:

If you want to remove or modify a Regulated or Significant Tree* you will need approval as outlined in the *Development Regulations 2008*. You need to identify if you have a Significant Tree and contact your Local Council for further information on how to apply.

Are you Bushfire Ready?

Actions you can take today:

- Reduce
- Remove
- Dispose
- Replace

* Definitions provided in the Glossary on Page 31.

Managing native vegetation to improve ecological processes

Bushfire has been a part of the Australian landscape for millions of years. Australian ecosystems have successfully adapted to the presence of bushfire on a regular basis. In some cases, native vegetation relies on bushfires for important ecological processes such as reproduction. Land managers have long recognised the value of using prescribed burning to support natural ecological processes.

What activities do I need approval for?

You may conduct a prescribed burn in an area of native vegetation if the burn is intended to improve ecological processes. This type of prescribed burn **must** be undertaken according to a management plan approved by the Native Vegetation Council or under delegation provided by the Native Vegetation Council. This also includes prescribed burning of native vegetation by Indigenous communities as part of ongoing cultural land management practices.

You can find more information about prescribed burning and ecological management in Appendix 4 of this Guide or you can contact the Native Vegetation Council (see page 22 for contact details).

IT IS YOUR RESPONSIBILITY TO FIND OUT IF THE ACTIONS YOU ARE PROPOSING TO UNDERTAKE REQUIRE APPROVAL UNDER OTHER LEGISLATION.

Things you will need to consider:

If you want to remove or modify a Regulated or Significant Tree* you will need approval as outlined in the *Development Regulations 2008*. You need to identify if you have a Significant Tree and contact your Local Council for further information on how to apply.

Are you Bushfire Ready?

Actions you can take today:

Reduce
Remove
Dispose
Replace

* Definitions provided in the Glossary on Page 31.

Application to manage Native Vegetation to reduce the impact of Bushfire

Cut down the impact of bushfires

Bushfire is a real risk for all South Australians and you can't predict when a bushfire will strike. But your chances of survival are increased if you are prepared.

The State Government, SA Country Fire Service (SA CFS), the Native Vegetation Council and Local Councils are working together to protect life and property, while still recognising the value of native vegetation.

Use the following application form to seek approval for activities as specified throughout the *Guide for managing Native Vegetation to reduce the impact of Bushfire (2009)* (download a copy from www.nvc.sa.gov.au). It is important that you provide adequate information about the activities you are proposing to carry out when completing your application form. Applications must be signed by an owner of the property where the works are to be carried out.

Things you will need to consider:

- If there is a bushfire prevention plan that applies to your area, the activities you are proposing to reduce the impact of bushfire on your property may already be approved. Contact the SA CFS to find out (see www.cfs.sa.gov.au for contact details).
- If you want to remove or modify a Regulated or Significant Tree* you will need approval as outlined in the *Development Regulations 2008*. You need to identify if you have a Significant Tree and contact your Local Council for further information on how to apply.

Are you Bushfire Ready?

Actions you can take today:

Reduce
Remove
Dispose
Replace

IT IS YOUR RESPONSIBILITY TO FIND OUT IF THE ACTIONS YOU ARE PROPOSING TO UNDERTAKE REQUIRE APPROVAL UNDER OTHER LEGISLATION.

Application to manage Native Vegetation to reduce the impact of Bushfire

OFFICE USE ONLY

Date received:

Received by:

Application No.:

Return completed form to your Regional CFS Office (see www.cfs.sa.gov.au for contact details).

1. Your Details

Name:

Postal Address:

Postcode:

Phone (Home):

Phone (Business):

Mobile:

Fax:

Email:

2. Location of Works

Give details of the property where the proposed works are to be conducted.

Location Address:

AND/OR

Section:

Hundred:

Lot Number:

3. Why do you want to manage native vegetation?

To protect a building/structure – Go to Section A

To reduce fuel – Go to Section B

To construct a fuel break – Go to Section C

To construct a fire access track – Go to Section D

A. Managing native vegetation to protect a building/structure

Building¹: You can manage native vegetation within 20m of a building, without seeking approval. Why would you like to carry out work greater than 20m from the building?

Structure¹: You can manage native vegetation within 5m of a structure, without seeking approval. Why would you like to carry out work greater than 5m from the structure?

What do you want to do? Please attach a sketch and/or photos of your property outlining where you intend to carry out the works.

Total area (approx) for proposed works:ha

Distance of proposed clearing around building/structure:m

Is the building/structure on a slope?

Yes No

If yes, please estimate what the slope is:

Upslope: 0-5° 5-10° 10-15° >15°

Downslope: 0-5° 5-10° 10-15° >15°

¹ Definitions provided at the end of this application form.

Application to manage Native Vegetation to reduce the impact of Bushfire – cont.

What is the main direction the slope is facing?
(Nth, East, Nth-West, etc.)

How do you propose to undertake these works²?

- Mechanical Method (e.g. hand clearing, brushcutting, tree removal/pruning, herbicide use)
- Prescribed Burn – Go to Section E
- Other – Please describe:

If using a mechanical method of vegetation removal, how do you intend to dispose of the vegetation?

- Mulching & leaving on site
- Licensed Recycling / Waste Transfer Centre
- Storage on site
- Pile Burn – Go to Section E
- Other – Please Describe:

Note: If you want to conduct a burn during the Fire Danger Season, a permit to burn is required under the *Fire and Emergency Services Act 2005* (for more information visit www.cfs.sa.gov.au). This application will be considered as an application for a permit to burn – see Section E.

B. Managing native vegetation to reduce fuel strategically

Why do you think your proposed fuel reduction works are needed?

What do you want to do? Please attach a sketch and/or photos of your property outlining where you intend to carry out the works.

Total area (approx):ha

How do you propose to undertake these works?

- Mechanical Method (e.g. hand clearing, brushcutting, tree removal/pruning, herbicide use)
- Prescribed Burn – Go to Section E
- Other – Please describe:

If using a mechanical method of vegetation removal, how do you intend to dispose of the vegetation?

- Mulching & leaving on site
- Licensed Recycling / Waste Transfer Centre
- Storage on site
- Pile Burn – Go to Section E
- Other – Please Describe:

Note: If you want to conduct a burn during the Fire Danger Season, a permit to burn is required under the *Fire and Emergency Services Act 2005* (for more information visit www.cfs.sa.gov.au). This application will be considered as an application for a permit to burn – see Section E.

²See 'A guide for managing Native Vegetation to reduce the impact of Bushfire (2009) Appendix 4' for more information on methods to undertake fuel reduction on your property.

Application to manage Native Vegetation to reduce the impact of Bushfire – cont.

C. Managing native vegetation to construct a fuel break

Why do you think your proposed fuel break(s) is needed?

Is the property mainly used for primary production?

- Yes No

What do you want to do? Please attach a sketch and/or photos of your property outlining where you intend to carry out the works.

Total area (approx):ha

Are there any existing fuel breaks on the property?
If yes, provide details and include on your sketch.

How do you propose to undertake these works?

- Mechanical Method (e.g. hand clearing, brushcutting, tree removal/pruning, herbicide use)
 Prescribed Burn – Go to Section E
 Other – Please describe:

If using a mechanical method of vegetation removal, how do you intend to dispose of the vegetation?

- Mulching & leaving on site
 Licensed Recycling / Waste Transfer Centre
 Storage on site
 Pile Burn – Go to Section E
 Other – Please Describe:

Note: If you want to conduct a burn during the Fire Danger Season, a permit to burn is required under the *Fire and Emergency Services Act 2005* (for more information visit www.cfs.sa.gov.au). This application will be considered as an application for a permit to burn – see Section E.

D. Managing native vegetation to construct fire access tracks

All fire access tracks should be constructed in accordance with 'A guide for managing Native Vegetation to reduce the impact of Bushfire (2009), Appendix 3' (download a copy from www.cfs.sa.gov.au).

Why do you think your proposed fire access track(s) is needed?

What do you want to do? Please attach a sketch and/or photos of your property outlining where you intend to carry out the works.

Total area (approx):ha

Are there any existing fire access tracks on the property?
If yes, provide details and include on your sketch.

How do you propose to undertake these works?

- Mechanical Method (e.g. hand clearing, brushcutting, tree removal/pruning, herbicide use)
 Prescribed Burn – Go to Section E
 Other – Please describe:

If using a mechanical method of vegetation removal, how do you intend to dispose of the vegetation?

- Mulching & leaving on site
 Licensed Recycling / Waste Transfer Centre
 Storage on site
 Pile Burn – Go to Section E
 Other – Please Describe:

Note: If you want to conduct a burn during the Fire Danger Season, a permit to burn is required under the *Fire and Emergency Services Act 2005* (for more information visit www.cfs.sa.gov.au). This application will be considered as an application for a permit to burn – see Section E.

Application to manage Native Vegetation to reduce the impact of Bushfire – cont.

E. Prescribed Burning

Please read before completing Section E:

If you want to conduct a burn during the Fire Danger Season, a Schedule 9 Permit to burn is required under the Fire and Emergency Services Act 2005 (for more information visit www.cfs.sa.gov.au). This application will be considered as an application for a permit to burn. However, there is no guarantee that a permit to burn will be issued as it is dependent on an assessment by the SA CFS of the safety of the proposed burn.

When conducting a prescribed burn the SA CFS may provide advice or place conditions on any permits to burn that are issued.

Note: You may be found liable for any loss or damage caused by a fire lit under the authority of a permit to burn, even if you have complied with the conditions of that permit.

If you want to conduct a prescribed burn to improve ecological processes you will need to have a management plan approved by the Native Vegetation Council. You can contact the Native Vegetation Council on (08) 8303 9741.

What do you want to do?

- Pile Burn to dispose of mechanically removed vegetation
 - Where on the property will you burn (mark on map)?
- Prescribed Burn to reduce fuel strategically
 - Total area (approx) of burn:ha

When do you propose to undertake the burn?

If you want to undertake any **burning during the Fire Danger Season**, you will require a **Schedule 9 Permit to burn**. To apply for a permit to burn, complete the information below. If you are undertaking a prescribed burn also complete and attach an **operation burn plan** using the template provided on the SA CFS website (www.cfs.sa.gov.au).

Please provide the following information for any burn that you are proposing to undertake, whether in the Fire Danger Season or not:

Who is going to undertake the burn?

Name: _____

Phone: _____

Email: _____

Who is the nominated contact person before, during and after the proposed burn?

Name: _____

Mobile phone: _____

The SA CFS should be contacted on the day prior to your intended burn (refer to www.cfs.sa.gov.au for your relevant Regional CFS Office).

To be completed for all applications

4. Urgency

Do you think your proposed works are a matter of urgency? If yes, please provide a reason.

5. Authorisation by landowner(s):

As the owner of this land, I consent to the above-proposed bushfire hazard reduction works, and advise that the information on this form is correct to the best of my knowledge.

I hereby consent to an authorised officer of the SA CFS entering the property to undertake a site inspection for the purposes of assessing the application, assessing compliance, or any other follow-up purposes.

Signature/s _____

Date _____

Note: You need written authority from each landowner should your proposed works cross into any other person's property.

OFFICE USE ONLY

Circle/Cross out as appropriate:

This application has / has not been approved by the SA CFS with/without conditions attached.

Signature & Name of SA CFS delegated officer: _____

Date: _____

Application to manage Native Vegetation to reduce the impact of Bushfire – cont.

Building means:

- (a) a building within the meaning of the *Development Act 1993* (other than a Class 7A or 10B building under the Building Code) that is permanently fixed to land; and
- (b) a building of a kind contemplated by paragraph (a) that is in the course of construction if the foundations, concrete slab or other footings have been completed; and
- (c) any other building or structure declared by the Minister by notice in the Gazette to be included within the ambit of this definition,

but does not include any building or structure declared by the Minister by notice in the Gazette to be excluded from the ambit of this definition (*Native Vegetation Regulations 2003*).

For example, a building may be a: dwelling, hotel, motel, school, office building, shop, cafe or restaurant, service station, storage building, laboratory, factory, hospital, private garage, carport, or shed.

(See also definition of Structure.)

Bushfire prevention plan means a plan for bushfire prevention and management prepared by a district bushfire prevention committee under the *Fire and Emergency Services Act 2005*.

Fire Access Track means a track (up to 15m in width) constructed for use by vehicles undertaking firefighting activities.

Fuel break means an area where vegetation has been removed or modified to reduce the risk of bushfires starting and to assist in reducing the intensity and rate of spread of bushfires. Fuel breaks provide protection from fire for personnel, equipment and property, and provide an edge from which fire crews can undertake fire suppression or prescribed burning activities.

Prescribed burn means the controlled use of fire to achieve planned native management objectives. A prescribed burn is only undertaken:

- (i) in specified environmental conditions
- (ii) over a defined area
- (iii) at a particular time, and
- (iv) within a predetermined fire intensity and rate of spread.

Primary Production means production resulting directly from the cultivation of land; the maintenance of animals or poultry for the purpose of selling them or their bodily produce; fishing operations; forest operations (which include the planting or tending in a plantation or forest of trees intended for felling and the felling of trees in a plantation or forest) or horticulture. It includes the manufacture of dairy produce by the person who produced the raw material used in that manufacture.

Significant Tree means any native or non-native tree that has a trunk with a circumference of 2m or more at a point 1m above natural ground level. In the case of trees with multiple trunks, the total circumference of the trunks must be 2m or more and the average circumference of each trunk must be 62.5cm or more.

Structure means any permanently fixed construction that is not defined under the definition of a 'building'. This includes constructions used for primary production, the housing or feeding of animals, the storage of fodder, and the storage of vehicles or vessels. This also includes any other structure declared by the Minister by notice in the SA Government Gazette to be included within this definition (*Native Vegetation Regulations 2003*).

For example, a structure could be any of the following if they are permanently fixed to the ground: a small aviary or other animal enclosure, a small shed constructed around a pump or other small infrastructure, a small garden shed or greenhouse, a pool shed, a gazebo, or a children's playhouse.

(See also definition of Building.)

South Australian Country Fire Service (CFS) In an emergency, please call 000.

Headquarters: (08) 8463 4200

Region 1 – Southern Mount Lofty Ranges and Kangaroo Island: (08) 8391 1866

Region 2 – Northern Mount Lofty Ranges and Yorke Peninsula: (08) 8522 6088

Region 3 – Murraylands and Riverland: (08) 8532 6800

Region 4 – Flinders, Mid North and Pastoral Areas: (08) 8642 2399

Region 5 – South East: (08) 8762 2311

Region 6 – Eyre Peninsula and West Coast: (08) 8682 4266

Web: www.cfs.sa.gov.au

Native Vegetation Council

Telephone: (08) 8303 9733

Fax: (08) 8303 9780

Email: nvc@sa.gov.au

Web: www.nvc.sa.gov.au

Do you want to know more about native vegetation and bushfire safety?

The Government of SA is committed to reducing the impact of bushfires on the community and the environment. As such the Government has developed a clear and consistent approach to the management of native vegetation to reduce the impact of bushfires throughout the State. This is delivered by the *Native Vegetation Regulations 2003*, which lists the actions that can be undertaken to manage native vegetation for bushfire prevention purposes.

The Regulations promote a planned approach to bushfire protection activities, including native vegetation management, around houses, other built assets and across the landscape.

In particular the Government recognises the need for you, the landowner, to be able to protect your property from the impacts of bushfires by responsibly managing vegetation levels on your property. It also recognises the responsibility of every individual to be adequately prepared for, and know what to do, in the event of a bushfire.

Why should native vegetation be managed to reduce the impact of bushfires?

Managing native vegetation

Native vegetation is an important component of South Australia's ecological processes, but it also has wider environmental, social, economic, spiritual and cultural values. It sustains critical ecological processes upon which we all rely, including water quality protection, catchment water yield, and soil fertility and stability. Carefully managed native vegetation often assists in protecting assets from bushfire and at the same time provides significant habitat for native fauna after a bushfire has passed. For example, native vegetation along road reserves is important because it can form a significant habitat corridor that links blocks of native vegetation and provides a source of seed for revegetation projects and habitat for threatened species. As we are all custodians of native vegetation in South Australia, we all have a duty of care to manage native vegetation responsibly.

To protect your home, family, and yourself

Making your house and property bushfire safe is your responsibility and is important for your family, your business and for the environment. Well-planned bushfire management activities on private property can reduce the risk of bushfire.

To protect your neighbours and community

The SA CFS cannot provide every person and home with individual protection during a major bushfire and recognises that many people may have to face a bushfire without the support of the SA CFS. Building community safety through greater community self-reliance means that you and your neighbours can work together to develop strategies to manage vegetation fuel levels to reduce the impact of bushfires in your area.

To reduce the risks of a major bushfire occurring

It is vital that we are proactive in managing fuel hazards and native vegetation across the landscape. When considered at a broad scale, the actions of each individual will contribute to more effective Statewide bushfire prevention and suppression activities.

Contact the SA CFS if you would like more information on how to make your property 'Bushfire Ready'. You can log onto the SA CFS website (www.cfs.sa.gov.au) or call for information on (08) 8463 4200.

Who is responsible and why?

Every member of the South Australian community is responsible for participating in bushfire safety activities, including industry and public land managers. These responsibilities are directed by our State legislation, for the purposes of:

1. Protecting human life and property

- *The Fire and Emergency Services Act 2005* (SA) (Part 1, Subdivision 2 & 5) requires public and private landholders to take “reasonable steps to protect property on the land from fire and to prevent or inhibit the outbreak of fire on the land or the spread of fire through the land” and must take into account “proper land management principles”.
- At a local level, the *Fire and Emergency Services Act 2005* also requires the establishment of committees for each local area that are responsible for:
 - formulating guidelines for the issue of permits to light fires during the fire danger season within its area; and
 - reporting on the progress of fire prevention planning before the Fire Danger Season.

2. Improving ecological processes

- *The Native Vegetation Act 1991* (SA) (Part 2) contributes to the enhancement of ecological processes in the natural environment by promoting “the conservation, protection and enhancement of native vegetation across the State and, in particular remnant native vegetation, in order to prevent further reduction of biological diversity and degradation of the land and its soil” and “loss of critical habitat”.
- *The Environment Protection and Biodiversity Conservation Act 1999* (Cth) and *National Parks and Wildlife Act 1972* protect matters of national and state environmental significance. This includes state and nationally threatened species and ecological communities.

How does the Government contribute to the management of native vegetation?

The Government of SA conducts its native vegetation and bushfire management activities within a risk management framework. This framework aims to provide a consistent and planned process across Government to make strategic and operational decisions about bushfire prevention and management activities.

It consists of three main elements:

- development and bushfire management *planning processes* that consider bushfire risk when deciding on the location of built assets, such as buildings and structures. These processes aim to ensure that built assets are constructed in accordance with Australian Standards that reduce the vulnerability of those assets to bushfire attack. Bushfire prevention plans are developed and reviewed regularly. They will focus on identifying bushfire risks, strategies to mitigate those risks and the implementation of those strategies,
- *reducing the frequency* of bushfires that result from arson and carelessness, and
- *managing the landscape* to protect life, property and environmental assets.

Local Councils are responsible for managing native vegetation on roadside land – the portion of the road reserve between the edge of the road surface to the private property boundary. Some exceptions exist where the Department for Transport, Energy and Infrastructure is seen as the landowner, e.g. the management of controlled access roads under Section 30 of the *Highways Act 1926*, or rail corridors.

Bushfire risk management planning and 'zones'

Bushfire management activities are most effective when bushfire risks are assessed at a landscape scale and strategies are devised to reduce the risks at this scale. South Australia's bushfire management planning framework, as directed by the *Fire and Emergency Services Act 2005*, develops bushfire risk management plans at a statewide level, as well as regional and local levels.

Bushfire risk management plans are developed using the *Overall Fuel Hazard Guide for South Australia* (DEH 2008) to assess the hazards posed by different fuel types in different vegetation classes. The plans aim to manage overall fuel hazards at a level that increases the opportunity to successfully suppress a bushfire. As vegetation differs across the landscape, the plans also identify the most appropriate methods for fuel reduction in particular vegetation classes.

The application of Bushfire Management Zones, as referred to in this Guide, is a useful way to devise a strategy that assists in protecting your property or community, and they define the primary purpose for fire management in a given area of land. The prevention-planning framework identifies the level of overall fuel hazard you should try to achieve in each Bushfire Management Zone.

The three Bushfire Management Zones identified in this Guide are based on the following:

- The strategic importance of fire protection to the area,
- The natural and developed assets and values to be protected or enhanced on the area being considered (e.g. water catchments), and
- A standard approach to reduce fuel hazards in native vegetation.

*You should be aware that under extreme fire weather conditions, zoning strategies will not prevent a high intensity bushfire across the landscape but are intended to reduce the spread of a bushfire.

Asset Protection Zone

An Asset Protection Zone aims to provide the highest level of protection to human life, and built, or other, assets. The goal for an Asset Protection Zone is to reduce the overall fuel hazard to a level of *moderate*². This means that they generally contain highly modified vegetation, such as a cultivated garden or grassland areas that will reduce the radiant heat impact during a bushfire. Asset Protection Zones provide a defensible space to allow residents and firefighters some degree of safety before, during and after the passage of the fire front.

Management of vegetation within an Asset Protection Zone alone cannot provide complete protection during a bushfire and should be accompanied by other measures to maximise your safety in bushfires. These can include:

- implementation of Bushfire Buffer Zones to further reduce fuel loads and minimise ember attack,
- appropriate building location, design, construction and maintenance,
- use of appropriate building materials, and
- installation and use of sprinklers.

For more information on these you can contact your local SA CFS Office (see www.cfs.sa.gov.au for contact details).

Bushfire Buffer Zone

A Bushfire Buffer Zone is intended to provide strategically located fuel reduced areas that decrease the potential for large bushfires to develop across the landscape. The goal for a Bushfire Buffer Zone is to reduce the overall fuel hazard to a level of *high*³. Bushfire Buffer Zones will typically be located in bushland at the urban fringe or close to rural assets and will complement Asset Protection Zones. They provide areas that assist in making bushfire suppression activities more effective and safer for firefighters.

A Bushfire Buffer Zone may also be used in large areas of native vegetation (e.g. farmland, reserves or parklands) that protect community assets across the landscape. These areas of native vegetation will typically be modified yet they will still provide for significant biodiversity value.

Where possible, Bushfire Buffer Zones should include agricultural land that has been managed to reduce fuel loads during the bushfire season.

Conservation Land Management Zone

The Conservation Land Management Zone ensures that management for ecological, conservation and land management purposes are achieved through appropriate, planned management programs. Conservation Land Management Zones can be large areas of native vegetation (e.g. farmlands, reserves or parklands) or alternatively in extensive areas of farmland.

Where appropriate, prescribed burning activities to be conducted in a Conservation Land Management Zone will be stated in an approved bushfire management plan and may be used to achieve improved ecological processes, cultural values or for landscape protection purposes.

Refer to Appendix 4 of this Guide for further information.

^{2,3} See page 30 of the *Overall Fuel Hazard Guide for South Australia* (DEH 2008).

Other relevant documents

- Australasian Fire and Emergency Service Authorities Council (AFAC) (2009) *Wildfire Glossary*.
- Australian Institute of Building (2009) *Building Code of Australia*.
- Department for Environment and Heritage (2008) *Overall Fuel Hazard Guide for South Australia*.
- Department of Planning and Local Government (2009) *Minister's Code: Undertaking development in Bushfire Protection Areas*.
- *Development Regulations 2008*.
- *Environment Protection and Biodiversity Conservation Act 1999*.
- *Fire and Emergency Services Act 2005*.
- *National Parks and Wildlife Act 1972*.
- *Native Vegetation Act 1991*.
- *Native Vegetation Regulations 2003*.
- SA Government Agencies Fire Liaison Committee (GAFLC) (2005) *Firebreaks and Fire Access Tracks: Guidelines for State Government Agencies SA Country Fire Service on behalf of GAFLC, Adelaide*.
- SA Government Agencies Fire Liaison Committee (GAFLC) (2004) *Prescribed Burning Code of Practice SA Country Fire Service on behalf of GAFLC, Adelaide*.
- Standards Australia (2005) *Construction of buildings in bushfire – prone areas. AS 3959-1999* Standards Australia, Canberra.

Contacts

South Australian Country Fire Service (CFS)

In an emergency, please call 000.

Headquarters
(08) 8463 4200

Building and Bushfire Safety
(08) 8391 6077

Region 1
Southern Mount Lofty Ranges
and Kangaroo Island
(08) 8391 1866

Region 2
Northern Mount Lofty Ranges
and Yorke Peninsula
(08) 8522 6088

Region 3
Murraylands and Riverland
(08) 8532 6800

Region 4
Flinders, Mid North and Pastoral Areas
(08) 8642 2399

Region 5
South East
(08) 8762 2311

Region 6
Eyre Peninsula and West Coast
(08) 8682 4266

Web
www.cfs.sa.gov.au

South Australian Metropolitan Fire Service (MFS)

In an emergency, please call 000.

General enquiries during business hours
(08) 8204 3600

Country callers (toll free)
1300 737 637
Fax: (08) 8204 3675

Native Vegetation Council

Telephone: (08) 8303 9733
Fax: (08) 8303 9780
Email: nvc@sa.gov.au
Web: www.nvc.sa.gov.au

Department for Environment and Heritage (DEH)

Adelaide Region
Black Hill CP, Athelstone
(08) 8336 0924

Kangaroo Island Region
Kingscote
(08) 8553 2381

Murraylands Region
Berri
(08) 8595 2111

Outback Region
Pt Augusta
(08) 8648 5300

South East Region
Mt Gambier
(08) 8735 1177

West Region
Port Lincoln
(08) 8688 3111

Northern and Yorke Region
Clare
(08) 8841 3400

Web
www.environment.sa.gov.au

Appendices – Appendix 01

Protecting your house and assets: Recommended distances to manage native vegetation around your property

Reducing the radiant heat impact is a key factor to improve the protection for your house and property during a bushfire. This can be done by reducing, modifying or removing the vegetation around your house and property. However, the location of your house and built assets provides the greatest opportunity to maximise your safety. When planning a new building you should consider:

- appropriate building location, design, construction and maintenance;
- use of appropriate building materials; and
- installation and use of sprinklers.

Nationally, 96% of house losses during bushfires occur on days where the Fire Danger Index⁴ (FDI) is greater than 70. Therefore, planning to protect your house and built assets should be based on scenarios of an FDI greater than 70.

The Standards Australia (2005) *Construction of buildings in bushfire – prone areas AS 3959-1999* recommends that protecting your house and built assets be focussed on limiting radiant heat exposure to 12.5kW/m². Building survival is unlikely if exposure to radiant heat is greater than this. In contrast, to increase the likelihood of personal survival, exposure to radiant heat should not exceed 2-3 kW/m². Beyond this intensity, you will not survive more than three minutes.

To maximise the protection for your built assets, such as buildings and structures, you should take into account the slope and the type of vegetation or fuel surrounding the block. These have a direct link to the amount of radiant heat your built assets are exposed to. The table below outlines the recommended distances around a built asset that you should manage native vegetation, depending on the slope and type of vegetation. These distances have been developed in order to limit radiant heat exposure to 12.5kW/m² in situations where the FDI is 80 and the flame temperature is 816.85°C, therefore increasing the chances of building survival.

Table 1: Recommended minimum distances (in metres) to clear between an asset and the predominant vegetation (Adapted from Table G4.2 in AS3959 (2009)).

		Slope				
		Upslope & flat	0-5°	5-10°	10-15°	15-20°
Vegetation Class	Forest	42	50	61	73	87
	Woodland	29	35	43	53	64
	Shrubland	19	22	25	28	31
	Scrub	27	31	35	39	43
	Mallee	17	20	23	26	29

⁴ Fire Danger Index – A relative number denoting an evaluation of rate of spread, or suppression difficulty for specific combinations of temperature, relative humidity, drought effects and wind speed. The numbers range from 1 to 100 (AFAC, *Wildfire Glossary*, 2009).

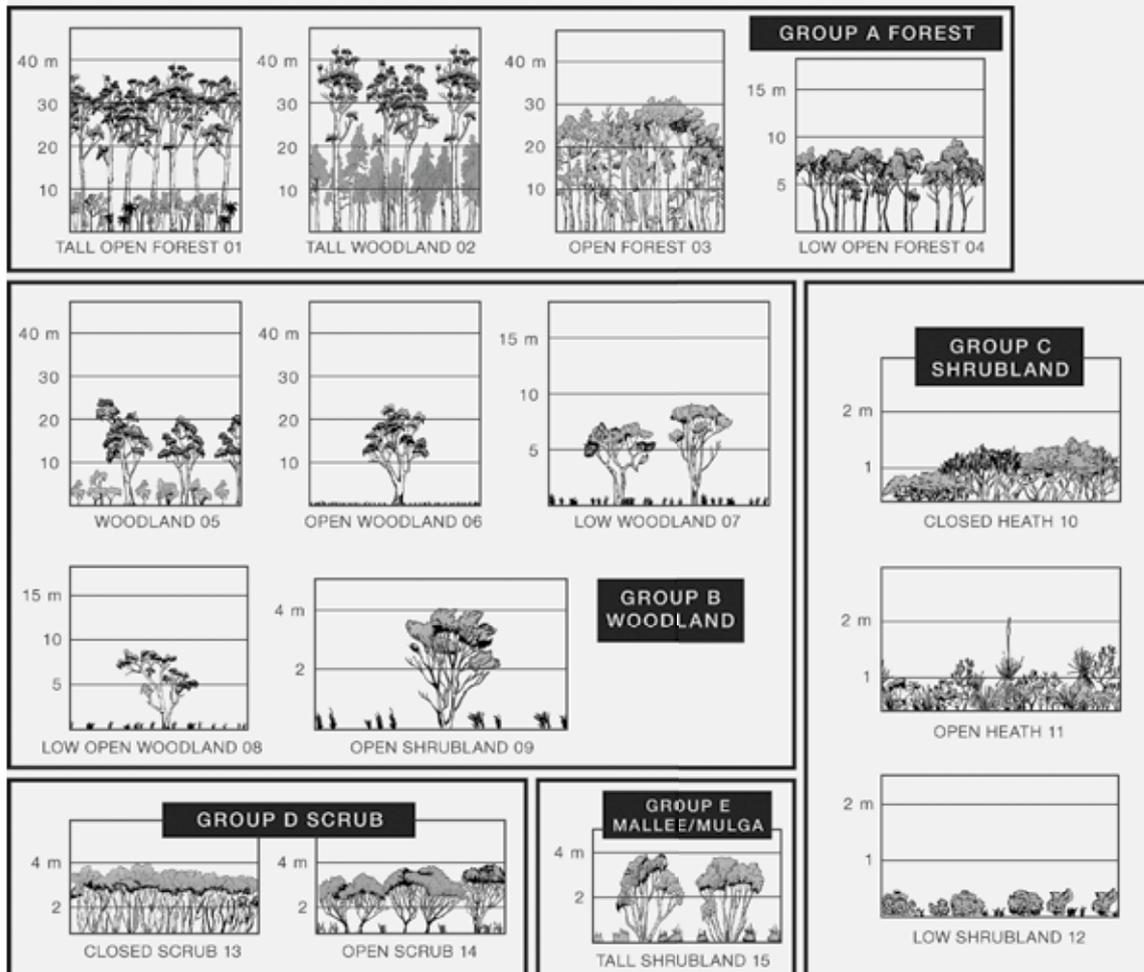
Appendix 01

Protecting your house and assets: Recommended distances to manage native vegetation around your property – cont.

As a guide, diagrams representing each vegetation class are shown in Figure 1 below.

***Note:** You should consult your nearest SA CFS Office (see www.cfs.sa.gov.au) to gain an accurate determination of the Australian Standard, AS3959 (2005).

Figure 1: Guide to identifying vegetation classes (AS 3959-1999 Fig 2.3 (images 1 – 15))⁵



⁵ Reproduced with permission from SAI Global under licence 0908-c023.

Appendix 02

Fuel Breaks in Mallee regions

For the purposes of the *Native Vegetation Regulations 2003* 5A(1)(e) a fuel break of 7.5m may be constructed in any of the following Hundreds:

Addison	Glynn	McIntosh	Pureba
Barna	Hambidge	Miller	Randell
Barwell	Hill	Moonabie	Russell
Batchelor	Hincks	Moorkitabie	Sleaford
Blesing	Hudd	Nash	Squire
Bockelberg	Inkster	Nicholls	Sturdee
Caldwell	James	Nilginee	Talia
Campbell	Kappawanta	Nunnyah	Tinline
Campbell	Kevin	O'Connor	Uley
Charleston	Koolgera	Panitya	Wallis
Cocata	Koongawa	Peachna	Witera
Condada	Lake Wangary	Peella	Wookata
Corrobinnie	Lucy	Pethick	Wright
Flinders	Magarey	Pildappa	
Giles	McGregor	Poynton	

Guidelines for constructing fire access tracks

Below you will find information about how to construct fire access tracks. This information has been developed by the SA Government Agencies Fire Liaison Committee (GAFLC).

Fire access tracks are intended to allow for the safe passage of firefighting vehicles undertaking fire suppression activities. Thus, fire access tracks must be designed, constructed, and maintained in order to permit access by 4WD fire vehicles.

There are three types of fire access tracks that must meet the following minimum standards:

1. Minor Fire Tracks:

- must be maintained to a width between 4 and 5 metres (m); and
- must be sufficiently clear of vegetation (both at the sides and overhead, see Figure 1) to allow ready and safe access; and
- must ensure that single lane access is permitted on through roads.

2. Standard Fire Tracks:

- must be maintained to a width between 4 and 5m; and
- must be sufficiently clear of vegetation (both at the sides and overhead, see Figure 1) to allow ready and safe access; and
- must be constructed with passing bays permitting two-way access (see Figure 2); and
- must provide passing bays with a minimum length of 17m, a minimum width of 6m and a maximum width in native vegetation of 8m (see Figure 2); and
- must provide opportunities to pass no less than once every 400m.

3. Major Fire Tracks:

- must be maintained to a minimum width of 7m; and
- must be sufficiently clear of vegetation to allow ready and safe two-way access.

Location of fire access tracks

When selecting a location for any fire access tracks, the following must be considered:

Fire access tracks should:

- wherever possible, be established on land where native vegetation has already been modified; and
- be incorporated within a fuel break, where possible; and
- be positioned so that they complement other fire access tracks outlined in relevant bushfire prevention plans.

Construction of fire access tracks

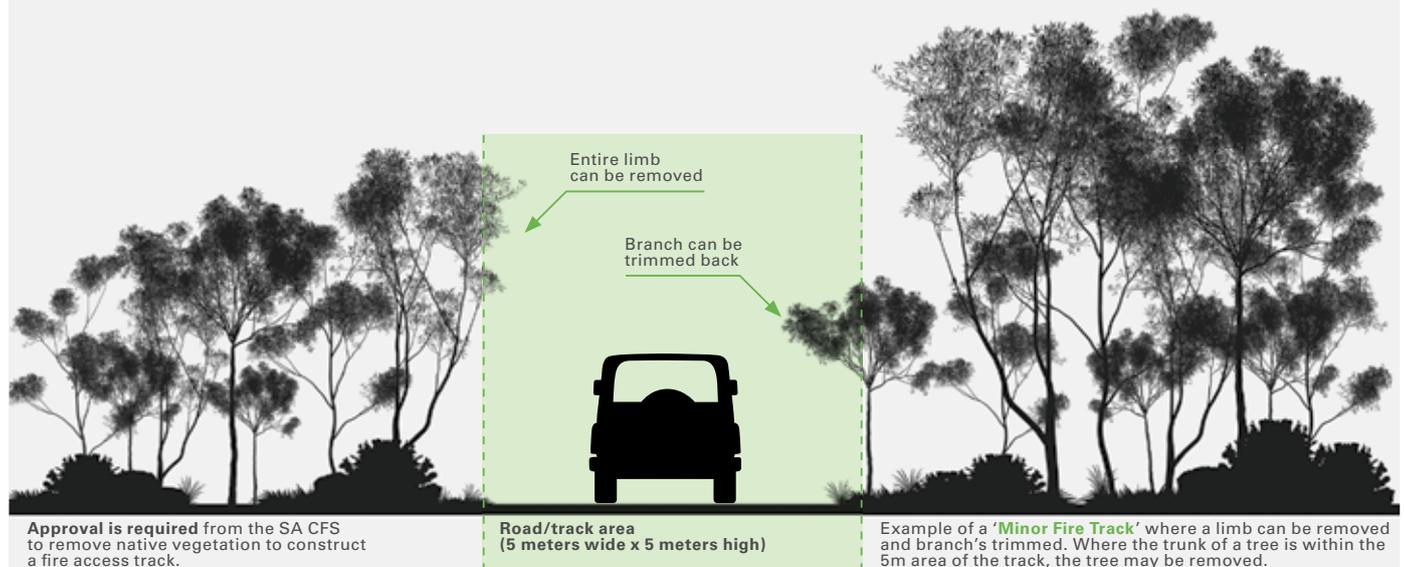
When constructing a fire access track, the following should be taken into consideration:

- **Erosion Control:** Where possible, access tracks should be located to minimise soil disturbance and to retain sufficient vegetation cover to reduce erosion. Track design should include erosion control measures. Formed or cut tracks should be designed and constructed to maintain natural drainage lines. All tracks should be designed to allow run-off, and any tracks across a watercourse should allow safe vehicle crossing, but not interfere with stream flow.

Appendix 03

Guidelines for constructing fire access tracks – cont.

Figure 1: Removal of vegetation for fire access tracks⁶



Construction of fire access tracks – cont.

- **Vehicle Trafficability:** Tracks used for fire access should be as straight as possible and allow easy passage for firefighting vehicles. Entry points to tracks that do not allow passage for firefighting vehicles should be clearly identified.
- **Curves:** All tracks used for fire access should have curves with a minimum inside radius of 8.5m (see Figure 2).
- **No Through Roads and Dead Ends:** No Through Roads are only permitted providing appropriate signage and turnaround points are in place. **No Through Roads without turnaround points are to be barricaded at their entrances and not included on fire maps.**

⁶ As published in the *Guidelines for State Government Agencies: Firebreaks & Fire Access Tracks*, GAFLC (2005), page 14.

Appendix 03

Guidelines for constructing fire access tracks – cont.

Construction of fire access tracks – cont.

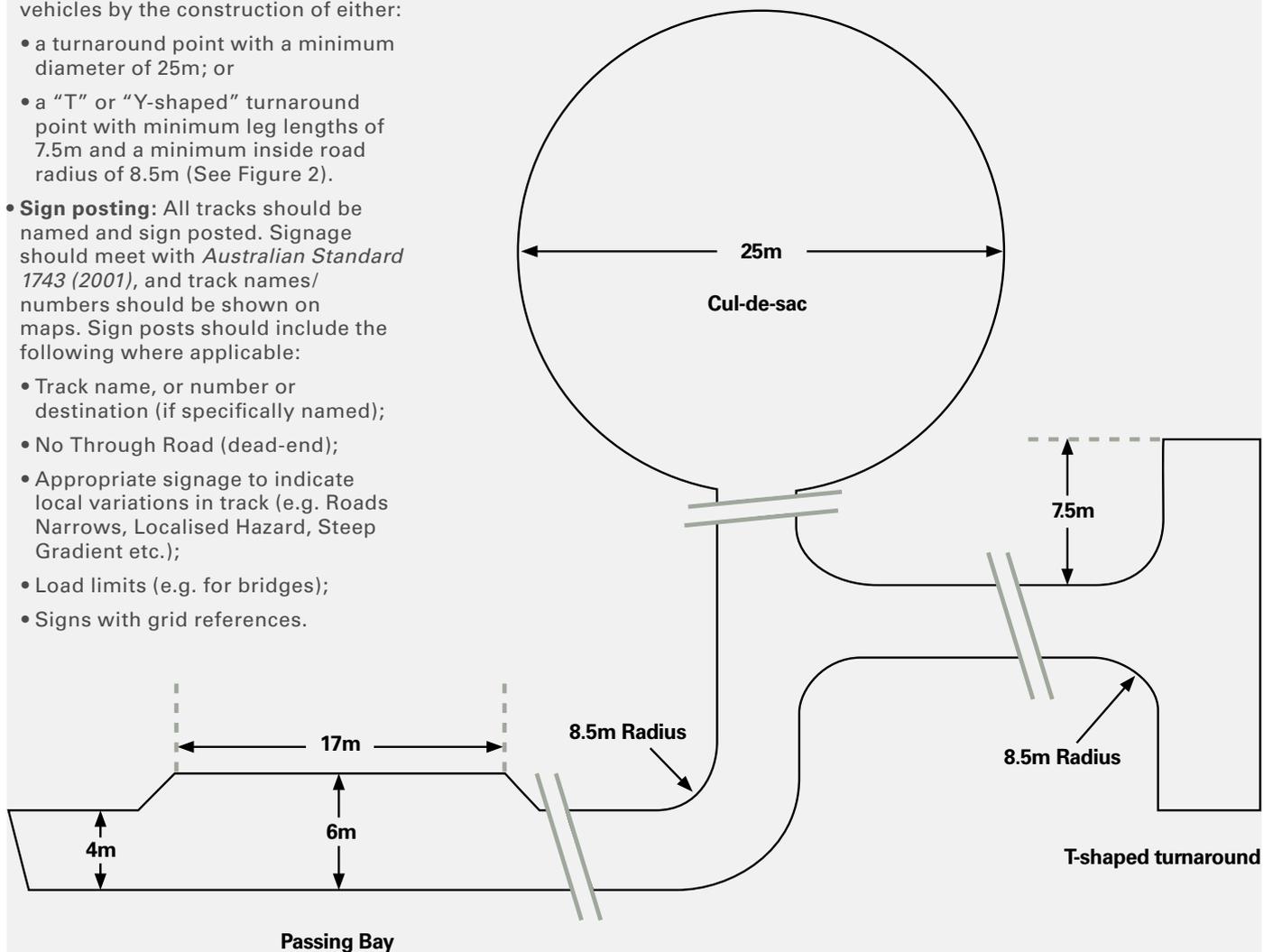
• **Turnaround Points:** In line with the above, construction of tracks with dead ends should be avoided. Where this is not possible, safe, suitable turnaround points must be provided to accommodate large firefighting vehicles by the construction of either:

- a turnaround point with a minimum diameter of 25m; or
- a “T” or “Y-shaped” turnaround point with minimum leg lengths of 7.5m and a minimum inside road radius of 8.5m (See Figure 2).

• **Sign posting:** All tracks should be named and sign posted. Signage should meet with *Australian Standard 1743 (2001)*, and track names/ numbers should be shown on maps. Sign posts should include the following where applicable:

- Track name, or number or destination (if specifically named);
- No Through Road (dead-end);
- Appropriate signage to indicate local variations in track (e.g. Roads Narrows, Localised Hazard, Steep Gradient etc.);
- Load limits (e.g. for bridges);
- Signs with grid references.

Figure 2: Minimum specifications for passing bays and turnaround points on fire access tracks⁷.



⁷As published in the *Guidelines for State Government Agencies: Firebreaks & Fire Access Tracks*, GAFLC (2005), page 14.

Guiding principles for bushfire management in native vegetation

A: Overarching principles

1. Bushfire management in native vegetation should be **planned** to ensure appropriate bushfire regimes, protection of assets and the potential impacts of large bushfires is reduced.
2. **Large blocks** of native vegetation provide a much higher biodiversity value that allows for the continuation of natural processes (including bushfire) when compared to small fragmented areas.
3. It is important to **retain trees** and other vegetation to provide habitat for a variety of native animals.
4. It is preferable to **“Contain”** bushfires as quickly as possible to avoid burning an entire block in one bushfire event.
5. **Strategic fuel breaks** should be maintained across the landscape to assist bushfire suppression activities.
6. **Access** for bushfire suppression into a large block should be located where it minimises the need to remove vegetation, in accordance with Appendix 3 of this Guide.
7. The issuing authority should review the **Heritage Sites Database** maps supplied by the Aboriginal Affairs and Reconciliation Division (AARD) in order to identify whether there are any registered heritage sites within the area of the hazard reduction application. If there are, the matter will need to be referred to AARD within the Department of the Premier and Cabinet for further assessment. The applicant must be advised if such a referral is required.

Prescribed Burning:

8. Prescribed burns should only be undertaken by **competent** and **experienced** personnel.
9. Prescribed burning to achieve stated management objectives will be **planned, follow safe working practices** and be **controlled**. The outcomes should be monitored and recorded.

10. Prescribed burning can be a useful tool that:

- assists management programs for the regeneration, rehabilitation, protection and conservation of native vegetation, including listed threatened species and ecological communities under the *Environment Protection and Biodiversity Conservation Act 1999*;
- enhances biodiversity by modifying or maintaining vegetation communities for specific plant or animal species;
- aids pest control programs;
- reduces hazards by the lowering of fuel loads, such as bark, and by doing so reduces the intensity and rate of spread of bushfires;
- reduces the impact of bushfires on specific built or natural assets; and
- reduces the impact of large bushfires on the landscape and ecosystem processes.

11. Areas to be burnt should not be adjacent to recently burnt areas where possible.

Ecological Burning:

12. Ecological fire regimes for South Australia should take into account the tolerable fire frequencies, interval, intensity and season for flora and fauna in an area.
13. Any burning conducted in Conservation Land Management Zones will be in accordance with an approved bushfire prevention plan and should aim to meet the following objectives:
 - managing ecological communities to improve natural processes;
 - managing weeds where appropriate for that ecosystem; and
 - using fire regimes that maximise a “patchwork” or “mosaic” arrangement across the landscape.

B: Methods of reducing fuel

There are a number of methods that you can use to reduce the level of vegetation fuel in an area. Some methods are even more effective when combined with others.

Various methods can be used to create and maintain effective fuel breaks on your property. These include the following methods:

Mechanical methods⁸

Hand Clearing

Hand clearing is often used to remove or reduce fine fuels (e.g. twigs less than a finger’s width) and leaf litter close to a dwelling. These hazards can be removed by hand tools such as rakes, hoes and leaf blowers and then disposed of (e.g. composting, mulching, or green waste collection).

Brushcutting / mowing

Hand held machinery (such as mowers and brush cutters) is very effective and often used to keep grass and other vegetation low.

Slashing / trittering

Large mechanical slashers including ride-on-mowers and tractor-towed implements are another economical way to reduce fuel levels. Slashing can leave grass in rows, increasing fuel in some places. To be most effective, the cut material should be removed or allowed to decompose well before summer. Tritering or turbo mowing also mulches leaving the fuel where it is cut.

It is important to note that mechanical fuel removal is not permitted on slopes of greater than 18°, because of the potential to create soil erosion.

⁸ Adapted from the NSW RFS, *Application Instructions for a bush fire hazard reduction certificate*.

Guiding principles for bushfire management in native vegetation – cont.

Tree pruning / removal

Pruning by thinning the tree canopy and removing branches that are overhanging or are very close to a building can help significantly reduce the fire risk. In most instances pruning will be sufficient to reduce the fire risk, but in some circumstances the complete removal of a tree may be necessary. Removal or modification of a Significant Tree is subject to the *Development Regulations 2008*. You will need to contact your Local Council for further information about what you can do with any Significant Trees.

Herbicide Use

Herbicides can be sprayed onto areas where other methods of fuel reduction may be difficult, such as around buildings, sheds, alongside fence lines and around fuel supplies. Spraying should be conducted after the autumn or at the end of winter to be effective on actively growing plants. Check regrowth of sprayed fuel breaks and re-do if necessary with a plough, slasher or boom spray.

Prescribed Burning

A prescribed burn involves the controlled use of fire to achieve planned native management objectives. A prescribed burn is only undertaken:

- in specified environmental conditions;
- over a defined area;
- at a particular time; and
- within a predetermined fire intensity and rate of spread.

a) Prescribed burning for fuel reduction purposes

Reducing fuel loads will assist in reducing the rate of spread and intensity of a bushfire and will assist in providing some protection for assets for a period of time. The GAFLC *Prescribed Burning Code of Practice* (2004) provides information on how to plan and conduct a prescribed burn in South Australia.

There are three main types of prescribed burn:

- **Low intensity:** must be conducted in accordance with the Government Agencies Liaison Committee *Prescribed Burning Code of Practice* (2004).
- **Moderate and High intensity:** must be conducted with a firefighting agency in attendance and in accordance with an agency approved burn plan.
- **Pile burning and windrow burning:** must be conducted in accordance with the *Environment Protection (Burning) Policy 1994*.

Prescribed burns must be contained within planned control lines⁹. The closest natural/existing control lines to the intended perimeter of the burn should be used where available. Construction of additional control lines must be limited to the minimum number needed to carry out the burn safely. Where control lines are to remain for use for follow up work or suppression they must be constructed to GAFLC standards.

Control lines must be constructed in a manner that minimises the potential for soil erosion. In addition, they should be constructed where native vegetation has already been disturbed, in preference to undisturbed vegetation. In Conservation Land Management Zones control lines constructed in native vegetation must be allowed to regenerate following the burn.

Once you have your approved application you must notify the issuing authority prior to lighting a fire for bushfire hazard reduction work. In turn, the issuing authority will notify the relevant SA CFS Group Officer as soon as possible.

Note: Mechanical removal of native vegetation may be a preferred option in cases where prescribed burning could increase the growth of weeds, exotic grasses and fast growing native plants that will re-establish fuel loads.

b) Prescribed burning to enhance ecological processes

Australian ecosystems have successfully adapted to the presence of bushfire on a regular basis. Because of this, prescribed burning is an important tool that can be applied to Australian landscapes in order to enhance ecological processes.

There are some key points that must be considered when planning an 'ecological burn':

1. An issuing authority must determine whether any threatened species, populations or ecological communities are present, or are likely to be present, at the site of the proposed works. Where threatened species or ecological communities are present, advice must be sought from the Native Vegetation Council (see Page 22 for contact details).
2. Where a species is listed under the *Environment Protection and Biodiversity Conservation Act 1999* the issuing authority must advise the applicant that the application will need to be referred to the Australian Government Department for Environment, Water, Heritage and the Arts for assessment in accordance with provisions under that legislation.

⁹ A natural or constructed barrier, or treated fire edge, used in fire suppression and prescribed burning to limit the spread of fire (AFAC, *Wildfire Glossary*, 2009).

Glossary

Building means:

- (a) a building within the meaning of the *Development Act 1993* (other than a Class 7A or 10B building under the Building Code) that is permanently fixed to land; and
- (b) a building of a kind contemplated by paragraph (a) that is in the course of construction if the foundations, concrete slab or other footings have been completed; and
- (c) any other building or structure declared by the Minister by notice in the Gazette to be included within the ambit of this definition,

but does not include any building or structure declared by the Minister by notice in the Gazette to be excluded from the ambit of this definition (*Native Vegetation Regulations 2003*).

For example, a building may be a: dwelling, hotel, motel, school, office building, shop, cafe or restaurant, service station, storage building, laboratory, factory, hospital, private garage, carport, or shed.

(See also definition of Structure.)

Bushfire prevention plan means a plan for bushfire prevention and management prepared by a district bushfire prevention committee under the *Fire and Emergency Services Act 2005*.

'Contained' Bushfire means the status of a wildfire suppression action signifying that a control line has been completed around the fire, and any associated spot fires, which can reasonably be expected to stop the fire's spread (AFAC, *Wildfire Glossary* 2009).

Fire access track means a track (up to 15m in width) constructed for use by vehicles undertaking firefighting activities.

Fuel means any material such as grass, leaf litter and live vegetation that can be ignited and sustains a fire.

Fuel break means an area where vegetation has been removed or modified to reduce the risk of bushfires starting and to assist in reducing the intensity and rate of spread of bushfires. Fuel breaks provide protection from fire for personnel, equipment and property, and provide an edge from which fire crews can undertake fire suppression or prescribed burning activities.

'Going' Bushfire means any fire that is expanding or that is continuing to require an active or escalating response.

Large Tree means a tree (including a dead tree) where the circumference of the trunk of the tree is 2m or more, when measured at a height of 30cm from the base of the tree.

Management of native vegetation is used in this Guide in the context of: modification, reduction and removal of native vegetation for the purpose of reducing fuel loads, creating fuel breaks or for ecological purposes.

Management Plan means any management plan that is approved by the Native Vegetation Council or under delegation from the Native Vegetation Council.

Modify means the manipulation of native vegetation to reduce the likelihood of bushfires starting, and/or to increase the likelihood of successful fire suppression (e.g. pruning, prescribed burning, removal of leaf litter).

Native Vegetation means a plant or plants of a species indigenous to South Australia.

Overall fuel hazard means the combined influences of bark hazard, elevated fuel hazard and surface fine fuel hazard (for more information refer to the *Overall fuel hazard guide for South Australia*, DEH 2008).

Prescribed burn means the controlled use of fire to achieve planned native management objectives. A prescribed burn is only undertaken:

- (i) in specified environmental conditions
- (ii) over a defined area
- (iii) at a particular time, and
- (iv) within a predetermined fire intensity and rate of spread.

Primary Production means production resulting directly from the cultivation of land; the maintenance of animals or poultry for the purpose of selling them or their bodily produce; fishing operations; forest operations (which include the planting or tending in a plantation or forest of trees intended for felling and the felling of trees in a plantation or forest) or horticulture. It includes the manufacture of dairy produce by the person who produced the raw material used in that manufacture.

Reduce means the manipulation of native vegetation to lessen the likelihood of a bushfire starting and/or to increase the likelihood of successful fire suppression. This may include the removal or the modification of native vegetation.

Regulated Tree means any native or non-native tree that has a trunk with a circumference of 2m (for **Significant Tree** 3m) or more at a point 1m above natural ground level. In the case of trees with multiple trunks, the total circumference of the trunks must be 2m (for **Significant Tree** 3m) or more and the average circumference of each trunk must be 62.5cm or more.

Remove means the killing or destruction of native vegetation, removal of a plant or plants from the ground, or any other action that stops a plant or plants from surviving in their current location. This includes any other activity that causes the killing or destruction of native vegetation.

Structure means any permanently fixed construction that is not defined under the definition of a 'building'. This includes constructions used for primary production, the housing or feeding of animals, the storage of fodder, and the storage of vehicles or vessels. This also includes any other structure declared by the Minister by notice in the SA Government Gazette to be included within this definition (*Native Vegetation Regulations 2003*).

For example, a structure could be any of the following if they are permanently fixed to the ground: a small aviary or other animal enclosure, a small shed constructed around a pump or other small infrastructure, a small garden shed or greenhouse, a pool shed, a gazebo, or a children's playhouse.

(See also definition of Building.)

