



**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 RISK ASSESSMENT
AND MITIGATION PLAN**

FOR

CARSELDINE GOVERNMENT OFFICE PROJECT

PLANS AND DOCUMENTS
referred to in the ULDA
APPROVAL dated 23/12/11

PREPARED BY

BUSHLAND PROTECTION SYSTEMS PTY LTD

COMMISSIONED BY

**BIODIVERSITY ASSESSMENT AND
MANAGEMENT P/L**

ON BEHALF OF

THE DEPARTMENT OF PUBLIC WORKS

DATE: 7th September, 2011.

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, 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.

This Bushfire Risk Assessment and Mitigation Plan is for a portion of Precinct 1 of the Fitzgibbon Urban Development Area, which is being redeveloped for use as a Government Office precinct. This report is based on the information supplied by Biodiversity Assessment and Management P/L, the review of the Fitzgibbon Urban Development Area Bushfire Management Plan and the site inspection with vegetation consultants on the 19/8/11.

1.1. An aerial photo of the site and surrounds outlining the vegetation groups of the localised areas, compiled by Biodiversity Management, Job no. 0208-010, dated 13/6/11, is included as appendix 1A in this report.

1.2. A copy of the Landscape Treatments Plan, sheets 1 & 2, drawing no.'s 67101/DD/LO2.01 & 02, dated August 2011, are included as appendix 1B & 1C in this report.

2. Land Use.

2.1. Site Description.

The site is bordered by Beams Road to the north, Dorville Road to the west, sports fields and a rail line to the east and Cabbage Tree Creek to the south.

2.2. Vegetation.

The majority of the site would be classified as open forest, much of which has a modified understory (mowed or maintained lawns with landscaping).

The main areas to be retained as native vegetation occur in Vegetation Community 2 shown on Appendix 1A, with particular reference to the area between the main buildings and the existing child care building. This area will be broken up further by a proposed roadway and car parking. The other area is along Cabbage Tree Creek shown on Appendix 1A as 4 & 6, bordering the riverine open forest. The balance of the site is managed (modified understory), predominantly moved grass understory.

2.3. Topography.

The site would be generally classified as level to lightly undulating 5% to 10% along the Beams Road half of the site with the lower area along the creek having grades of less than 5%.

2.4. Potential Bushfire Hazard.

Realistically the Potential Bushfire Hazard (PBH) would be relatively low due to existing natural mitigating factors such as the riparian vegetation along the creek, which would inhibit the spread of fire from the south, the built up nature of the surrounding area and the limited size of the bushland pockets, which would limit any fires ability to build up to its full potential.

2.5. Hazard Assessment.

The area of retained bushland between the main buildings and the existing childcare building to the east, consists of a small amount of bushland which would not be assessable under the SPP1/03 due to it being under 5Ha in size (*SPP 1/03 FAQ, Ver.2, Nov. 2003*).

The severity of bushfire hazard for the retained bushland along the creek, as calculated in accordance with Appendix 3 of the State Planning Policy 1/03 (SPP1/03), would assign a vegetation score of 5 (open woodland), a slope score of 1 (plain 0%-50%) and an aspect score of 0 (land under 5% slope), equating to a severity of bushfire hazard score of 6 medium, at the lowest end of the medium range (see table 1).

Table 1

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

3. Roadways and Access trails.

The site has access from both Beams Road and Dorville Road with numerous driveways and car parking which also provides good all round access for vegetation management and fire suppression activities, if required.

There are a number of wide cleared walking tracks located throughout the retained vegetation corridor along the creek, which are very well maintained. These provide for effective fire breaks and good access for management and fire suppression, minimising the risk of injury to persons or property in the event of a localised bushfire.

4. Appropriate Building Site location.

The structures are already established on the site with the only extension to be at the Beams Road end, well away from the retained 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 (i.e. buildings with a residential component), 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*).

As the buildings are commercial buildings, not Class 1, 2, 3 or 10a, the bushfire provisions and the AS3959-2009 do not apply.

6. Appropriate Landscaping and Clearing.

At the time of inspection, most of the site was extremely well managed in relation to minimising the bushfire hazard to structures and the localised ecosystems, as well as public safety.

All buildings should be provided with a 10 metre inner radiation zone around the building as outlined in appendix 2 of this report, with a further 10 metre outer radiation zone where ground fuel is managed and mid storey fuel is thinned. A further 1 metre of extended outer-radiation zone, per degree of down slope should be provided to the buildings to afford added protection from bushfire approach from the lower slopes. Quality trees and habitat trees can be retained or planted within these buffer zones provided they do not provide a continuous canopy cover or pose a threat to persons or property.

The areas of retained bushland are to be managed to remove or control all non-endemic grass and weed growth, as they provide the highest risk of bushfire damage to the desired ecosystem.

In small pockets of retained bushland a closed in canopy is an option to reduce ground fuel levels naturally by reducing sunlight to the understory. Running crown fires in small pockets of bushland in South East Queensland will not occur.

In bushland areas, the areas around the fringes of the bushland and along tracks have a tendency to have increased ground fuel loading, as a result of increased sunlight penetration producing better growing conditions for grass and weeds (known as 'Edge Effects'), which can have an adverse impact on the local ecosystem and safety issues for fire suppression personnel during unplanned fire events. These non-endemic grasses penetrate into the edges of the retained bushland, creating conditions for high intensity fire which damages the edges of the bushland, opening up the canopy which then allows more sunlight in and promotes grass and weed intrusion further into the bushland. This cyclic process has the effect of decreasing the size of quality bushland and increasing grass and weed dominated areas. The most cost effective way to control grass and weed growth is to create a good closed in canopy cover, which will shade out the undesirable species. The control of fuel loads along the edges by regular mowing, brush cutting or in some cases poisoning may be suitable. Areas with a build up of volatile fuel levels along the open edges of bushland, where full sunlight is available, can be where the most damage is inflicted on the bushland during a bushfire. Fibrous bark trees, such as melaleuca and stringy bark, have a tendency to increase ember attack during a bushfire, due to the fire running up the tree trunk and burning bark breaking off, creating large airborne burning embers. For this reason it is recommended that ground fuels be kept to a minimum around the base of stringy bark trees, to minimise the risk of bushfire running up the tree trunk.

Care is to be exercised by maintenance personnel to prevent the build up of unacceptable fuel levels on the site which may cause an increase in bushfire risk.

Internal roadways are to be maintained with low ground fuel to minimise the potential for localised bushfire hindering access or egress. Low branches along internal roadways should be removed to a height of 2 metres to assist in preventing fire from climbing into treetops. Branches overhanging internal roadways should be removed to a minimum height of 4 metres to ensure access by medium and heavy fire vehicles.

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. Waste water may possibly be utilised to achieve this outcome.

7. Provision of Adequate Water Supplies.

The site is serviced by reticulated water supplies with the inclusion of fire hydrants for fire fighting purposes. These services are to comply with the relevant standards as required by the local authorities. The refurbishments are also to include rain water tanks to be used for irrigation purposes. These should be fitted with a 50mm male camlock fitting to allow access for fire services.

8. Provision of Fire Fighting Infrastructure.

Being commercial buildings, hydrants, hose reels, extinguishers and other requirements applicable to meet fire safety regulations will be required.

All external hydrants and hose reels are to be well marked and accessible. It was noted that a hydrant up-stand was located in the retained vegetation area between the main building and the childcare building. This area around the hydrant is to be managed with low ground fuel levels to approximately 3 metres with clear access.

9. Local Fire Services.

The subject site is within the Urban fire district and they would be responded on a 000 emergency call. It would be unlikely that the Rural Fire Service would be required, as the areas involved are small in size and well broken up with good access.

10. Improved Community Awareness.

A copy of this plan, including Appendix 3 on "being prepared", should be retained by management. Appendix 3 contains general purpose information regarding bushfire, primarily designed for housing, but still contains very relevant information for the subject site and is therefore included as a guide. All grounds staff should be made aware of their role in the implementation and ongoing management of the recommendations in this plan, 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.

The retained bushland within this site is a very sensitive ecosystem and could be altered drastically if not cared for properly. Management can assist in maintaining this fragile ecosystem by preventing unwanted fires from spreading throughout the area and ensure the 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 bushlands biodiversity.

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 or by phoning 1300 369 003.

11. Conclusion.

At the time of inspection, the site was extremely well managed in relation to minimising the bushfire hazard to structures and the localised ecosystems, as well as public safety.

With the appropriate radiation zones as outlined in Appendix 2 and Section 6, adequate water supply, good access provisions and minimising of ground fuels within the majority of the site and around the edges of retained vegetation pockets, the risk of bushfire damage can be managed to improve the safety of the public, staff and fire services in attending to a bushfire threat.

This plan should remain current for a period of 5 years, until 2016, 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.

This bushfire Risk Assessment and Mitigation Plan complies fully with the intent and objectives of the SPP 1/03 Guidelines

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

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



Clyde L. Bain
Principal Consultant.



Image courtesy of NearMap (accessed 08/07/2011)

© Biodiversity Assessment and Management Pty Ltd
While every care is taken to ensure the accuracy of this data, Biodiversity Assessment and Management makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all liability for any loss, damage or costs which might be incurred as a result of the data being inaccurate or incomplete in any way and for any reason.
Based on or contains data provided by the Department of Environment and Resource Management, Queensland (accessed May 2011) which gives no warranty in relation to the data (including accuracy, reliability, completeness or suitability) and accepts no liability (including without limitation, liability in negligence) for any loss, damage or costs (including consequential damage) relating to any use of the data.

Legend

Site Boundary

Vegetation Communities

- 1 Open Forest (RE 12.5.2)
- 2 Open Forest (RE 12.5.3)
- 3 Open Forest - Modified Understorey (RE 12.5.3)
- 4 Open Forest (12.3.11)
- 5 Open Forest - Modified Understorey (RE 12.3.11)
- 6 Open Forest (Non-remnant)
- 7 Open Forest - Modified Understorey (RE 12.3.7)
- 8 Riverine Open Forest (Non-remnant)
- 9 Open Woodland (Non-remnant)
- 10 Closed Forest (Non-remnant)
- 11 Non-remnant - Highly Modified Understorey

Macadamia integrifolia



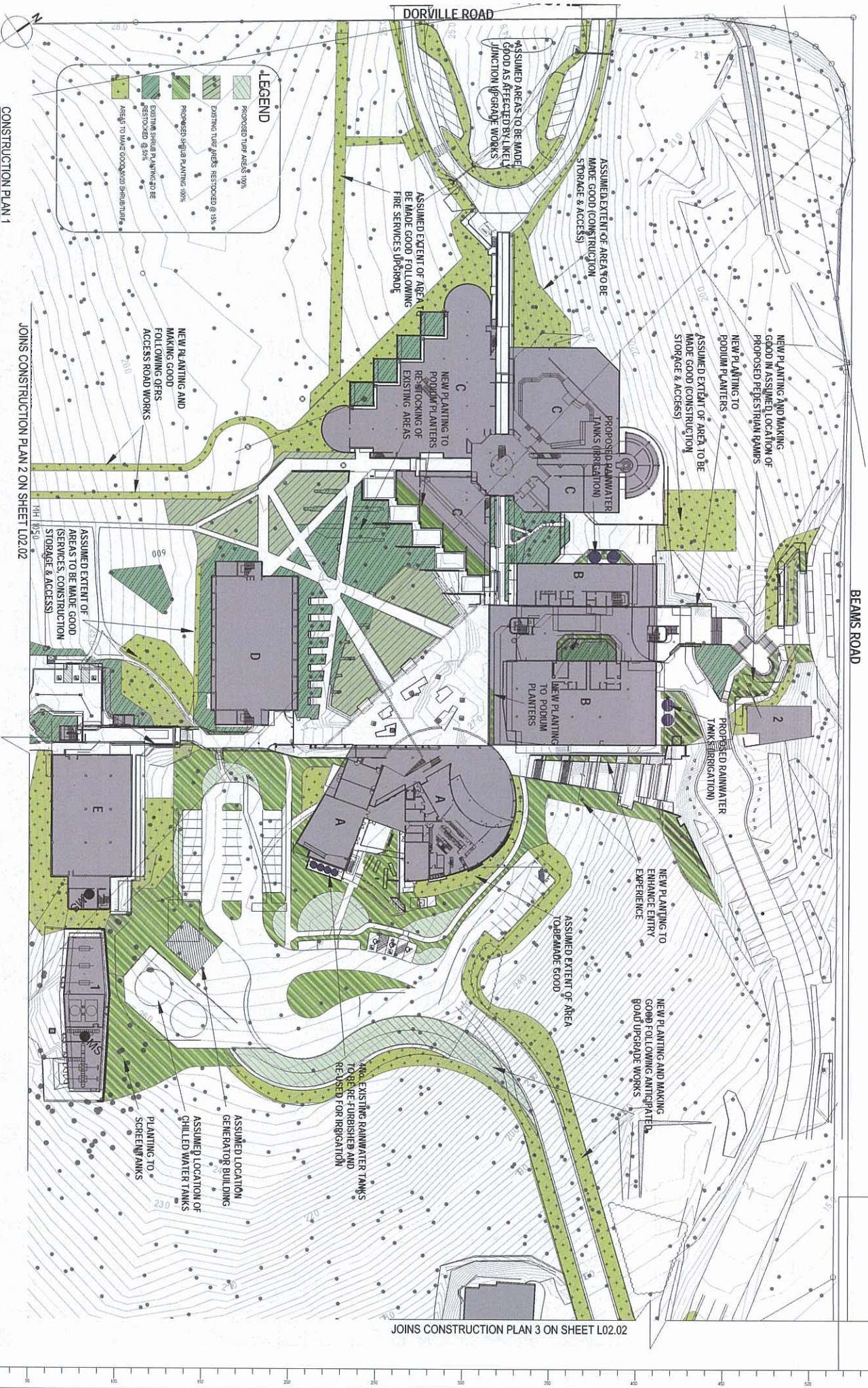
Kilometers
0 0.04 0.08 0.12 0.16
Datum: GDA94
Projection: MGA94 Zone 56

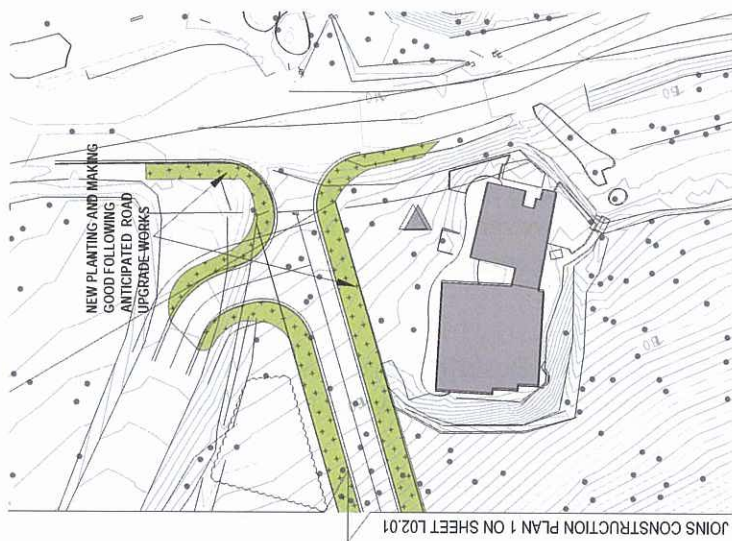
Figure 5.1

Vegetation Communities

QUT Carseldine Flora and Fauna Assessment







JOINS CONSTRUCTION PLAN 1 ON SHEET L02.01

CONSTRUCTION PLAN 3

[illegible]

APPENDIX 2

Fire Radiation Zones

Appendix 2 on Radiation Zones is included in this report as a guide for owners on how to implement and maintain radiation zones, however the dimensions required for these zones are those stipulated in the report, not the generalised examples stated in this appendix.

Buildings located in medium and high Potential Bushfire Hazard Areas would require the establishment of an inner and outer fire radiation zones around the buildings.

Radiation Zones is the terminology that has been applied to the recommended area separating a building from an area of identified potential bushfire hazard.

A building's Radiation Zone is generally separated into two sections 'Inner Fire Radiation Zone' & 'Outer Fire Radiation Zone'.

The management of fuel levels within these zones is designed to reduce the intensity of wild fires before they impact on assets such as buildings and property. The correct and continued maintenance of fuel levels within a buildings radiation zones may result (depending on factors such as terrain, fuel types and climatic conditions) in reduced flame height, a slowing of the rate of spread of the fire and a reduced risk of direct or radiant heat attack on building and other property assets.

The accepted methods of fuel level reduction within a property's radiation zones are:

- hand or mechanical removal of fuel and litter,
- slashing and mulching of under-growth,
- selective clearing of the tree understorey and saplings,
- strategic removal of selected hazardous trees.

The dimensions of a property's Radiation Zones are the result of the property's aspect (compass direction), and the slope of the surrounding terrain keeping the building as a central point.

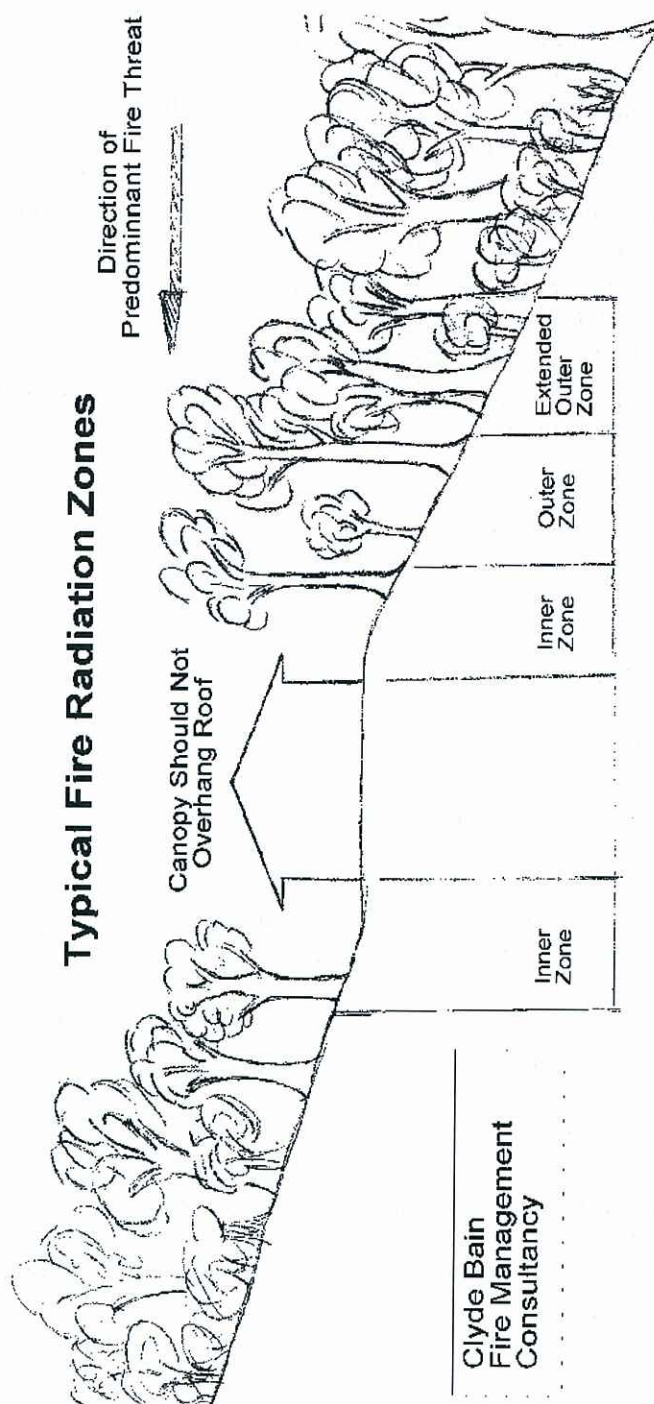
A general rule of thumb is a 10metre wide Inner Radiation Zone, where ground fuel levels are kept low so as not to be able to support a ground fire. Mature quality trees may be retained within the inner radiation zone provided they do not form continuous canopy coverage. Low branches should be removed to a height of 2 metres above ground level and hanging bark and accumulated debris should be removed prior to fire season. Dead or hazardous trees that may pose a threat to life and property or could trap and accumulate air-bourn embers should be removed.

The establishment of lawns and the use of fire retardant species in landscaping are recommended within inner radiation zones.

Outer Radiation Zones should be a further 10metres in width where low ground fuel is maintained and mid-storey saplings are thinned-out. A property's outer radiation zone should be increased an extra metre of width for every degree of down-slope of the property.

The area recommended for a buildings radiation zones may vary with regard to the direction of the perceived potential bushfire hazard.

For example : A building may require a 10metre inner radiation zone completely around the structure however the outer radiation zone may only be required in a semi-circular direction with respect to the potential bushfire hazard from that direction. This outer radiation zone may also be extended in width taking into consideration the slope of the subject property.



APPENDIX 3

Being Prepared

Knowing how to prepare the 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 the office precinct. 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 or through the local Fire Brigade.

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.

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.

- 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 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.

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 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. The information provided above is only a basic guide. Further and more details information is available from the Queensland Fire and Rescue Service.



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

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.