

# Queensland Fire and Rescue Service

## Gold Coast Bushfire Planning & Mitigation

### TRAINING AND EMERGENCY MANAGEMENT



#### Bushfire Management Plan Cover Sheet for

<b>Attached Document Title</b>	Bushfire Hazard Assessment and Mitigation Plan on Proposed Residential Subdivision on Lot 5 SP146973 Felling Drive Maudsland
<b>Attached Document Date</b>	5 <sup>th</sup> June 2012
<b>Date of QFRS on-site Inspection</b>	5 <sup>th</sup> September 2012
<b>Date of QFRS Assessment</b>	5 <sup>th</sup> September 2012
<b>Prepared by</b>	Bushland Protection Systems Pty Ltd
<b>QFRS Reference.</b>	<b>A 247442</b> <small>This reference is also to also be recorded on the QFRS approval letter and the BMP.</small>

This cover sheet contains the conditions and recommendations sought by the Queensland Fire & Rescue Service in relation to the attached Bushfire Management Plan. It is intended that this cover sheet be regarded as forming an integral part of the BMP.

## **Approval of this Bushfire Management Plan, subject to the following is recommended.**

### **Recommended Conditions:**

1. The complete Bushfire Management Plan, the BMP, shall consist of the plan submitted by the applicant, the QFRS Bushfire Planning Cover Sheet and any fire safety material included by the bushfire consultant or QFRS.
2. It is required that a copy of this Approved Bushfire Management Plan, the BMP, be supplied to the applicant with the decision notice for the application. This BMP should also be referenced in the decision notice to the applicant and must be complied with, by the applicant and distributed to individual present and future lot owners.
3. All of the recommendations, that are made in response to the performance criteria by the bushfire consultant or QFRS should be considered as requirements and conditions of approval for this application unless otherwise stated in writing by the Gold Coast City Council. Where there is a conflict, the cover sheet conditions will apply.
4. The conditions and recommendations made are based on the lot layout, street layout and building envelopes in the BMP referred to above. Changes to these or other factors, such as areas of revegetation, conservation covenant, retained bushland etc, may affect the safety of the development and may void the recommendations contained in this report. Should any changes to the above occur, the applicant should advise the bushfire consultant to ensure that the BMP is not affected by these changes.
5. In the event of such changes, an amended Bushfire Management Plan that takes into account the changes may be required. Any such amended plan may be subject to further assessment, which may or may not result in recommendation for approval.
6. This BMP is subject to an agreement re a 20m low fuel buffer to be created on the neighbouring lot. It is expected that an easement be created over the buffer and a binding agreement on the landowner to maintain this buffer. Should this buffer not be created then the layout will need to be changed or those lots on the western boundary will need to be staged subject to the neighbouring lot being subdivided.
7. Where the BMP has triggered the requirements of AS3959.2009 – Construction of Dwellings in Bushfire Prone areas, QFRS only assesses that this performance criteria has been addressed. QFRS does not accept any responsibility or liability for or give approval as to the accuracy of the Bushfire Attack Levels that are contained in this BMP.
8. It is required, as per the BMP, that an assessment of the requirements of AS3959.2009 of the BCA, be submitted with the application for the sealing of the lots at each stage.
9. **Where the development is to be supplied with reticulated water the following is to apply:**  
For uses involving new or existing buildings with a gross floor area greater than 50 m<sup>2</sup> each lot has a reliable reticulated water supply that has sufficient flow and pressure characteristics for fire fighting purposes at all times, either to the standard required in Appendix 5A (page 60) of the State Planning Policy Guideline 1/03 or that which is able to be supplied by the Gold Coast Water reticulated supply.
10. An alert should be placed on the Title or Council Rate searches that an approved Bushfire Management Plan is in existence, is made available to ensuing owners, and must be complied with, by ensuing owners.

11. With respect to the requirement to inclusion of Fire Trails in this BMP, the following information is required:
- a) Location of any existing trails or cleared areas for proposed fire trails
  - b) Type (purpose) of proposed fire trails.
  - c) Typical cross sectional elevations of fire trails within constrained locations showing the interface between public open space and the proposed development. Sectional elevations must detail: slope, batters, cross fall of trails, typical surface treatments, and drainage devices.
  - d) Indicative treatments for ecological rehabilitation post bushfire trail installation within public open space.
12. All fire/ maintenance/ access trails are to be included in the development's maintenance schedule and are to be maintained to the standard as required by the Bushfire Code. Regular checks and any repairs, particularly erosion and water run-off issues, are to be conducted by the developer until approval is given for each trail to go Off Maintenance.
13. Fire trails are required to be numbered and signposted. If the site has or is required to have fire trails a 50mm diameter (nominal) capped CHS galvanized steel signpost 1.8m in length, concreted to a depth of 600mm is to be installed at every entrance to a fire trail from a roadway or property boundary. Should there be an intersection of fire trails then each branch of a trail is to have a 50mm diameter (nominal) capped CHS galvanized steel signpost 1.8m in. length, concreted to a depth of 600mm. Where the trail connects with a road or boundary the post is to be within 2m of the boundary. At an intersection the post is to be within 5m of the intersection. GCCC will allocate trail numbers and install the numbering on the post. Other fire trail related signage is to be installed complete. Signage is to comply with Section 3.8 Sign Types - Fire Trail Signage of the GCCC Natural Areas Management Unit Signage Guidelines (Page 16) a copy of which is attached. Trail Number and Key Point signage is to be as specified. The symbols on other signs are to comply with the Queensland Fire and Rescue Service Field Incident Guide Page 191 'Mapping Symbols' a copy of which is attached.
14. Roads are to be designed and constructed in accordance with Policy 11 of the Gold Coast Planning Scheme, Land Development Guidelines and are to provide safe access for fire fighters.
15. The applicant is to obtain a copy of the complete approved Bushfire management Plan as described above from council. This and only this is the plan that is to be complied with and distributed to all landowners.

Summary of Compliance with Gold Coast Planning Scheme Performance Criteria				
Acceptable Solution	Compliance			
	(mark applicable box 'X')			QFRS Conditions (record paragraph no. from Page 2)
	Yes	No	Not Applicable	
AS1.1.1 BMP Provided	x			
AS1.1.2 Detached dwelling in development with BMP			x	
AS1.1.3 Low PBH letter			x	
AS2.1 House location – away from fire front <b>AND</b>	x			
AS2.2 Building site location clearly identified <b>AND</b>	x			
AS3 AS3959-2009	x			8
AS4.1.1 5000 litre tank – one dwelling <b>OR</b>			x	
AS4.1.2 10000 litre tank – more than one dwelling			x	
AS5 50mm male camlock			x	
AS6.1 Supply outlet remote from hazards <b>AND</b>			x	
AS6.2 50mm outlet pipe <b>AND</b>			x	
AS6.3 Hardstand area			x	
AS7 Reticulated Water	x			
AS8.1 22500 litre public tanks; concrete construction; 50 mm outlet pipe; 50 mm male camlock <b>AND</b>			x	
AS8.2 handstand area			x	
AS9 Vegetation clearing & landscaping	x			6
AS10.1 Medium PBH fire trails – near boundaries of lots and bushland <b>AND</b>	x			
AS10.2 Trail width & gradient – 4m formed; 6m cleared; max. 16% <b>AND</b>	x			
AS10.3.1 Vehicular links – designed for topography; firefighter safety; water supply access <b>AND</b>	x			
AS10.3.2 Trail access and links – each end and to other trails and roads <b>OR</b>	x			
AS10.3.3 Turning circles <b>OR</b>	x			
AS10.3.4 T or Y turning bays	x			
AS10.4 Passing bays – maximum 400m apart	x			
AS10.5.1 Trails on public land for fire fighting access only <b>OR</b>	x			
AS 10.5.2 Trails on public land and used for other purposes also <b>OR</b>	x			
AS10.5.3 Trails on-site with easement granted			x	
AS11 BMP to residents – addresses potential hazard; their responsibility; measures available for ongoing mitigation	x			
AS12.1 High PBH - perimeter roads; minimum cleared width 20m; constructed width minimum 6m; all weather standard <b>AND</b>			x	
AS12.2 Roads capable of fire fighting vehicle access <b>AND</b>		x		
AS12.3 High PBH through roads, no culs-de-sac			x	14
AS12.4.1 Medium PBH culs-de-sac max. 200m; intersect by cross or connecting road <b>OR</b>	x			
AS12.4.2 Medium PBH alternative access links to culs-de-sac	x			
AS13 Roads in accordance with Policy 11		x		14
AS14 Lots not wholly located in high PBH and building envelope outside high PBH	x			
AS15 Inappropriate uses in high PBH	x			

## Information:

The Queensland Fire and Rescue Service has adopted a policy whereby recycled water use for firefighting will be in accordance with the following:

- Water is to be of a minimum standard of Class A+, the highest class described in the Queensland Water Recycling Guidelines
- The Department of Emergency Services (DES) has recommended that *“to ensure consistent production and safe management of Class A+ recycled water for firefighting use, the DES expects that all recycled water treatment plant operators will prepare and use a Recycled Water Management Plan (RWMP). The RWMP should incorporate hazard analysis and critical control point (HACCP) principles to ensure the treatment plant is designed, operated and maintained to consistently produce Class A+ quality recycled water to minimise health risks to firefighters.”*

David Heck JP (Qual)  
Bushfire Planning & Assessment Officer (Gold Coast)

# Are you bushfire prepared?

## Are your family and home at risk?

- ❶ Do you live within a few kilometres of bushland?
- ❷ Does your local area have a bushfire history?
- ❸ Is your home built on a slope?
- ❹ Do you have trees and shrubs within 20m of your house?
- ❺ Is your 'Bushfire Survival Plan' more than one year old?

If you answered 'Yes' to one or more of these questions you may be at risk in the event of a bushfire.

## PREPARE.ACT.SURVIVE.

Tomorrow's Queensland: strong, green, smart, healthy and fair



## Message from the Minister

You don't have to live in the bush to be threatened by bushfire, just close enough to be affected by burning material, embers and smoke. For Queensland residents, that can be just about anywhere.

In 2009 Queensland experienced one of its worst bushfire seasons on record and at one point firefighters attended 4491 vegetation fires across the state over a 36-day period. In many cases homes and lives were at risk and residents were faced with the decision to stay with their property or leave the area early.

This booklet is full of information that will help you to prepare your home and your family for bushfire season. It will assist you in making the decision to stay or to leave and will outline the steps you need to take as a result of your decision.

Please take time to sit down with your family and discuss your bushfire survival plan and what steps you will take to **PREPARE.ACT.SURVIVE.** this bushfire season.

**Neil Roberts MP**  
Minister for Police, Corrective Services  
and Emergency Services



## Commissioner

Every year bushfires put the lives and properties of Queenslanders like you and me at risk.

Everyone has a part to play in bushfire mitigation and it is vitally important that we all take steps to ensure we **PREPARE.ACT.SURVIVE.** this bushfire season.

This booklet is not only full of information about bushfire preparation, but it also includes advice on the new fire danger ratings and how you can get involved with your local Rural Fire Service.

If we all play our part we can build more resilient communities that know what to do when faced with a bushfire situation.

Rural and urban firefighters spend months preparing for the bushfire season but if we all took a few hours over a couple of weekends, we can all be a lot better prepared.

**Lee A Johnson AFSM MIFireE**  
Commissioner, Queensland Fire and  
Rescue Service

## Emergency Warnings

Queensland has adopted a new national Fire Danger Rating Index. This includes two new levels of severe and catastrophic.

The new FDR is used as a trigger for the level of advice and messaging to the community when a bushfire starts.

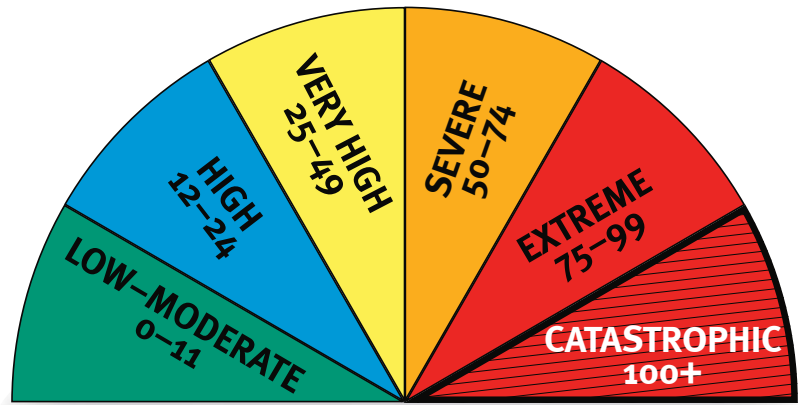
There are three types of alert messages – Advice, Watch and Act, and Emergency Warnings.

- Advice messages keep people informed and up to date with developments on a fire.
- Watch and Act messages advise people to take action to prepare and protect themselves.
- Emergency Warnings, accompanied by a siren sound effect, advise that you must take action immediately, as you will be impacted by the fire.

The Standard Emergency Warning Signal (SEWS) is also used when bushfire threatens life. The siren sound effect is the same used for cyclone warnings.

These messages are delivered through local TV and radio. However, you should not expect that detailed information will be available every time there is a bushfire.

# FIRE DANGER RATING



## CATASTROPHIC 100+

A fire with a rating of **'catastrophic'** may be uncontrollable, unpredictable and fast moving. The flames will be higher than roof tops. Many people will be injured and many homes and businesses will be destroyed.

During a **'catastrophic'** fire, well-prepared and constructed homes will not be safe. Leaving is the only option for your survival.

## EXTREME 75-99

A fire with an **'extreme'** rating may be uncontrollable, unpredictable and fast moving. The flames will be higher than roof tops. During an **'extreme'** fire, people will be injured and homes and businesses will be destroyed.

During an **'extreme'** fire, well-prepared and constructed homes may not be safe. Leaving is the only option for your survival.

## SEVERE 50-74

A fire with a **'severe'** rating may be uncontrollable and move quickly, with flames that may be higher than roof tops. A **'severe'** fire may cause injuries and some homes or businesses will be destroyed.

During a fire with a **'severe'** rating, leaving is the safest option for your survival. Use your home as a place of safety only if it is well-prepared and well-constructed.

## VERY HIGH 25-49

A fire with a **'very high'** danger rating is a fire that can be difficult to control with flames that may burn into the tree tops. During a fire of this type some homes and businesses may be damaged or destroyed.

During a fire with a **'very high'** danger rating, you should use your home as a place of safety only if it is well prepared and well-constructed.

## HIGH 12-24

A fire with a **'high'** danger rating is a fire that can be controlled where loss of life is unlikely and damage to property will be limited.

During a fire with a **'high'** danger rating, you should know where to get more information and monitor the situation for any changes.

## LOW-MODERATE 0-11

A fire with a **'low to moderate'** rating can be easily controlled and pose little or no risk to life property.

During a fire with a **'low to moderate'** rating, you should know where to get more information and monitor the situation for any changes.

## You may receive an Emergency Alert on your phone

Emergency Alerts are sent by emergency services to landline telephones based on the location of the handset, and to mobile phones, based on the billing address. These alerts are used in a range of emergency situations, including bushfires and other extreme weather events.

In the case of an emergency, you may receive a voice message on your landline or a text message on your mobile phone. If you receive an Emergency Alert and want more information, follow the instructions in the message received.

It is important that you do not rely on receiving an alert: you and your community must still prepare yourselves and have an action plan in case of an emergency.

For more information on the Emergency Alert system visit [www.emergencyalert.gov.au](http://www.emergencyalert.gov.au).

# PREPARE

The first step is to prepare. It forms the basis for how you act and whether you and your family will survive.

## Prepare a Bushfire Survival Plan

Whether you live in the city, on the urban fringe or in regional or rural Queensland, it is essential you have a Bushfire Survival Plan. Your bushfire survival plan details how you'll prepare and what action you will take if threatened by a bushfire. A well-prepared home has an increased chance of survival in a bushfire. During a large-scale event, Queensland Fire and Rescue Service (QFRS) will not be able to place a fire truck at every property so it is therefore even more important to have a solid plan in place.

The first step is simple, make a commitment to do it! Your plan must be written down and practised regularly and should take into consideration the ages and physical capabilities of everyone in your household including children and elderly residents.

Your plan needs to take into account what you will do based on the Fire Danger Rating (see page 3). On days of catastrophic and extreme fire weather the QFRS advises that people leave the area well in advance of any fire (the night before or early in the morning is recommended). So you need to decide under what conditions you will stay (if any) and when it would be best to leave well in advance of a fire.

Children, the elderly and those who are vulnerable are advised to leave well before a bushfire threatens and should not be part of any plans to stay with your property.

To prepare your Bushfire Survival Plan visit [www.ruralfire.qld.gov.au](http://www.ruralfire.qld.gov.au) and follow the links.

## Some of the issues you need to consider

- Does everyone in your family understand the dangers of bushfire and how your plan will be put into action?
- Have you arranged appropriate car and household insurance?
- Do you know what you will take with you if you need to leave early?
- Have you considered how to deal with pets and livestock?



## Prepare your property

Properties that are well prepared are far more likely to survive a bushfire, so everyone living in a bushfire-prone area should prepare their property, regardless of whether their plan is to stay or go.

- Clear space around buildings.
- Clear and remove undergrowth.
- Fill any gaps in the eaves, around windows, and door frames.
- Protect larger under-deck areas with non-flammable screens.
- Remove any fire hazards from around the house.
- Rake up bark, leaves and twigs.
- Make sure you have appropriate water and firefighting equipment.
- Make sure your property has cleared access for fire trucks.

More tips for preparing your property are available in your Bushfire Survival Plan at [www.ruralfire.qld.gov.au](http://www.ruralfire.qld.gov.au).

## Prepare to leave

If you plan to leave you should leave early, before a fire reaches your area, even the night before or early in the morning. Listen to your local radio station for community messages and warnings.



Photo courtesy of Morning Bulletin Rockhampton



## Prepare yourself

In the event of a fire everyone should wear:

- natural fabrics such as cotton, denim or wool
- sturdy work boots (non-metal caps) and a pair of wool socks to prevent burns to your feet and support your ankles
- a wide-brimmed hat to stop embers dropping onto your head or down the back of your shirt
- work gloves to protect your hands
- a good pair of safety goggles to safeguard your eyes against smoke, embers and debris in the air
- a smoke mask or a damp cloth (non-synthetic) to cover your nose and mouth to protect you from inhaling smoke and embers.

More tips for preparing yourself are available in your Bushfire Survival Plan at [www.ruralfire.qld.gov.au](http://www.ruralfire.qld.gov.au).



## Bushfire Survival Kit

You need to have a Bushfire Survival Kit stored in an area of the house that is safe to access. It should contain:

- mop
- gloves
- torch
- hoses
- shovel
- towels
- buckets
- safety goggles
- ladder
- medications
- bottled drinking water
- fire extinguishers
- battery-operated radio
- spare batteries
- smoke mask
- woollen blankets
- first aid kit
- knapsack sprayer
- protective clothing for the whole family.



## Mental and physical preparation

You also need to be prepared mentally and physically for the ferocity of a bushfire.

In a bushfire you'll experience strong, gusty winds, intense radiant heat and flames, heavy smoke which makes it difficult to see and breathe, embers causing spot fires, the sounds of roaring fires approaching, power and water being cut off and an environment which can be dark, noisy and terrifying.

You need to realistically consider the potentially overwhelming physical and psychological demands of facing a bushfire.

If you have any doubts about your ability to cope you should plan to leave early.



Photo courtesy of Ray Green Photograph



## If you decide to stay

### Firefighting equipment and protective clothing

If your plan is to stay you need at least the following firefighting equipment and protective clothing:

- sufficient lengths of hose to reach all buildings that could be threatened
- external and internal ladders
- buckets and alternative water supplies
- shovels, rakes and wet towels, sacks or other heavy material that can be used to put out small fires
- fire extinguisher (for internal fires only)
- plugs for downpipes (can be bought from hardware stores, or alternatively use a supermarket bag filled with sand or soil)
- torch
- first aid kit
- full length clothing (wool, cotton), including:
  - gloves
  - eye protection, work boots and a broad-brimmed hat
  - water bottles or containers to carry drinking water with you.

### High fire danger days

On hot dry days when bushfires are likely, listen to local radio stations for bushfire information, drink plenty of water and, if you live on acreage or a farm, move stock to fully grazed areas. It is also a good idea to check water pumps and generators (if you have them) to make sure they are working, and prepare your protective clothing in case you need it quickly.

### Fire in the area

- Listen to local broadcasts or check websites for updates.
- Put on protective clothing.

- Drink lots of water.
- Move car/s to a safe location.
- Close windows and doors and shut blinds.
- Take down curtains and move furniture away from windows.
- Bring pets inside and restrain them (leash, cage, or secure room) and provide water.
- Block downpipes (at the top) and fill gutters with water if possible.
- Wet down the sides of buildings and close shrubbery in the likely path of the bushfire.
- Wet down fine fuels close to buildings.



Photo courtesy of Morning Bulletin Rockhampton

**ACT now – use the diagram on the next page to help you and your family prepare for bushfire season.**



- Turn on sprinklers in garden for 30 minutes before bushfire arrives.
- Remove garden furniture, door mats and other items.
- Seal all gaps under doors and screens.
- Fill containers with water – baths, sinks, buckets, wheelie bins.
- Have ladders ready for roof space access (inside) and against roof (outside).
- Have generator or petrol pump ready.
- Check and patrol outside for embers and extinguish any bushfires.

#### **When the fire front arrives**

- Disconnect hose and fittings and bring inside.
- Go inside for shelter.
- Drink lots of water.
- Check and patrol for embers inside, particularly in the roof space.
- Check family and pets.



#### **Ross's Story**

Ross has always been bushfire prepared and after a recent fire he was glad he had been.

During the last fire season Ross became aware of a large bushfire in his area. Once he knew it was headed towards the family's property at Mount Fox in North Queensland, he enacted his bushfire plan and began preparations for the approaching fire.

Ross has firebreaks on all sides of his property which he keeps well maintained. He also has a tractor with a tank and a hose and large-capacity water tanks on his property.

As the fire approached the boundary fence of the property Ross's firebreaks slowed the advance but the intensity of the fire was so great that it jumped the breaks. "The fire came so quickly it just went straight over the firebreak," Ross said. "Without these preparations my family home would have been lost, along with a lot more in the district. Even though the fire came within 20 metres of my house, because of the firebreaks I had put in, a neighbour and I were able to halt the advance of the fire front".

"The biggest lesson I took from this was to be prepared and encourage everyone around you to be prepared. This fire was able to increase in speed as the neighbouring block of land was unprepared and very overgrown. I will definitely be keeping all my firebreaks in place and well maintained in the future."



## Long term fire precautions

- A** Reduce fuel by controlled landscaping.
- B** Use smooth-barked trees – prune lower branches.
- C** Clear overhanging trees and shrubs from house area.
- D** Enclose all eaves.
- E** Fill ends of corrugated roofing
- F** Fit wire screens to doors, windows and roof vents.
- G** Enclose under-floor space; shift woodpile away from house.
- H** Install taps at strategic places – with long hoses.
- I** Have a standby water pump.
- J** Ensure LPG safety valves face away from building.

## Pre-Summer checklist

- K** Check firefighting equipment (including standby pump).
- L** Clear fences of rubbish and undergrowth.
- M** Check all screens – doors, windows, roof vents.
- N** Ensure roof is in good condition and gutters clear of leaves and rubbish.
- O** See that under-floor area is fully protected.
- P** Water tank – make sure it has a 50mm camlock so firefighters can use water if needed.

## As fire approaches

- 1** Fill knapsacks, buckets – assemble firefighting equipment.
- 2** Place ladder and hose to protect roof.
- 3** Take car out of garage.
- 4** Attach hoses to taps, check standby pump.
- 5** Block downpipes and fill gutters with water.
- 6** Call roll, check children at school.
- 7** Dress in protective clothing.
- 8** Keep children and pets inside – responsible children could help in some way.
- 9** Wet down house and close shrubbery, refill gutters.
- 10** Monitor radio and internet ([www.fire.qld.gov.au](http://www.fire.qld.gov.au)).
  - Watch lawn and roof for small fires.
  - Follow fire officer's instruction.

## When the fire front arrives

- Disconnect hose and fittings and bring inside.
- Go inside for shelter.
- Drink lots of water.
- Check and patrol for embers inside, particularly in the roof space.
- Check family and pets.





# SURVIVE

## Sheltering during the fire

Information about how to survive if you choose to stay.

- Shelter in your house on the opposite side of approaching fire.
- Maintain a means of escape.
- Continually monitor conditions.

After the fire front has passed:

- wear protective equipment
- go outside once it is safe
- check for small spot fires and burning embers
  - inside roof space
  - under floor boards
  - under house space
  - on veranda and decks
  - on window ledges and door sills
  - in roof lines and gutters
  - garden beds and mulch
  - woodheaps
  - outdoor furniture
  - sheds and carports
- continue to drink lots of water
- stay at your property until the surrounding area is clear of fire
- monitor media outlets – radio, TV and internet.

## Contingency Plan

Even if your choice is to stay, you must still have a contingency plan as a part of your Bushfire Survival Plan. A change in household circumstances (i.e. someone home alone or unexpected visitors), fire danger rating of extreme or catastrophic and the current preparedness of your home are all reasons for you to reconsider your Bushfire Survival Plan. You should identify a safer location (i.e. a neighbour's home), a Neighbourhood Safer Place and consider if you should leave early well before bushfire threatens.

For more information if you choose to stay please refer to and complete the Bushfire Survival Plan (available at [www.ruralfire.qld.gov.au](http://www.ruralfire.qld.gov.au)).



The safest place is to be away from the fire. Being involved in a fire maybe one of the most traumatic experiences in your life. Survival and safety depend on the decisions you make. Are you bushfire prepared?

On days where the Fire Danger Rating is predicted to be extreme or catastrophic for you and your family's survival, leaving is the best option.

Thinking 'I will leave early' is not enough,  
you must **PREPARE ■ ACT ■ SURVIVE ■**

It is important for your own safety and the safety of your community that you don't return to your home before the all-clear is given by emergency services or your local council. It is equally important that when you do return home you are aware of the hazards and other issues you will face.

Returning to your property can be both physically and mentally challenging so it is essential that you use caution. Emergency services will attempt to eliminate obvious hazards. However, you are responsible for ensuring your property is safe before undertaking any activity in or around damaged structures – you must seek professional advice to do this. A hazard assessment by experts may be necessary to determine the stability of full and partially standing walls, roofs and chimneys and the safety of services. Your insurance company may also have conditions about what you can or cannot do until the loss assessor visits.





## Neighbourhood Safer Places (NSP)

An NSP is a local open space or building where people may gather, as a last resort, to seek shelter from a bushfire. Use of an NSP may be your contingency plan when:

- your Bushfire Survival Plan has failed
- the extent of the fire means you have planned to stay but your home cannot withstand the impact of the fire and therefore is not a safe place to shelter.
- the fire has escalated to an extreme or catastrophic level and relocation is your safest option.

The main purpose of an NSP is to provide some level of protection to human life from the effects of a bushfire. Your NSP will not guarantee safety in all circumstances. The following limitations of an NSP need to be considered if you plan to use one as a last resort:

- Firefighters may not be present, in the event that they will be fighting the main fire front elsewhere.
- NSPs do not cater for animals or pets.
- NSPs do not provide meals or amenities.
- NSPs may not provide shelter from the elements, particularly flying embers.
- If you are a person with special needs you should give consideration to what assistance you may require at an NSP.
- Although QFRS cannot guarantee an immediate presence during a bushfire, every effort will be made to provide support as soon as resources are available.

Not all areas will have a designated NSP and a register can be found on the Rural Fire Service website [www.ruralfire.qld.gov.au](http://www.ruralfire.qld.gov.au). Remember to regularly visit the website for changes and updates.

## On the way to your home

Watch for fallen objects; downed electrical wires; and weakened walls, bridges, roads, trees, low branches, burning debris and footpaths.

## Returning home

For safety reasons, initial access should be limited to adults.

The following is a checklist of the things that you should do when you arrive at your home:

- Consider the use of a face mask and protective clothing.
- Walk around the outside of your house to check for the following hazards:
  - live electricity
  - leaking gas (odour or gas hissing)
  - septic or sewage leaking
  - hot embers
  - trees and over hanging branches
  - major structural damage.

There are numerous other hazards that you may be faced with. If you are unsure refer to your local authorities for further advice.

If the Fire Danger Rating is not extreme or catastrophic, and your plan is to stay with your property, it may involve the risk of psychological trauma, injury or death. Your property must be well prepared if you intend to stay. The better prepared your home, the more likely it will survive a bushfire.

You cannot just stay and protect your property without careful planning and preparation, you must **PREPARE.ACT.SURVIVE.**

For more information please refer to and complete the Bushfire Survival Plan (available at [www.ruralfire.qld.gov.au](http://www.ruralfire.qld.gov.au)).



Photo courtesy of Matt Hayes

# FAQS

## **Will there always be a fire truck available to fight a bushfire threatening my home?**

No, not always. Fire trucks and firefighters are a limited resource so it is important they are deployed in an appropriate manner to best manage the fire. The QFRS cannot guarantee a fire truck will be available to defend every home during a large bushfire event.

## **What does leaving early mean?**

Leaving early means before a bushfire event has reached your neighbourhood. Leaving early could be the day before or morning of predicted extreme or catastrophic bushfire weather.

## **If I know the back streets in my suburb or town very well, is it okay for me to leave at the last minute?**

If your decision in your Bushfire Survival Plan is to leave early, then you should leave well before the fire front reaches your property. Irrespective of your local area knowledge you must stick to your plan and leave early. Leaving late can be fatal.

## **Will someone from an emergency service knock on my door when it is time to leave?**

Emergency services personnel are not always available to alert the community of potential risks by door knocking and encouraging you to leave. Monitor local radio stations, television networks and emergency service websites for information updates. Remember the safest option is to leave early. Leaving too late can be fatal.

## **Can I be made to leave my home during a bushfire?**

In Queensland you can be ordered by the Police or Fire Service to evacuate if they believe it is necessary for your safety.

## **Is my house at risk of burning if there is more than 50 metres between my home and nearby bushland?**

Yes, most houses destroyed in bushfires are lost as a result of ember attack. Under certain conditions embers can cause fires to ignite up to 20 kilometres in front of the main fire. A combination of your level of preparation and your home construction will determine the survivability of your home.

## **Is cleaning my gutters and mowing my lawns enough to prepare my property for bushfire?**

No! Fire requires fuel, heat and oxygen to occur. The radiant heat and flying embers produced by bushfires mean that overhanging trees, shrubs and mulch against homes, woodpiles, old building materials, outdoor furniture or other objects stored under the deck or chemicals in the garden shed will quickly ignite. Do yourself and your neighbours a favour by taking the time to properly prepare your whole property, which includes yourself, your house and your land.



# FIRE BAN



The QFRS can restrict the use of fire and impose a fire ban in communities where predicted conditions and weather forecasts indicate fires would be difficult to control and pose a danger to communities.

Restrictions on the issue of permits are normally imposed locally by fire wardens and local fire bans may be imposed over an entire local government area, prohibiting the lighting of all open fires (gas and electric barbecues may still be used). During a local fire ban all permits to light fire issued in the designated area are cancelled.

Fire bans are advertised widely and remain in force until cancelled. To find out if there is a current fire ban enforced in your local government area visit the Rural Fire Service (RFS) website or phone the free call info line on 1800 020 440.

All the information you need in relation to Fire Wardens, permits to light fires and fire bans can be found at [www.ruralfire.qld.gov.au](http://www.ruralfire.qld.gov.au).

## Fire Wardens and fire permits

In rural Queensland the use of fire is controlled through the volunteer Fire Warden network. However if you live in an urban or rural fringe community the Fire Warden could be your local fire station.

In Queensland a permit to light fire is required by members of the public when intending to light a fire. Some exemptions may apply and advice should be sought from the Fire Warden. A Fire Warden is responsible for safe fire management within the community and controls the use of fire through the issuing of permits to light fire.

The Fire Warden's role includes:

- granting or rejecting applications for permit to light fire
- determining the conditions under which permitted fires can be lit
- advising owners and occupiers of the need for fuel and hazard reduction
- recommending safety precautions for the protection of homes and assets
- To find your Fire Warden go to [www.ruralfire.qld.gov.au](http://www.ruralfire.qld.gov.au) and use the "Fire Warden finder" tool, or contact your local RFS area office with the details provided on page 15 of this magazine.

## Your Rural Fire Brigade

For many Queenslanders the mention of the fire service conjures up images of red trucks, but for Queenslanders in rural and semi-rural areas, this is not the case. For these Queenslanders the fire service means yellow trucks and a crew of dedicated local volunteers.

### What is the Queensland Rural Fire Service?

There is no urban fire service coverage of rural, semi-rural and some urban fringe areas. The RFS, made up of approximately 34 000 volunteers, is the volunteer side of the QFRS and it is these volunteers who provide fire services to 93 per cent of Queensland. Although there is a general perception that the main role of RFS volunteers is active firefighting, there is much more to being a member of a Rural Fire Brigade (RFB).

### What services do RFB provide to communities?

Members of the RFS and your local rural fire brigade provide a range of services to help keep Queensland communities safe.

**Fighting fires** – RFS respond to the outbreak of fires within their local area and in surrounding areas in support of other RFB and emergency service workers.

**Fire prevention** – RFB's, in conjunction with Rural Operations staff, undertake a range of planning and preparation activities throughout the year to ensure communities are well prepared for the fire season. One of these activities is hazard reduction burns. Hazard reduction burns use fire to reduce excess vegetation and minimise the potential for bushfires to get out of control.

**Community education** – RFS Volunteer Community Educators deliver a range of community education programs within their communities. Their local knowledge paired with their knowledge of fire behaviour and prevention ensures the community gets information and education specific to their circumstances.

**Permits to light fire** – In Queensland the RFS controls the use of fire by not allowing fires to be lit without a specific permit. RFS volunteer Fire Wardens and authorised fire officers manage the permit to light fire system.

**Deployments and assistance during disasters** – RFS volunteers are often sent on deployment to assist other states during fire disasters. Members are also called upon to assist other emergency service agencies during disasters such as floods and storms.

### How do I become involved in the RFS?

The RFS needs all types of people, with a wide range of skills, to help keep your community safe. There are a number of roles in the RFS. These include firefighting, community education, fundraising, administration, communication and more.

As a member of a RFB you have the opportunity to not only help your community, you will also meet great people and make new friends, become part of a team and learn a range of new skills through the wide variety of training available to you. To find out how you can become a volunteer firefighter contact your local RFB.



Photo courtesy of Morning Bulletin



“The Rural Fire Service is made up of approximately 34 000 volunteers, who provide fire services to 93 per cent of Queensland.”



# Rural Operations Areas



## Cairns Area Office

Phone: (07) 4039 8240

## Innisfail Area Office

Phone: (07) 4061 0650

## Townsville Area Office

Phone: (07) 4796 9082

## Charters Towers or Cloncurry Area Office

Phone: (07) 4787 8213

## Mackay Area Office

Phone: (07) 4965 6641

## Barcaldine or Emerald Area Office

Phone: (07) 4651 1190

## Rockhampton Area Office

Phone: (07) 4938 4736

## Bundaberg Area Office

Phone: (07) 4153 3244

## Maryborough Area Office

Phone: (07) 4190 4839

## Caloundra Area Office

Phone: (07) 5420 7517

## Toowoomba Area Office

Phone: (07) 4614 2835

## Roma Area Office

Phone: (07) 4622 2074

## Caboolture Area Office

Phone: (07) 5420 1333

## Ipswich Area Office

Phone: (07) 3381 7122

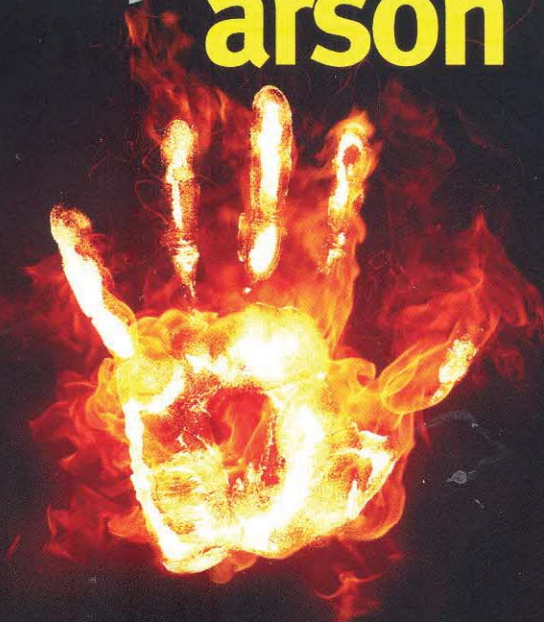
# Bushfire is a very real risk to many of our suburbs, so make sure you are prepared . . . ***NOW!***

For further information, go to  
[www.fire.qld.gov.au](http://www.fire.qld.gov.au) or  
[www.ruralfire.qld.gov.au](http://www.ruralfire.qld.gov.au)  
or book a free  
“Are You Bushfire Prepared?”  
presentation by calling  
**1300 369 003**

Tomorrow's Queensland:  
strong, green, smart, healthy and fair



# stop bushfire arson



if YOU see something,  
know something,  
then say something...

call **CRIME STOPPERS** on **1800 333 000**

**Rewards** are paid for information leading to arrests, and you can remain anonymous.

## bushfire arson...

**take action. Don't let arsonists win...**

If your workplace, neighbourhood or district is being affected by deliberately lit, illegal bushfires, there are things you can do to help stop them.

To make sure the area you are responsible for is safe from bushfire arsonists, follow these simple rules.

### Things you can do immediately...

1. remember the time and location where you see fires
2. write down the description of people acting suspiciously in the area where fires have been happening, or any unusual activity
3. write down the description of the vehicles entering or leaving the area about the times of fires
4. pass this information onto your local police, or anonymously to **CRIMESTOPPERS** call **1800 333 000**.

*For more information to protect your home and community against deliberately lit fires, go to [www.ruralfire.qld.gov.au](http://www.ruralfire.qld.gov.au) [www.fire.qld.gov.au](http://www.fire.qld.gov.au) or phone **1800 369 003**.*



Queensland  
Government



## Evacuation - get out, stay out

During a fire in your home, you will only have one to two minutes from the sounding of the alarm to when your life is seriously threatened by fire or smoke. It is very important that you prepare and practise an escape plan, and that everyone in the household knows what to do.

One of the key reasons people lose their lives in house fires is because they haven't planned their way out.

Take the time to sit down and draw up a home escape plan. It will be half an hour well spent in an emergency where every second counts.

### You should:

- ✓ Start with a floor diagram of the home;
- ✓ Make sure that everyone knows the sound of the smoke alarm and what to do if a fire occurs;
- ✓ Plan escape routes. Identify a primary escape route out of every room, then pick a secondary route in case the first is blocked by fire (always plan two ways out of each room);
- ✓ Select and indicate a meeting place outside of the home (e.g. the letterbox);
- ✓ Dial 000 - the number to call in an emergency - from a neighbour's home or mobile phone.

### Home Security vs. Fire Safety

People have died in fires because they had dead-locked themselves in and removed the key from the lock. You must be able to quickly escape from your home in the event of fire.

### Tips

- ✓ Install deadlocks that can be opened from the inside without keys;
- ✓ If keys are needed, leave the key in the lock or on a hook on the centre of the door, but out of reach of potential intruders;
- ✓ Limit the number of keys needed to open doors by having locks keyed alike;
- ✓ When installing security grills on windows, select a unit that feature keyless options on the inside;
- ✓ Ensure that any window grill bars/screens readily open outwards from the inside;
- ✓ Be prepared to smash a window as a means of escape. Use a solid object to break the window, clear away jagged glass to protect yourself against cuts;
- ✓ If grills are key locked, the key should be readily on hand.

For further information on home evacuation go to the Queensland Fire & Rescue Service website at [www.fire.qld.gov.au](http://www.fire.qld.gov.au)



## What do you need to do?

In Queensland, homes are required by law to have smoke alarms installed that comply with Australian Standards.

Homes built before 1997, must have, as a minimum, 9 volt battery operated smoke alarms installed.

Homes built after 1997, must have 240 volt (hard-wired) smoke alarms installed at the time of construction. This is a requirement under the Building Code of Australia (BCA).

If major renovations have been done since 1997, 240 volt (hard-wired) smoke alarms must be installed.

Queensland Fire & Rescue Service recommends installing photoelectric smoke alarms, which have long life batteries or hard wired types, for better protection.

## How are smoke alarm laws enforced?

On the sale of a property, the vendor must lodge a form with the Queensland Land Registry ([www.nrw.qld.gov.au](http://www.nrw.qld.gov.au)), stating that smoke alarms are installed in the property and the purchaser has been informed smoke alarms are installed.

Fire Officers will also investigate complaints received. There is a maximum fine of \$500 for failing to install smoke alarms.

Department of Community Safety

**For further information about smoke alarm laws go to [www.fire.qld.gov.au](http://www.fire.qld.gov.au) or call 1300 369 003**



**Queensland  
Government**

## What are the minimum requirements?

The minimum smoke alarm location requirements are the same for all homes.

- There must be one alarm outside sleeping areas and one alarm on each level of the home.
- Alarms are not required to be installed where the level is predominantly open such as the basement level of a highset house that is used for car-parking or laundry.
- Alarms are not required for a unit in a level containing only sanitary facilities or parking.
- The laws will require the typical home to install one or two alarms.
- Depending on the home more than one smoke alarm will be required by law.

Remember smoke alarms installed must be in accordance with Australian Standards and can be 9 volt battery operated, 10 year battery operated or 240 volt hardwired.

## Are you renting?

Smoke alarm laws place obligations on both the lessor and the tenant.

## What if I'm a lessor?

You are required to:

- have smoke alarms installed in your rental property/ies that comply with Australian Standards;
- test and clean the smoke alarm in accordance with the manufacturer's instructions within 30 days before the start of the tenancy (this includes renewals);
- replace each battery that is flat or which you are aware is almost flat within 30 days before the start of the tenancy; and
- replace the smoke alarm before the end of its service life, or if it reaches the end of its service life replace it immediately.

## What if I'm a tenant?

You are required to:

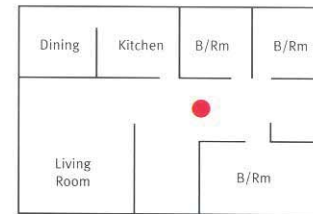
- test each smoke alarm every 12 months;
- clean each smoke alarm every 12 months;
- replace each battery that is flat or that you are aware is almost flat; and
- advise the lessor as soon as practicable, if the smoke alarm fails or is about to fail other than by reason of the failure of the battery.

As a tenant, you cannot:

- remove the smoke alarm;
- remove the battery (otherwise than to replace it); or
- do anything to reduce the effectiveness of the smoke alarm (eg paint it).

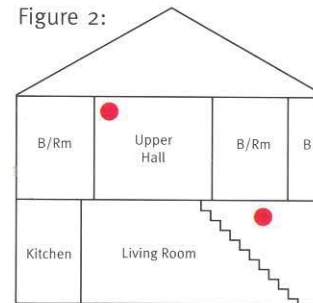
## How many do I need?

Figure 1:



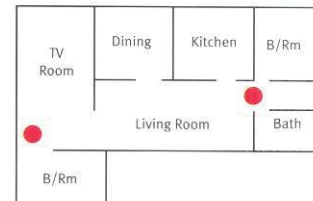
Between the bedrooms and the rest of the house  
**\*\* Minimum by law**

Figure 2:



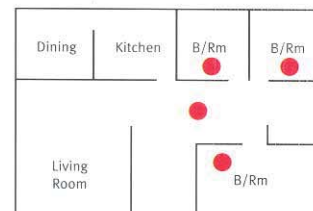
Near bedrooms and on every storey of a multi-level house  
**\*\* Minimum by law**

Figure 3:



Additional alarms are needed in homes with separated sleeping areas  
**\*\* Minimum by law**

Figure 4:



Inside the bedroom if you are a heavy sleeper or if you close the door  
**Additional recommendation for added safety (not law)**

# safehome

Call 1300 369 003

for your **FREE** fire safety visit

- Smoke alarm advice
- Evacuation plans
- Avoid fire risks

Proudly Supported by

**NRMA**  
INSURANCE



**Queensland**  
Government  
Department of  
Emergency Services



Dear Queenslander

You're invited to book a **FREE** Safehome visit from your local fire crew to check your home has the best possible protection against fire.

This exclusive offer entitles you to around 45 minutes worth of advice about:

- smoke alarm installation and maintenance
- types of smoke alarms
- fire risks in each of the rooms of your home
- what to look out for with home appliances
- outdoor fire safety
- basic electrical safety
- evacuation planning
- fire prevention equipment
- household chemical storage.

Call 1300 369 003 to claim your best free insurance against fire danger. Please make sure yours is a Safehome.

Yours sincerely

The Queensland Fire and Rescue Service

# safehome

Call 1300 369 003




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**Queensland**  
Government  
Department of  
Emergency Services



STAY SAFE THIS WINTER FIRE DOESN'T DISCRIMINATE

DON'T LEARN  
FIRE SAFETY

## FACT SHEET

# by Accident

### Smoke Alarms

Install and maintain your photoelectric smoke alarms. Do you have an adequate number of photoelectric smoke alarms throughout your home? Have you checked the batteries and tested the alarm? Make sure it's in working order.

### Evacuation Plan

Develop a home evacuation plan and practise it with all the members of your household. If you use deadlocks, keep the keys in a location known to all occupants. Assemble at your meeting point e.g. letterbox and call the Queensland Fire and Rescue Service on Triple Zero (000). NEVER go back into a burning house.

### Cooking

Keep an eye on your cooking. Never leave cooking unattended. Cooking fires are the most common cause of residential fires. Have an extinguisher and fire blanket stored in accessible low fire risk area e.g. Linen cupboard or pantry.

### Clothes Dryers

Regularly clean your clothes dryer. Clean the lint out from the filter in the dryer. Do not leave the home or go to sleep with the clothes dryer on. Always make sure that the clothes dryer goes through the full drying cycle, which includes the cool down stage.

### Electrical

Check and test electrical appliances that have been stored for long periods of time and also frequently used appliances. Do not use any electrical appliance if the cords are frayed or worn. Avoid overloading power boards with electrical appliances. Never go to sleep with an electric blanket on.

### Fireplace

Screen and clean your open fireplace. If you have a fireplace, ensure fire screens are always in position. All solid fuel heaters should have chimneys cleaned annually.

### Low Fire Danger Clothing

When purchasing clothing for children, such as pyjamas look for LOW FIRE DANGER labels. Consider buying clothing which is close fitting. Wool offers a higher degree of fire resistance than synthetic materials.

### Open Flames

Take care with your candles, matches and lighters. Use candles and open flames with care. Always extinguish open flames before going to bed or leaving the home. Store matches and lighters in a secure place not accessible to children. Ensure cigarettes are completely extinguished before going to bed. Never smoke in bed.

### Heaters

Keep a clear space of 1 metre around your heater. Portable heaters should always be placed in a stable position, a safe distance away from bedding, clothing, curtains and tablecloths.

In an emergency, call 000

If you are concerned about the fire risks in and around your home,  
call **13 QGOV (13 74 68)** to book your FREE **safehome** visit  
or book online at **[www.fire.qld.gov.au](http://www.fire.qld.gov.au)**

FOLLOW US ON



QUEENSLAND  
GOVERNMENT

STAY SAFE THIS WINTER FIRE DOESN'T DISCRIMINATE

## CHECKLIST

The Queensland Fire and Rescue Service recommend using this simple safety checklist to help keep homes fire safe.

# DON'T LEARN FIRE SAFETY by Accident

### DETECTION AND EVACUATION

- ☐ Install working photoelectric smoke alarms
- ☐ Practise your home evacuation plan
- ☐ Know at least two safe ways out of each room
- ☐ Designate a safe meeting point e.g letterbox
- ☐ Talk to your family about what to do in the event of a fire: Get down low and go go go - Stop drop and roll - Get out and stay out
- ☐ Know who to contact in an emergency, Triple Zero (000)

### PREVENTION

- ☐ Check all electrical items for damage, do not use if damaged
- ☐ Install an electrical safety switch
- ☐ Regularly clean your oven, stove top and rangehood
- ☐ Only use one appliance per power point
- ☐ Regularly clean your clothes dryer and air-conditioner filters
- ☐ Store chemicals in a secure area away from high fire risk areas
- ☐ Store matches and lighters in a secure place not accessible to children
- ☐ Regularly maintain the yard removing dead leaves and scrub

### FIRE SAFETY TIPS

- ☐ Do not use water to extinguish fat or oil fires
- ☐ Use only qualified Electricians to fix or maintain heating and electrical appliances
- ☐ Oil, gas or wood heating units may require a yearly maintenance check
- ☐ Only use fuses of recommended rating and install an electrical safety switch
- ☐ Keep a Fire Extinguisher and Fire Blanket in a low fire risk area

FOLLOW US ON  

If you are concerned about the fire risks in and around your home, call **13 QGOV (13 74 68)** to book your FREE **safehome** visit or book online at **[www.fire.qld.gov.au](http://www.fire.qld.gov.au)**

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**QUEENSLAND  
GOVERNMENT**

## The Rural Fire Service

is made up of more than  
36 000 dedicated men and  
women across Queensland  
who give up their time  
to help protect their  
communities from the  
destructive force of fire.

## YouCan!





## As a member of a **RuralFireBrigade**

*You learn new skills including:*

- Teamwork
- Communication
- Incident Management
- Fire Behaviour
- Leadership






















You meet great people, develop networks and make new friends, and you help protect your community from the destructive force of fire.

**The Rural Fire Service** needs all types of people with a wide range of skills to help keep our communities safe. **YouCan!**



*For more information visit [www.ruralfire.qld.gov.au](http://www.ruralfire.qld.gov.au)*

## Mapping Symbols (cont.)

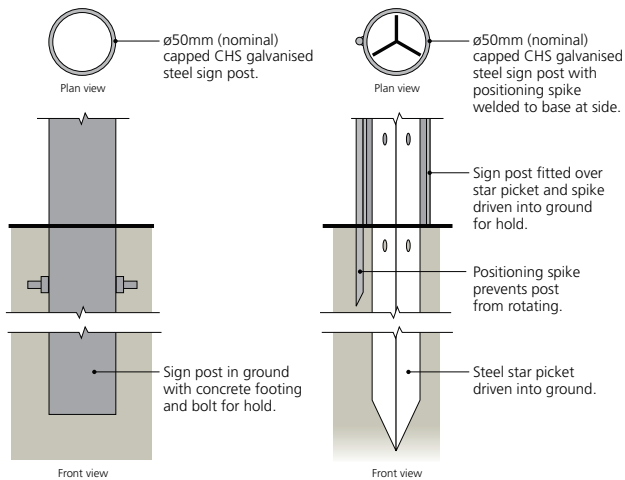
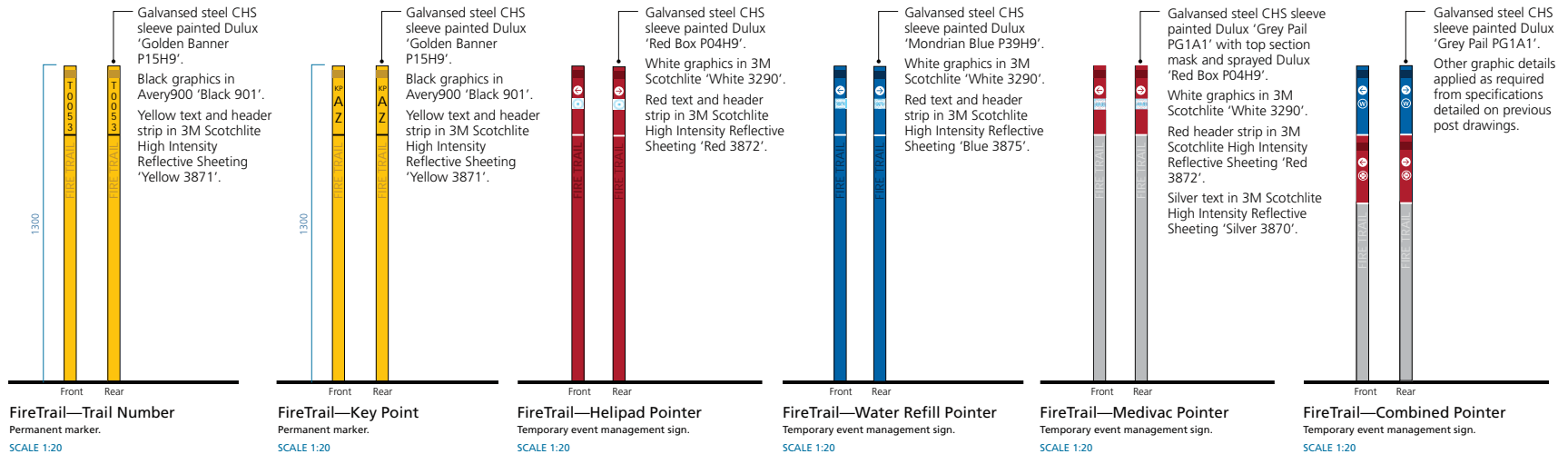
RED – FIRE		BLACK – CONTROL LINES		BLUE – WRITING & SYMBOLS			
	Strategic or Tactical Significance		Command, Control & Coordination		Logistics Related		
	Assets to be Protected						
Name		Symbol		Name		Symbol	
REFUGE AREA		BLUE 		ESCAPE ROUTE (add arrow to show safe exit)		BLUE 	
CONTROL CENTRE (Incident Management Team location)		BLUE 					
DIVISION COMMAND		BLUE 		STAGING AREA (where resources are available)		BLUE 	
SECTOR COMMAND		BLUE 		BASE CAMP		BLUE 	
HELIPAD		BLUE 		AIR BASE (fixed wing and/or helicopter base)		BLUE 	
WATER POINT VEHICLE (Firefighting Water Supply)		BLUE 		WATER POINT HELICOPTER (Helicopter water supply)		BLUE 	
AMBULANCE LOCATION		BLUE 		ABORIGINAL SITE OR ARTIFACTS		BLUE 	
THREATENED PROPERTY		BLUE 		ENDANGERED FLORA		BLUE 	
HISTORICAL SITE (Building or structures)		BLUE 		ENDANGERED FAUNA		BLUE 	

### FireTrail Package

In addition to some permanent signs the provision of temporary FireTrail signs allows the signage to be customised quickly in response to fire fighting operations.

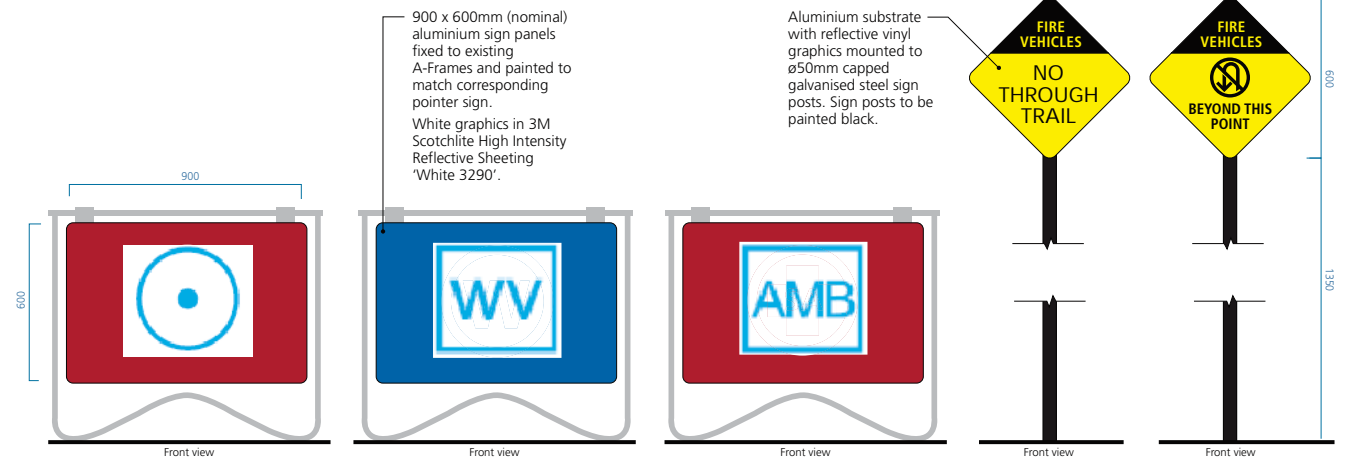
*Note: The decision of whether or not to erect permanent fire signage on GCCC managed lands is the responsibility of GCCC based on assessed risk and needs.*

*The provision of signage or otherwise in no way diminishes the responsibility of a fire fighter to inspect the conditions of a fire trail before use, drive within their capabilities and read a map.*



**Permanent FireTrail Post**  
Indicative construction.  
SCALE 1:4

**Temporary FireTrail Post**  
Indicative construction.  
SCALE 1:4



**FireTrail—Desination A-Frame Signs**  
Temporary event management signs.  
SCALE 1:20

**FireTrail—Vehicle Control Signs**  
SCALE 1:20



**Bushland Protection  
Systems Pty Ltd**  
Specialising in  
**BUSHFIRE HAZARD  
PLANNING & MITIGATION**

ACN 109 667 101 ABN 97 782 336 595 Phone: 07 5546 7933 Fax: 07 5546 7988 PO Box 40, Ormeau, Qld, 4208  
E-mail: admin@bpsfire.com.au

## **BUSHFIRE HAZARD ASSESSMENT AND MITIGATION PLAN**

**ON**

**PROPOSED RESIDENTIAL SUBDIVISION  
ON LOT 5 SP146973  
FELLING DRIVE  
MAUDSLAND**

**PREPARED BY**

**BUSHLAND PROTECTION SYSTEMS P/L**

**COMMISSIONED BY**

**ILIV GROUP**

**DATE: 5<sup>th</sup> June, 2012.**

Qld Fire & Rescue Service  
Gold Coast Bushfire Planning  
Bushfire Management Plan  
Assessed - File No.  
A 247442  
Plan to be read in conjunction with QFRS  
Cover Sheet bearing same file no.

## 1. Background

A Bushfire Mitigation Plan is designed to identify and minimise the potential bushfire risk to a given property and to help property owners to minimise bushfire risk to themselves, their property and their neighbours, although it will not completely eliminate that risk. Ultimately it is a community responsibility to protect the environmental values, life and property in their area.

This plan is produced in accordance with the State Planning Policy 1/03, *Mitigating the Adverse Impacts of Flood, Bushfire and Landslide*, under the Queensland Sustainable Planning Act 2009 and the Gold Coast Councils Constraint Codes- Part 7 Division 3 Chapter 2, *Bushfire Management Areas*.

This Bushfire Hazard Assessment and Mitigation Plan is for the proposed residential subdivision over Lot 5 SP146973, Felling Drive, Maudsland. This plan is based on the following material supplied by Iliv Group and the site inspection on 1/6/12.

- 1.1. A copy of the Proposed Reconfiguration Plan showing the lot and road layout, drawn by Schlenker Surveying (QLD), drawing no. 11005-06B, Amendment B, dated 1/6/12, is included as Appendix 1 in this report.

## 2. Land Use.

The subject site is a 3.272Ha rural allotment with road frontage to Felling Drive and Gaven Arterial Road. The property slopes down from Gaven Arterial Road to the gully, then slopes back up to Felling Drive in the southern corner of the site. The general aspect of the site is to the east and southeast. In general gradients over the site are in the order of 10-15%.

The vegetation over the site is predominantly re-growth pine with grass and weed understorey as well as some grassy eucalypt. All slashpine is to be removed over the whole site as unmanaged, it creates a significant bushfire hazard.

To the north is the Gaven Arterial road with approximately 35 metres of cleared width. On the opposite side is a Council owned allotment which is currently vacant. The majority of the allotment is being regularly slashed with only pockets of grass and weed growth scattered around the property, too small to be assessable under the SPP 1/03 (*SPP 1/03 FAQ, Ver.2, Nov. 2003*). If this allotment starts to become overgrown, Council should be contacted immediately to rectify the situation.

To the east is Felling Drive with residential development opposite. To the south is also residential development. The predominant potential bushfire hazard is upslope to the west on the neighbouring property, which is also earmarked for residential development. Adjacent to proposed Lot 1 there is an existing dwelling with a cleared area. Until development occurs on the neighbouring site, it still poses a bushfire hazard. The severity of bushfire hazard as calculated in accordance with appendix 3 of the State Planning Policy 1/03 Guidelines (SPP1/03) would assign a vegetation score of 6 (grassy eucalypt), a slope score of 3 (undulating hills >5%-10%) and an aspect score of 0 (east to south), equating to a severity of bushfire hazard score of 9 medium (see table 1).

The park 900 consisting of 8,848m<sup>2</sup> is an overland flow path with 2 retention basins. This park is to be managed to prevent an unacceptable build-up of volatile fuel loads which may pose a risk to persons, property or the local ecosystems.

Table 1

TOTAL HAZARD SCORE	SEVERITY OF BUSHFIRE HAZARD
13 or greater	High
6 to 12.5	Medium
1 to 5.5	Low

Section A3.24 and table A3.5 of the SPP 1/03 sets out inclusion zones when calculating a PBH level. Any land within 50 metres of medium PBH rated bushland is deemed to have a medium PBH rating. Any land within 100 metres of high PBH rated bushland is deemed to have a high PBH rating. Therefore the allotments within 50 metres of the bushland on the neighbouring property would be assigned a medium PBH rating, being Lots 1, 10-13 & 16-18. The remainder of the proposed allotments would be assigned a low PBH rating.

### 3. Road, Driveway & Fire Trail layout.

The proposed road layout is accessed from low PBH rated areas with proposed connectivity to existing and future residential areas. It would be unlikely that access or egress would be denied due to bushfire.

Being a residential development, driveways will be short and direct.

A fire trail is to be established along the boundaries of Lots 15 & 16 (see Appendix 1), providing connectivity to the 20 metre wide bushfire buffer on the neighbouring property and for management of Park 900. The fire/maintenance trail would be low impact preferably with a mowed or slashed surface which would minimise disturbance or erosion, Appendix 3 on fire trails is included in this report as a guide on establishing and maintaining fire access trails.

There is a 4 metre wide pathway from Road 3 to Felling Drive beside Lots 19 & 24 (see Appendix 1). This can also be used for maintenance of Park 900 and for fire management access.

### 4. Appropriate House Site Location.

To provide a minimum 20 metre separation from the western bushland exposure, it is proposed to create a 20 metre wide bushfire buffer over the neighbouring property as shown in Appendix 1 of this report. Such an arrangement would need to be by agreement between the developer, the neighbouring land owner and Council. The agreement would need to be legally binding, with Council having the ability to enforce management by the responsible party. The agreement would need to be binding on current and future land owners/parties. The buffer would be temporary until such time as development takes place on the neighbouring land. The buffer is to consist of regularly slashed native grassland with retained mature trees, in effect, creating an open woodland environment with managed understorey. Establishment of the buffer may require an OPW application for vegetation clearing. The benefit of this approach

is to avoid the establishment of temporary, (eventually un-necessary) infrastructure that reduces yield rates, or having un-necessarily high construction ratings with excessive building costs, due to a temporary hazard. This approach also assists the neighbouring land owner to meet their obligations under s.67 of the Fire and Rescue Service Act 1990.

Lot 16 has a building envelope to ensure that the dwelling will have a 20 metre separation to unmanaged bushland to the west.

All dwellings are located on the lower slope of the local area and with the implementation of the buffer and building envelope mentioned previously, all dwellings will have a minimum 20 metres separation from unmanaged bushland.

## 5. Appropriate Building Construction.

The bushfire provisions of the Building Code of Australia (BCA) are applied to Class 1, 2 & 3 buildings and associated Class 10a buildings, located in designated bushfire prone areas. "Designated bushfire prone area means land which has been designated under a power in legislation as being subject, or likely to be subject, to bushfires" (BCA 1.1.1 Definitions).

The Gold Coast City Council Planning Scheme, section 7.3.2.1, states "*Land identified on Overlay Map OM10 – Potential Bushfire Hazard Areas, and confirmed through site-based assessment as being in a Medium or High Potential Bushfire Hazard Area, should be considered as designated bushfire prone areas for the purposes of the Building Code of Australia and AS 3959-1999 Construction of Buildings in Bushfire-Prone Areas, and all Building Work must be carried out in a manner consistent with this standard.*" AS3959-1999 has been superseded by AS3959-2009 and therefore AS3959-2009 should be adhered too.

For those lots with a Low PBH rating, under the Gold Coast Councils Constraint Codes- Part 7 Division 3 Chapter 2, Section 1 & PC3, dwellings with a low PBH rating do not require assessment under the Building Code of Australia or under the Australian Standard (AS3959) for *Construction of Buildings in Bushfire Prone Areas* and therefore no specific level of construction would be required in relation to bushfire.

For those lots with a medium PBH rating under the SPP1/03, the Gold Coast Council's Constraint Codes- Part 7 Division 3 Chapter 2, PC3, requires the Building Code of Australia (BCA) and where relevant the Australian Standard for Construction of Buildings in Bushfire-Prone Areas (AS3959) to be addressed.

P2.3.4 of the BCA requires:- "A Class 1 building or a Class 10a building or deck associated with a Class 1 building that is constructed in a designated bushfire prone area must be designed and constructed to reduce the risk of ignition from a bushfire while the fire front passes."

Section 3.7.4.0 of the BCA states:- "*Performance requirement P2.3.4 is satisfied for a Class 1 building or a Class 10a building or deck associated with a Class 1 building, located in a designated bushfire prone area if it is constructed in accordance with AS 3959*".

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The level of construction for dwellings, if any, should be assigned prior to plan sealing stage (or just prior to sale if selling off the plan) when the actual risk would be more readily assessable for individual allotments, allowing for potential alterations during development to terrain and vegetation types.

## **6. Appropriate Clearing and Landscaping.**

The residential allotments are to be maintained with low ground fuel levels at all times and may include domestic gardens, lawns with grass kept under 100mm in height and scattered trees with discontinuous canopy.

The proposed 20 metre wide managed buffer to lots 11, 12, 16 & 18 is to be cleared and managed with low ground fuel levels by the developer, until such time as the neighbouring property is developed. This can be achieved by a temporary easement to be extinguished once development takes place over the neighbouring site.

The park 900, which is an overland flow path and its associated retention basins, is to be managed to prevent a build-up of volatile ground fuel levels that could pose a risk to persons, property or the surrounding ecosystems.

As the development is to take place in stages, care should be exercised to ensure the developed stages are not threatened by bushfire from the undeveloped stages.

All timber, foliage and rubbish previously cleared or accumulated as a result of the implementation of this report would need to be removed from the site or mulched and not simply moved down slope as this would result in a concentrated area of fuel loading which would increase the PBH from that direction.

Added protection from bushfire can be achieved by establishing green fire breaks which include green lawns, trees arranged to create a shield to catch sparks or fire brands or the expanding of rainforest species. Trees and shrubs not subject to drought stress will cope better during bushfires. The higher the moisture content in the plant the slower it burns. Therefore by keeping the surrounding area green and low in dry ground fuel, the intensity of an approaching fire will be reduced and the risk of spot fires minimised.

For optimal bushfire safety and best practise, the allotments must have the required vegetation management practices established during operational works and be maintained by the developer with low ground fuel levels until sold. Once sold the purchaser must maintain the allotment at all times, before, during and after construction of the dwelling.

## **7. Provision of Adequate Water Supplies.**

The area of the proposed development is serviced by reticulated water supplies with the inclusion of fire hydrants for fire fighting purposes and is to be supplied in accordance with Planning Scheme Policy 11 – Land Development Guidelines.

## 8. Provision of Fire Fighting Infrastructure.

Proposed dwellings are to have external hose cocks and hoses that are positioned so water supply is capable of reaching to all parts of the building. All water lines are to be covered by at least 300mm of soil. Residents should maintain good access around their homes for fire suppression activities by fire authorities.

## 9. Local Fire Brigades.

The subject property is currently in the Guanaba Rural Fire Brigade district and they would be responded on a 000 emergency call. If back-up is required for vegetation fire, further units would be engaged by the Gold Coast Rural Fire Brigades Group. Urban fire appliances would be responded in the event of a structural fire or specialised structural protection being required.

## 10. Improved Community Awareness.

Minimising ground fuel and regrowth is the easiest way of reducing bushfire hazard on rural lots. Owners can assist in the mitigation of these bushfires by the removal of ground fuels prior to the bushfire season.

The Bushland open space is a very sensitive ecosystem and could be altered drastically if not cared for properly. Residents can assist in maintaining this fragile ecosystem by preventing unwanted fires from encroaching into the parkland, ensure that dumping of rubbish does not degrade the area and that exotic plant species do not invade the bushland. Hot fires on a regular basis will degrade the bushland's biodiversity.

It would be recommended that a copy of the fire management plan be placed on display at any sales office, and a copy of the plan including Appendix 2 be given to the purchasers of lots with a direct exposure to the bushland areas to provide them with the necessary information required for the building application process.

A copy of the plan should be retained by residents and passed on to future residents including Appendix 2 on "being prepared" to assist them in minimising the risk of bushfire damage. It is recommended that regular liaison with the local fire brigade takes place as a way of being informed of danger periods.

Further useful information on Bushfire Preparedness and Local Rural Fire Brigades can be obtained through the Rural Fire Service Division of the Queensland Fire and Rescue Service at [www.ruralfire.qld.gov.au](http://www.ruralfire.qld.gov.au) or by phoning 1300 369 003.

## 11. Summary of recommendations.

- A fire trail is to be established along the boundaries of Lots 15 & 16 (see Appendix 1), providing connectivity to the 20 metre wide bushfire buffer on the neighbouring property and for management of Park 900. The fire/maintenance trail would be low impact preferably with a mowed or slashed surface which would minimise disturbance or erosion.

- To provide a minimum 20 metre separation from the western bushland exposure, it is proposed to create a 20 metre wide bushfire buffer over the neighbouring property as shown in Appendix 1 of this report. Such an arrangement would need to be by agreement between the developer, the neighbouring land owner and Council. The agreement would need to be legally binding, with Council having the ability to enforce management by the responsible party. The agreement would need to be binding on current and future land owners/parties. The buffer would be temporary until such time as development takes place on the neighbouring land. The buffer is to consist of regularly slashed native grassland with retained mature trees, in effect, creating an open woodland environment with managed understorey.
- The level of construction for dwellings under AS3959-2009, if any, should be assigned prior to plan sealing stage (or just prior to sale if selling off the plan) when the actual risk would be more readily assessable for individual allotments, allowing for potential alterations during development to terrain and vegetation types.
- The residential allotments are to be maintained with low ground fuel levels at all times and may include domestic gardens, lawns with grass kept under 100mm in height and scattered trees with discontinuous canopy.
- The proposed 20 metre wide managed buffer to lots 11, 12, 16 & 18 is to be cleared and managed with low ground fuel levels by the developer, until such time as the neighbouring property is developed. This can be achieved by a temporary easement to be extinguished once development takes place over the neighbouring site.
- The park 900, which is an overland flow path and its associated retention basins, is to be managed to prevent a build-up of volatile ground fuel levels that could pose a risk to persons, property or the surrounding ecosystems.
- As the development is to take place in stages, care should be exercised to ensure the developed stages are not threatened by bushfire from the undeveloped stages.
- All timber, foliage and rubbish previously cleared or accumulated as a result of the implementation of this report would need to be removed from the site or mulched and not simply moved down slope as this would result in a concentrated area of fuel loading which would increase the PBH from that direction.
- For optimal bushfire safety and best practise, the allotments must have the required vegetation management practices established during operational works and be maintained by the developer with low ground fuel levels until sold. Once sold the purchaser must maintain the allotment at all times, before, during and after construction of the dwelling.
- Proposed dwellings are to have external hose cocks and hoses that are positioned so water supply is capable of reaching to all parts of the building. All water lines are to be covered by at least 300mm of soil. Residents should maintain good access around their homes for fire suppression activities by fire authorities.

- It would be recommended that a copy of the fire management plan be placed on display at any sales office, and a copy of the plan including Appendix 2 be given to the purchasers of lots with a direct exposure to the bushland areas to provide them with the necessary information required for the building application process.
- A copy of the plan should be retained by residents and passed on to future residents including Appendix 2 on "being prepared" to assist them in minimising the risk of bushfire damage. It is recommended that regular liaison with the local fire brigade takes place as a way of being informed of danger periods.

## 12. Conclusion.

This Bushfire Hazard Assessment and Mitigation Plan is for the 29 Lot Residential subdivision on the corner of Gaven Arterial Road and Felling Drive on Lot 5 SP146973. It is located in a developing residential area with the predominant bushfire hazard to the west with a down slope approach through land earmarked for residential development. Most lots will be located in a low PBH area with only the lots within 50 metres of unmanaged bushland having a medium PBH rating.

This plan should remain current for a period of 5 years, until 2017, at which time it should be subject to review to take account of changing land use and vegetation patterns. Any major bush fire event affecting the subject site should also trigger a review in order to determine effectiveness of protection measures and annual hazard reduction initiatives.

Ultimately, persons living in a bushfire prone area must take the precautions necessary to protect themselves, their families and their homes if Brigades are stretched and are unable to attend immediately.

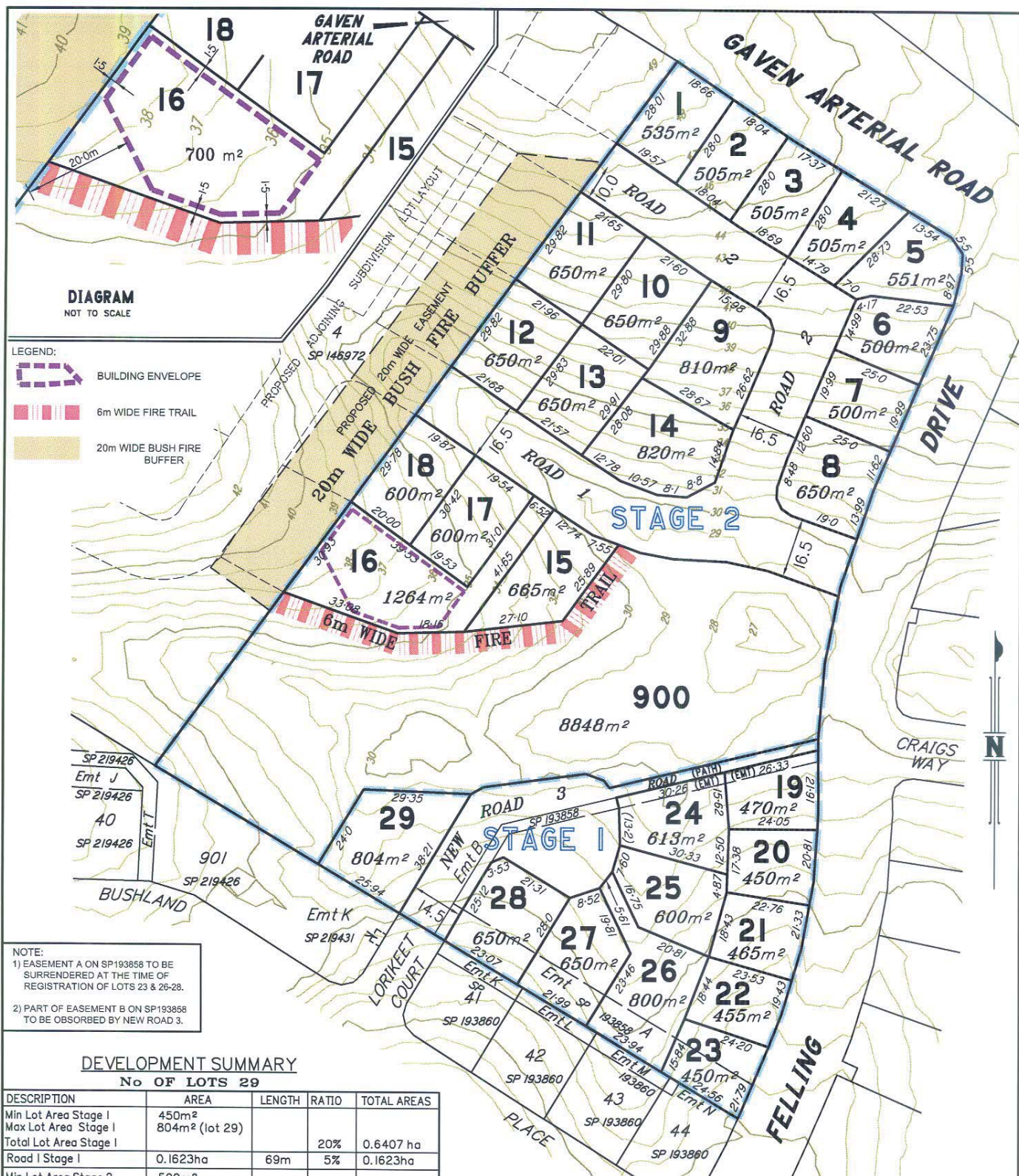
If you require any further assistance please do not hesitate to contact this office.



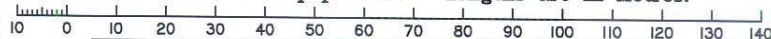
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C. L. Bain  
Principal Consultant.

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Scale 1:1000 @ A3 paper size - Lengths are in Metres.



AMENDMENTS		
DESCRIPTION	DATE	
A BUSH FIRE PROVISIONS	1.6.12	
B Proposed EMT 20m Wide & 2nd Plan with Photo	1.6.12	

**SCHLENKER SURVEYING (QLD)**  
Gold Coast • Brisbane • Rockhampton

Consultants in Surveying,  
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DRAWN	DATE	CHECKED	DATE
KDC	19.4.2012	KWB	19.4.2012

SURVEYED	DATE		

SCALE	JOB NO.	DWG. NO.
1:1000	11005	11005-06B

11005 FRENKEL - Felling 5 Drawings 11005-06B Proposal Plan.dwg

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## SUBDIVISION PROPOSAL PLAN

Lots 1-29, 900 (Public Open Space)  
& New Road

Cancelling Lot 5 on SP146973

COUNCIL OF THE CITY OF GOLD COAST

8 Felling Drive, MAUDSLAND.

PARISH	COUNTY	Ward
BARROW		

## APPENDIX 2

### Being Prepared

Knowing how to prepare your property for bush fire, both pre-fire and during a fire, can assist in protecting people and property. It can also alleviate a lot of the stress and panic and the feeling of helplessness that is commonly felt by the inexperienced and by the ill-prepared.

It is generally accepted that South East Queensland does not experience the same degree of extreme fire conditions as the southern states of New South Wales, Victoria and South Australia. Having said this it is also accepted that this State's bushland experiences a relatively regular fire regime. From time to time conditions may occur that will institute a serious and potentially destructive fire. These conditions can be recognised and precautions taken. It must be remembered that during extreme fire conditions the fire services may be stretched to the limit and may not be able to respond immediately to your particular emergency. Fire trucks and fire fighters are a limited resource so it is important that they are deployed in an appropriate manner to best manage the fire. The Queensland Fire and Rescue Service do not guarantee a fire truck will be available to defend every structure during a large bushfire. So it would be desirable to be as prepared and self-reliant as possible to protect yourself, your family and your assets. It is not difficult if appropriate preparation is undertaken and the following information is provided to be of some assistance.

#### 1. Conditions that may lead to a Serious Fire:

- 1.1. Higher than average air temperatures for prolonged periods.
- 1.2. Large and very dry fuel loads.
- 1.3. Prolonged dry spell with little or no rain resulting in low soil moisture content.
- 1.4. Very low relative humidity, ie. there is very little moisture in the air.
- 1.5. Strong and gusty winds, usually from the north through to the west contribute to increased fire hazard. The longer these winds continue the drier the conditions become, and the higher the risk of serious fire.

Observation of local weather conditions past and present will give the best indication of the potential intensity of a fire at any given time or place.

Notification of potential bushfire conditions are available from the Queensland Rural Fire Service and Local Brigades, in the form of Fire Danger Ratings often seen on roadside signs, Advice Messages, Watch and Act Messages and Emergency Warnings. More information on these information sources, where to find them and what they mean, is available on the Rural Fire Service Website [www.ruralfire.qld.gov.au](http://www.ruralfire.qld.gov.au) or through the local Fire Brigade.

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## 2. Basic Fire Behaviour.

Having some idea of what a fire is likely to do in your local area, will help you make the right decisions and give you the confidence to deal with an approaching fire if necessary. Following are some basic fire behaviours.

- 2.1. Fire will travel faster and hotter uphill. The steeper the slope the faster the rate of spread, in some cases allowing little time to react. The speed of a fire will double for every 10 degrees of upslope.
- 2.2. Fire will usually travel relatively slower down hill even with reasonably high fuel loads, which will give more time to prepare. The speed of a fire will halve for every 10 degrees of down slope.
- 2.3. A fire will generally travel faster and at higher intensities with a wind behind it. The stronger the wind, the faster the rate of spread. Likewise a fire will slow considerably when burning against the wind in some cases it may even go out.
- 2.4. The fire will usually burn at a higher intensity and spread faster during the hottest times of the day and tend to slow down considerably as the evening approaches and air temperatures drop.
- 2.5. The greater the supply of dry ground fuel available to the fire, ie. grass, dry leaf litter, hanging bark and twigs, the greater the intensity of the fire. If the ground fuel is minimised the intensity of the fire reduces considerably and so does the personal risk and the potential for damage.
- 2.6. If ground fuels are kept relatively low the chances of a fire progressing into the treetops (crown fire) would be considerably reduced within the Queensland coastal bushlands. For a fire to progress into the tree tops ground fuels and elevated fuels must be present providing a 'ladder' of fuels from ground level to tree top. Control of these fuels is the best way of minimising fire intensity and therefore limiting the destructiveness of a bushfire.

Talk to neighbours that have been present during previous bushfires or consult the local Fire Brigade to develop an understanding of usual fire behaviour for your specific location.

## 3. Preparing for the bushfire season.

Most cases of damage to property are caused by radiated heat, direct flame contact or most commonly by burning debris or sparks landing in, on, or around buildings and starting small spot fires which if not attended to may destroy the property long after a fire front has passed. There are many steps that should be taken prior to the onset of a fire season to help protect your property.

- 3.1. Keep ground fuel cleared from around buildings such as long dry grass, branches, dead leaves, bark and thick undergrowth.
- 3.2. Remove elevated fuels, such as hanging bark and fallen debris hung up on lower branches.

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- 3.3. Ensure fire breaks/trails/buffers are checked and maintained, even a well-watered lawn can be an effective firebreak.
- 3.4. Flammable material around buildings should be kept well clear, such as firewood piles, rubbish, fuels, hazardous materials, plant pots, boxes, paper, patio and garden furniture.
- 3.5. Ensure flammable materials are not stored in open areas under the building.
- 3.6. Make sure that rainwater gutters are kept clear of leaf litter build-up. Consider a method of blocking off down pipes so gutters can be filled with water during a fire to extinguish sparks landing in gutters. There are commercially made products available or you can create your own.
- 3.7. Make sure that the roofing is well secured, as winds created during a fire may lift roofing and allow the entry of burning embers into the roof space. Also clear any leaf litter or debris build-up from roof areas.
- 3.8. All windows and vents should be screened with fine wire mesh and all roof areas closed in to prevent entry by sparks.
- 3.9. Ensure gas tanks have their emergency relief valves facing away from the building (this includes barbeque bottles).
- 3.10. Make sure of reserve water supplies. Power frequently fails during a fire. If petrol or diesel pumps are available make sure they and associated hoses and fittings are in good working order.
- 3.11. Ensure your bushfire survival kit is up to date and complete.

The Queensland Fire and Rescue Service provide detailed lists for preparation prior to fire season and what to do during a bushfire event. This information can be found at [www.ruralfire.qld.gov.au](http://www.ruralfire.qld.gov.au) or obtained from your local fire brigade.

#### 4. Green Fire Breaks

Added protection from bushfire can be achieved by establishing green fire breaks which include green lawns, trees arranged to create a shield to catch sparks or fire brands or the expanding of tropical rainforest species. Excess rainwater or tertiary treated waste water could be stored and used for this purpose during dry periods to maintain the green fire breaks. Trees and shrubs not subject to drought stress will cope better during bushfires. The higher the moisture content in the plant the slower it burns. Therefore by keeping the surrounding area green and low in dry ground fuel, the intensity of an approaching fire will be reduced and the risk of spot fires minimised.

#### 5. Personal Protection

- 5.1. If you plan to evacuate, make sure you do so early, long before the fire front arrives. Evacuating at the very last moment results in the majority of deaths at bushfires. People remaining to fight the fire need to be physically and mentally fit to do so.

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5.2. Those staying to protect the property should make sure they protect themselves from radiant heat, flying embers, smoke and most importantly heat stress.

Protection measures should include the following:

- Long trousers and long sleeve shirt made of wool, denim or cotton (no synthetics)
- Woollen socks and sturdy work boots for foot protection
- Goggles for eye protection
- A good pair of work gloves to protect hands from burns
- A smoke mask or a damp cloth (non-synthetic), to cover your nose and mouth to protect you from inhaling smoke and embers.
- Have plenty of drinking water available to protect against dehydration (not refrigerated as this can cause cramping).

### 5.3. During the fire

When a fire is approaching and given that you have already carried out your pre-fire precautions, established adequate buffers, implemented mitigation measures and established the degree of risk to your property, protection from the actual fire should be relatively straight forward.

5.3.1. Dress in the appropriate clothing and be sure to drink water regularly.

5.3.2. Fill up bathtubs, sinks, buckets, laundry tubs etc. in case of blackouts.

5.3.3. Close doors and windows.

5.3.4. Close gaps under doors and windows with wet towels.

5.3.5. Block up down pipes, wet down roof, walls and gardens, paying particular attention to the side the fire is approaching from.

5.3.6. Have a battery-powered radio on hand to listen for information about the fire's progress from local radio stations.

5.3.7. Patrol your property while the fire is approaching and take shelter inside as the fire front passes. Then continue patrolling the property for many hours after it has passed, to ensure that any spot fires or smouldering debris do not get a chance to develop into a major fire, paying particular attention to the roof cavity of your buildings. Smouldering embers have been known to start fires hours or even days after the initial passing of the bushfire front.

The Queensland Fire and Rescue Service provide detailed lists for preparation prior to the arrival of a bushfire and what to do during a bushfire event. This information can be found at [www.ruralfire.qld.gov.au](http://www.ruralfire.qld.gov.au) or obtained from your local fire brigade.

## 6. Further Information?

The local fire brigade is a good source of local district knowledge, they also have pamphlets and literature produced by the Queensland Fire and Rescue Service available. Most brigades will also be happy to advise local residents.

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The information provided above is only a basic guide. Further and more details information is available from the Queensland Fire and Rescue Service. It would be recommended that residents in bushfire prone areas prepare a 'Bushfire Survival Plan', which is available from the Queensland Rural Fire Service website at [www.ruralfire.qld.gov.au](http://www.ruralfire.qld.gov.au). The 'Bushfire Survival Plan' document provides information on Bushfire Danger Ratings, Community Warning Information, how to prepare your property, what to do in the event of a bushfire and what to expect. The Bushfire Survival Plan should be updated annually. Further information is also available through the Prepare•Act•Survive brochure also available on the Rural Fire Service website. For further information contact your local Fire Brigade for assistance or phone 1300 369 003.

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## APPENDIX 3

### Recommendations for Fire Trails

Fire trails can be a very effective tool in the management of bushland, for weed control, hazard reduction requirements, prescribed burns and fire suppression activities. A good well maintained trail network can effectively enhance and maintain desired ecosystems, while providing added safety for the protection of life and property. The following is some ways in which fire trails can be constructed and maintained to improve their viability.

1. Fire trails should preferably be constructed to a minimum width of 4 metres, be able to be negotiated by light and medium 4 wheel drive fire appliances.
2. They should preferably have a maximum gradient of 25%, a maximum cross slope of 5%, avoid large cut and fill and avoid sharp corners.
3. Fire trails up to 25% can be of compacted earth surface designed with water shedding devices, such as pipes under trail, woa boys or change of gradients, to prevent washouts or gouging of slopes. It would also be advantageous in some cases if grass coverage can be established, which with periodic slashing or mowing will assist in preventing washouts.
4. Fire trails should have access at each end and multiple access/egress points where possible.
5. Fire tails are to have passing and turn around areas at maximum intervals of 400 metres.
6. Periodic management of ground fuel levels along the edges of fire trails should be implemented to at least one metre each side to improve accessibility during a fire event.
7. Trees alongside fire trails should have low branches removed to a height of 2 metres to assist in preventing fire from climbing into treetops. Branches overhanging fire trails should be removed to a minimum height of 4 metres to ensure access by fire vehicles.
8. Fire trails should be inspected each year prior to fire season, to ensure their condition and carry out remedial work if required.
9. Dead or dying trees that are close to fire trails and may pose a risk to fire services should be removed.
10. Fire trails should not be seen as fire breaks. They are an aid in the management of fuel levels and fire suppression activities.
11. Fire trails should be identifiable to land managers and fire services by signage and map records. Where a fire trail network exists, intersections should also be identifiable.



**Bushland Protection  
Systems Pty Ltd**  
Specialising in  
**BUSHFIRE HAZARD  
PLANNING & MITIGATION**

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E-mail: admin@bpsfire.com.au

Fire is a part of nature. Its effects can be catastrophic and fire can never be totally eliminated, however there are steps that can be taken to reduce the chances of uncontrolled fires occurring and the risk to life, property and the environment, in the event of uncontrolled fires. This is what we concentrate on, how the threats from bushfire can be minimised. There are many methods to do so, however deciding which method/s is best to use can be a complex decision to make. There are so many factors to consider such as ecological values, biodiversity, fire history, availability of resources, cost effectiveness and public awareness just to name a few. No guarantees can ever be given when dealing with Mother Nature, with ever increasing complexities it has now become a specialist field to be able to create plans to try and minimise the risk from bushfire. Ultimately it is a community responsibility to protect the environmental values, life and property in their area

## COMPANY PROFILE

Bushland Protection Systems Pty Ltd (BPS) is a leading Bushfire Management Consultancy firm in Queensland, with many clients, ranging from private landowners to multi-national companies and government bodies.

BPS consultants began operating as Bushfire Management Consultants with the introduction of the Gold Coast Bushfire Management Strategy in 1998 and spread their operations across the state with the implementation in 2003 of the State Planning Policy for mitigating the adverse impacts of flood, bushfire and landslide.

During that time over 1700 projects have been successfully completed, including large residential estates such as Coomera Waters, Spring Mountain, Pacific Pines, Coomera Springs, Highland Reserve & Delfin Woodlands as well as commercial or Government project sites such as Paradise Country, Wacol Police Academy, Numinbah Correctional Facility, Silkwood Steiner School, Canon Hill Community Links Project & Griffith University. Clyde Bain, the Principal Consultant, is also one of the two most highly sought after expert witnesses for Land and Environment Court Appeals, in Queensland, having worked as the Bushfire Expert for several Regional and City Councils throughout the state on a number of various projects before the Land and Environment Court.

With a strong background in bush fire fighting and involvement with numerous industry bodies, Bushland Protection Systems continues to deliver realistic and cost effective advice, solutions to provide higher levels of safety for the community, improve wildfire suppression and mitigation options for emergency services and land managers, while maintaining and improving environmental values for the future. All our Consultants are members of the Rural Fire Association of Queensland.

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