Attachment 4 - Bushfire Management Plan

T J Kelly Surveys Pty Ltd
A.B.N. 95 823 241 957
A.C.N. 058 752 417

T J KELLY SURVEYS PTY. LTD.

CONSULTING SURVEYORS & TOWN PLANNERS

23 January 2015 Our ref: 3349

The Chief Executive Officer
Scenic Rim Regional Council
PO Box 25
BEAUDESERT QLD 4285

Attn: Mr John Creagan (Your Ref. MC.Bd14/053)

Dear John,

RE: Response to Bushfire Management Issues
Material Change of Use – Outdoor Sports, Recreation & Entertainment (Mountain Bike & Outdoor Recreation Park), Food Establishment/Reception Centre (Restaurant), and Camping Grounds
98-196 Guanaba Road, Tamborine.
Lot 3 on RP181081.

Further to our recent meeting, we hereby provide three (3) copies of a Revised Bushfire Management Report (Guanaba Experience Bushfire Management Report – 1, FM 1797-1), along with a detailed submission from Eldon Bottcher addressing the issues raised by Council. For your convenient reference, we also enclose a Table summarising the changes made to the original report.

Yours faithfully
T J Kelly Surveys Pty Ltd

Mark Toombs
Principal Planner

Cc.: Mt Tamborine Camping & Activities Pty Ltd

RECEIVED
23 JAN 2015
SCENIC RIM REGIONAL COUNCIL

SCENIC RIM REGIONAL COUNCIL
File No: MC.Bd14/053
23 JAN 2015
Doc. Set No: RBA
Resp. Officer: DA ADMIN
2. CREAJ 3.
xref L & EP

Office:
109 Brisbane Street
Beaudesert, Qld

Postal Address:
P.O. Box 221
Beaudesert, Qld 4285

Telephone: (07) 5541 4722
Facsimile: (07) 5541 4723
Email:
admin@kellynet.com.au
Web: www.kellynet.com.au

Item	Change Description
1.15	"Open Woodlands" deleted
2.2	"Native Grasslands (ungrazed), open woodlands, canefields" section of table deleted
2.3	As per 2.2
2.4	Text changes referring to evolving SPP 1013
2.4	"Walk In Camping" and "Prestige Camping" have been removed in response to draft council and state conditions
2.5	As per 2.4
3.5.4 & 3.5.5	"Concrete tank" changed to "non-combustible tank"
3.6.2	Additional specification on capping campfire pits to 4 per zone
3.7.1	Text change to remove the implication that ALL trails are to be reopened. Rather a reference is made to the plan
3.7.3	As per 3.7.1
3.8.3	Addition of burning as a control measure
3.19.3	Additional requirement "no smoking"
3.19.4	Specifies the future requirement of a comprehensive safety plan (site closure, evacuation procedures etc)
Drawings	"Trail Plan" renamed as "Vehicular Trail Plan". Mountain Bike trails removed from this drawing for clarity. More clarity about trail types and whether currently open or overgrown. Walk In Camping and Prestige Camping removed as per 2.4. Fire trail to Walk in Camping removed.

Eldon Bottcher Architect Pty. Ltd

Postal
P.O. Box 3606
Robina Town Centre
QLD 4230
W www.eb-a.com.au
E architects@eb-a.com.au

Office
145 Varsity Pde
Varsity Lakes QLD 4227
ABN 61010354604
P 07 55920082
F 07 55380374

EJB: VAB: FM1798/L2

22nd January 2015

The Manager
Mt Tamborine Camping and Activities Pty Ltd
Sinclair Street
Arundel Qld 4214

ATTENTION **MR J NOORT**

PROJECT: **GUANABA EXPERIENCE**

SUBJECT: **FIRE MANAGEMENT REPORT**
RESPONSE TO COUNCIL RFI

Dear Sir

As requested, we have made some minor changes to the report to reflect changes to the extent of facilities, and to respond to the " issues "raised in the email to Mr Toombs from John Creagan dated 5th January 2015. This letter also carries a detailed response to these "issues".

I would note that are disappointed that we were able to partly respond to these issues at out meeting with Council on Friday 9th January 2015.

We attach marked up copies of sections of our original report to highlight the relevant sections to which SRRC refer, and to which this response relates, as appendices at the rear of this letter.

1 Alternative Solution

The reason for the alternative solution is clearly explained in the introduction of our report. You will note that you have an acknowledgement number (RNP002673680B02) to your SAC Notification to the Department of Natural Resources and Mines, and this alternative solution was to demonstrate that although the landowner is able to clear this property under the Sustainable Planning Act and Regulation, there was not a need to do this due to the manner in which we have addressed the bushfire mitigation measures on the site.

Whilst the comment about tented accommodation is irrelevant in respect to the reason for the alternative solution, we would point out that the BCA only applies to permanent structures. In Queensland, permanent structures are described as having a life expectancy in excess of 2 years.

Comment is also made here and later about emergency management. The original report and revised report contain substantial measures in relation to emergency management.

2 Assessment of Hazard

There is no pattern of understating, nor is there divergence from the Vegetation management Report.
The assessment has been done strictly in accordance with the SPP 01/03 and qualified best practice.

It appears that council may have misread the relevant sections of the SPP 01/03, and accordingly we have provided copies of the relevant sections, highlighted as appropriate.

The Vegetation types initially referred to as being on the site are;

Grassy Eucalypt
Open Woodlands
Intact Rainforest

These are abbreviations of the full descriptions, with Grassy Eucalypt being an abbreviation for " Grassy Eucalypt and Eucalypt Forest", as shown in full in section 2.2 Vegetation Types, and also in the Table 2.3 Anticipated Bushfire Behavior.

This is consistent with the description in the Vegetation Management Reports, and the relevant components of vegetation where uses are planned.

Substantial comment was made during the meeting and in the RFI about "open woodland", which was used only in the general descriptions as to vegetation on the site, but not in any of the specific Hazard assessments for specific usage areas.

However, as can be seen by the attached aerial photos, there is in fact substantial open woodland on this site, particularly in areas to be developed. However, so as not to cause further confusion, reference to this quite correctly included Vegetation Type has been removed.

The initial purpose of this assessment is to establish if the site is in fact in a Bushfire Prone Area. The result was that it is in a mixture of Medium and High, with areas (now deleted from this application) along the Guanaba Creek being Low Hazard due to the Rainforest Vegetation.)

The Scenic Rim Bushfire Hazard mapping for this site, a copy of which is attached, supports our assessment.

Further, reference was made to the new State Government Mapping, with the note that the whole of the site is mapped " Very High".

The effect of this was that we established that the site was in fact , in a Bushfire Prone Area for the purposes of Town Planning , Construction, and any other relevant matters.

Comment was also made about slopes being inappropriate. The slopes were interpolated from the site contours and used according to assess as to whether the slope category was, as an example only Rolling Hills, Steep Hills etc.

3 Construction

The RFI makes a Statement that the BCA and AS 3959-2009 pertain to Class 1.2.and 3 buildings and associated 10a structures.

This is not correct.

Whilst the BCA may refer to these classes, there is no such distinction in AS 3959-2009 Construction of Buildings in Bushfire Prone Areas.

Further, as stated in our report, Scenic Rim Regional Council, via the overlay code prepared by Beaudesert Shire Council, requires " development"- with no qualification as to type- to comply with AS 3959-1999 (now lapsed) The standard of law here is that the later Standard is applicable (reference last sentence in SRRC RFI)

A copy of the applicable portion of the Town Plan is attached for your reference.

Construction levels, have used the classification of "B -Woodland" because it has the most appropriate fuel loads for the vegetation on the site. This is noted, and highlighted for your information in our Table in Section 2.2 of our report.

The AS 3959-2009 is quite clear in relation to Fuel Load Values.
CB3
"Consultation with relevant fire authorities is important to establish any variations from the values provided in table B2 below"

A copy of CB3 and Table B2 is attached as part of Appendix 3 Construction. It can be seen that Table B2 has a fuel load for Forests as 35t/ha, whilst for Woodlands, 25t/ha.

Attached also are the pictographs cited in the meeting. The pictographs for Open Forest A-03, and Woodland B-05 are appropriate for the vegetation communities in the areas where development is to occur.

I attach also part of a document entitled " State–wide Bushfire Prone Area Mapping Vegetation Classes and Potential Fuel Loads"

This document is issued by the Queensland Government, Rural Fire Service and Queensland Fire and Emergency Services.

It provides fuel loads for "Moist to Dry eucalypt Open Forests to Woodlands, usually on coastal lowlands and Ranges"—an appropriate description of the vegetation in development areas on the subject site, and commensurate with the pictographs used in AS 3959-2009.

Two fuel loads are cited—one of 24.1 t/ha, and one of 17.2t/ha. Both of these are less that the AS 3959-2009 rate for Woodland of 25t/ha.

It is therefore demonstrated that not only is the use of Woodland appropriate for this purpose, it is in accordance with the Standard in all manner, with fuel loads provided by the state government that support my use for the Tables associated with B and as set out in the Table in Section 2.2 of the report.

The BAL to be used has not been advised as, quite simply, we don't know the final positioning of the buildings, and their relation to the management zones called up in the report. Again, this is clearly addressed in Section 2.5. Quite simply, the BAL's will be determined as stated in the report "at time of construction"

The RFI then appears to get confused as it refers to PBP 2006, which is Planning for Bushfire Protection 2006. This is legislation in New South Wales. The subject site is in Queensland, and NSW legislation is not valid, and possibly not even appropriate, in Queensland.

Prestige Camping has been deleted due to environmental reasons cited by Scenic Rim Regional Council.

4 Risk Management

Section 3 of the report is entitled" Risk Management Plan" This section contains quite detailed measures for Risk Management, and the overall report includes a Plan entitled "Emergency Management Plan"
This plan shows all tracks and facilities to be on the site, including water points and signage.

We have explained the signage system, and attached as supporting information at the rear of the report, the graphics required for signage. The system is set up to compliment AIIMS, or Australian Interservice Incident Management System, the system used by emergency services in Queensland.

The requirements are for master signs and waypoints, which clearly allows easy identification of areas.

It is my understanding that a formal Management Plan is being prepared by a specialist company that deals with this type of event. We are not able to prepare this as we do not have the accreditation required.

The RFI makes a statement that the Report does not address risk to other properties, in particular, those along Guanaba Road.

This statement is factually incorrect.

The Vegetation Management Plan clearly shows a 50m wide secondary management zone along Guanaba Road, with a strategy to reduce the fuel load to what is considered as Low Threat by the BCA (Qld Variation) at all times of the year, and what is considered as Low Threat by the AS 3959 during Fire Season.

Additionally, there is a requirement for a substantial Tank Farm, with dedicated storage for Fire purposes. Under Queensland Law, this water is available to the Fire Service for use on all fires, not just those associated with the proposed development.

Ignition Management has been addressed in relation to Camping areas in section 3.6 of the report. However, additional measures have been proposed in the revised report accompanying this letter.

The RFI makes a statement that emergency management measures "receive no direct attention", and that " no thought has been given to this aspect"

Again, this is patently incorrect.

The first line of Section 3.18 states;

"in the event of fire emergency assistance is to be obtained by dialing 000".

Section 3.18 sets out Emergency Response Procedures, including the requirement for a warning system and training of appropriate staff. It must be remembered that Tambourine Mountain has an auxiliary urban Brigade and Volunteer Rural Brigade. Real turnout times will be in excess of 20 minutes for Urban and possibly up to an hour for Rural. It is therefore desirable that the facility has a degree of self sufficiency as set out in the various requirements of the report.

There is a suggestion that the Proprietor should take it upon themselves as to establish a benchmark as to when certain measures should be taken.

This is highly inappropriate, in that;

1 Rural Fire Service issues warnings as to fire weather and the various restrictions to be considered. This is the appropriate manner to receive and act on Fire Weather warnings.

2 The proprietor has no ability to judge or measure the relevant FDI at which point the restrictions should be in place.

Benchmarking has been addressed further in the revised report, but was addressed in relation to Open Fires in the original report.

The management plan has addressed;

Substantial fire trails and paths, as well as establishing large areas of managed vegetation, coupled with substantial requirements for dedicated water supplies for fire fighting purposes.

A system of signage is required that sits the requirements of AIIMS.

It is required that a warning system for all site occupants in the event of emergencies be installed.

It is therefore inappropriate and incorrect to make that statement that " there is no evidence to show that no thought has been given to this respect", as it is readily demonstrated that substantial thought has been given and the requirements for a substantial system was required by the initial report.

It has been readily demonstrated that the BFMP has considered the Hazard, risk and relevant bushfire measures.

In relation to the last sentence of the RFI, I would reiterate that we have enclosed the section of the Town Plan that requires this.

I attach a revised BFMP, which has some additional aspects, but was mainly required to be amended due to changes and deletions made to the layouts as a result of other council and State requirements.

The report, as with the original report, is prepared in full compliance with the relevant legislative requirements (in Queensland) and best practice.

This has been readily demonstrated in the above responses and attached appendices.

Yours faithfully
ELDON BOTTCHER ARCHITECT PTY LTD

ELDON BOTTCHER
Grad. Dip. DBPA (UWS) Dip. Arch. (QIT), Cert. R.F.M. (USQ), F.R.A.I.A., M.A.I.E.S. M.U.D.I.A. AIFireE
Architect
BPAD-Level 3 Practitioner
DIRECTOR

APPENDIX 1
ATTACHMENTS IN RELATION TO 'ALTERNATE SOLUTION"

INTRODUCTION

This Fire Management Report has been written for the benefit of future occupants of this proposed site and developed in accordance with the requirements of;

- The Scenic Rim Regional Council Town Plan,
- The State Planning Policy SPP01/03 " Mitigating the Adverse Impacts of Flood, Bushfire and Landslide, and SPP 2013.
- Queensland Sustainable Planning Act
- The National Construction Code and
- Australian Standard AS3959,
- International Fire Safety Engineering Guidelines

(1) This report has been prepared to provide an alternative solution to the requirements of the Sustainable Planning Act. These documents refer to clearing of buffer areas between the buildings and vegetation of 1.5 times the vegetation height. This report reduces the buffer width by increasing the level of construction in accordance with the AS3959 and the National Construction Code and ensuring the ability of service intervention by the introduction of fire trails and defendable space, along with associated signage, access way protection, and water storage.

Note that SPP 2013 came into being on 2nd December 2013, whilst the SPP 01/03 lapsed in October 2013. The proposed methodology for calculating Bushfire Hazard is still in Draft form, and is under question. On this basis this report refers to both methodologies.

The report has been prepared as supporting documentation for a Material Change of Use (Building and Change of Use) Application.

1.1. **Address:**
98-196 Guanaba Road
Tamborine Mountain

1.2. **Local Authority**
Scenic Rim Regional Council

1.3. **R.P.D.**
Lot 3 on RP 181081

1.4. **Site area**
203.023ha

1.5. **Responsible Fire Authority**
Rural Fire Service Queensland via the rural fire brigade for rural fires and QFES for Structural fires.

1.6. **Potential Bushfire Hazard Rating.**
The hazard rating maps prepared for the Council show the ratings on this property ranging from Low to High.

1.7. **Land tenure**
Freehold

1.8. **Adjoining owners are:**
Freehold

1.9. **Current Land Use:**
Vacant

1.10. **Fire danger Index**
FDI 40 (nominated by AS 3959-2009)

1.11. **Topography**
Gorges and Mountains

1.12. **Predominant Wind Direction**

APPENDIX 2
ATTACHMENTS IN RELATION TO "ASSESSMENT OF HAZARD"

2. SITE AND HAZARD ASSESSMENT

2.1. Discussion with Responsible Fire Authority

The fire management report has not been discussed with the First Officer of the Rural Fire Brigade.

2.2. Vegetation Types

The vegetation type predominate to this site is as scheduled below. Note that under SPP 2013, differing vegetation types are used. This report does not refer to these but does take into account draft mapping prepared under different methodology and published by the State Government.

VEGETATION TYPE	STATE PLANNING POLICY INDICE	AS 3959 CATEGORY	COMMENTS
(2) Grassy Eucalypt and acacia forest, exotic pine plantations, Cyprus pine forests, wallum heath	6	B	For the purposes of construction level assessment under AS 3959-2009, woodland is the appropriate vegetation type to us due to fuel load.
Native Grasslands (ungrazed), open woodlands, canefields	5	G	Note that where canopy cover is less than 30% AS 3959 uses the surface fuel load. State variation (Qld) to Section 3.7.4.0 of Volume 2 Building Code of Australia states that *"The requirements of (a) do not apply when the classified vegetation is Group F rainforest (excluding wet sclerophyll forest types), mangrove communities and grasslands under 300mm high."* This is interpreted as stating that where these communities exist within a Designated Bushfire Prone Area construction in accordance with AS 3959 is not required in relation to this vegetation.

VEGETATION TYPE	STATE PLANNING POLICY INDICE	AS 3959 CATEGORY	COMMENTS
Intact Rainforest, mangrove, intact riverine rainforest	0	F	Note that Rainforest is not considered as a fire threat within SPP 01/03, which is a policy called up by the Sustainable Planning Act. Where the SPP 01/03 (amended) index is, or is less than, 2 the hazard is automatically regarded as LOW and no further assessment is required. State variation (Qld) to Section 3.7.4.0 of Volume 2 Building Code of Australia states that *"The requirements of (a) do not apply when the classified vegetation is Group F rainforest (excluding wet sclerophyll forest types), mangrove communities and grasslands under 300mm high."* This is interpreted as stating that where these communities exist within a Designated Bushfire Prone Area construction in accordance with AS 3959 is not required in relation to this vegetation.

2.3. **Anticipated Bushfire Behaviour**
Bushfire behaviour noted below is as noted in State Planning Policy SPP 01/03

VEGETATION TYPE	ANTICIPATED BUSHFIRE BEHAVIOUR
Grassy Eucalypt and acacia forest, exotic pine plantations, Cyprus pine forests, wallum heath	Fire intensity may be severe with flame lengths to 20m, with a lesser attack from embers
Native Grasslands (ungrazed), open woodlands, canefields	Fast moving fires available to fire annually to 4 years. Usually no ember attack, radiant heat for >10m, duration <2 minutes
Intact Rainforest, mangrove, intact riverine rainforest	Virtually fireproof

2.4. **Potential Bushfire Hazard Rating.**
Site inspection and assessment against the State Planning Policy indicates ratings across the whole of the site.

The ratings from the State Planning Policy are as scheduled below;
Note that SPP 01/03 has lapsed at time of preparing this report, whilst the revised methodology under SPP 1013 is in Draft Form and under question.

The ratings from the State Planning Policy SPP 01/03 are as scheduled below;

Reception

KEY LAND CHARACTERISTIC	INDICE	COMMENTS
Vegetation Communities	6	Grassy Eucalypt
Slope	3	Rolling hills
Aspect	3.5	North to North West
Total	**12.5**	**Sum of indices is between 6 and 12.5 denoting a Medium Hazard**

This confirms a rating of Medium on the site

Camp Zone 1

KEY LAND CHARACTERISTIC	INDICE	COMMENTS
Vegetation Communities	6	Grassy Eucalypt
Slope	3	Rolling hills
Aspect	3.5	North to North West
Total	**12.5**	**Sum of indices is between 6 and 12.5 denoting a Medium Hazard**

This confirms a rating of Medium on the site

Camp Zone 2

KEY LAND CHARACTERISTIC	INDICE	COMMENTS
Vegetation Communities	6	Grassy Eucalypt
Slope	4	Steep Hills
Aspect	3.5	North to North West
Total	**13.5**	**Sum of indices is 13 and above denoting a High Hazard**

This confirms a rating of High on the site

Walk In Camping 1

KEY LAND CHARACTERISTIC	INDICE	COMMENTS
Vegetation Communities	6	Grassy Eucalypt
Slope	4	Steep Hills
Aspect	3.5	North to North West
Total	**13.5**	**Sum of indices is 13 and above denoting a High Hazard**

This confirms a rating of High on the site

Camp Zone 3

KEY LAND CHARACTERISTIC	INDICE	COMMENTS
Vegetation Communities	6	Grassy Eucalypt
Slope	5	Gorges and Mountains
Aspect	3.5	North to North West
Total	**13.5**	**Sum of indices is 13 and above denoting a High Hazard**

This confirms a rating of High on the site

Prestige Camping

KEY LAND CHARACTERISTIC	INDICE	COMMENTS
Vegetation Communities	0	Rainforest
Slope	0	utilising footnote to table A3.2 of the guidelines to State Planning Policy SPP 01/03
Aspect	3.5	
Total	**3.5**	**Sum of indices is 5.5 or below denoting a Low Hazard. Automatically low hazard as vegetation is rainforest**

This confirms a rating of Low on the site

Picnic Area (day use)

KEY LAND CHARACTERISTIC	INDICE	COMMENTS
Vegetation Communities	0	Rainforest
Slope	0	utilising footnote to table A3.2 of the guidelines to State Planning Policy SPP 01/03
Aspect	3.5	
Total	**3.5**	**Sum of indices is 5.5 or below denoting a Low Hazard. Automatically low hazard as vegetation is rainforest**

This confirms a rating of Low on the site

All of the sites addressed above are noted as Very High Hazard on the Draft Planning issued by the State Government.

The SPP 2013 is a Planning Policy (instrument) referred to under the Sustainable Planning Act. Its requirements bind all persons and override Council Bushfire Hazard Plans.

SPP 2013 states that being located in a Medium, High or Very High Hazard area triggers the need for compliance with AS 3959.

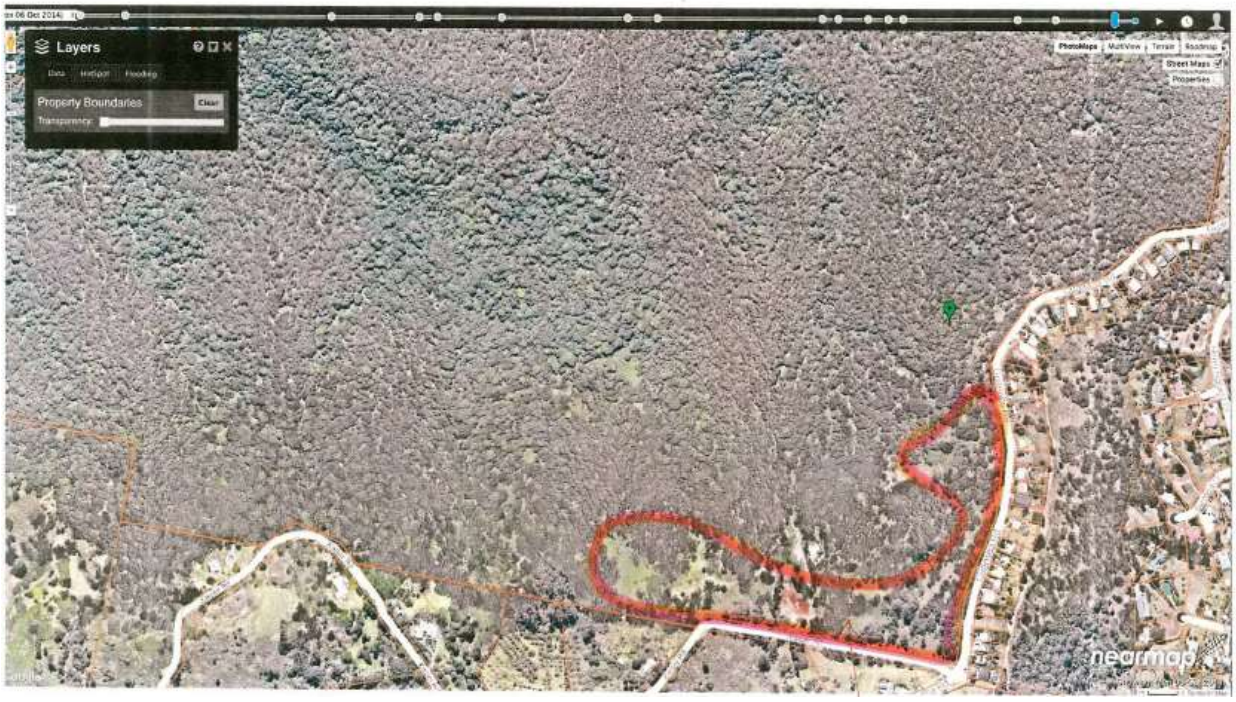
Footnote 24 to the SPP 01/03 and Footnote 34 to The SPP Guideline states "A natural Hazard management area may be defined using a different term (e.g. bushfire prone area; flood affected area)." This confirms the designation of a Natural Hazard Area (Medium and High Hazard defined by the SPP) as a bushfire prone area and therefore requiring Construction complying with the Australian Standard.

2.5. **Building Construction**

All buildings are in a Designated Risk Area. There is a requirement by Scenic Rim Regional council that any Buildings within this area be constructed in accordance with the Australian Standard for Construction in Bushfire Prone Areas. The levels determined effect the types and usage of materials in relation to the type of Bushfire Attack, which may occur as assessed under the Standard. The Level of Bushfire Attack is assessed taking the vegetation types, slope, and distance from vegetation into account. The most common elements affected are Windows and flyscreening, with some restrictions on cladding and timber types. A comprehensive breakdown is available in either the National Construction Code or the Australian Standard for Construction in Bushfire Prone Areas. Extracts of these documents are not provided due to copyright reasons. Full details can be obtained from your building designer or certifier.

Note . The construction levels are issued as a guide only, with more detailed assessment required at time of construction.


Layers
Property Boundaries
Clear
Transparency:
nearmap


Layers
Property Boundaries
Clear
Transparency:
nearmap


Layers
Data
HotSpot
Flooding
Property Boundaries
Clear
Transparency:
PhotoMaps
MultiView
Terrain
Roadmap
Street Maps
Properties
nearmap

APPENDIX 3
ATTACHMENTS IN RELATION TO "CONSTRUCTION"

Prestige Camping

KEY LAND CHARACTERISTIC	INDICE	COMMENTS
Vegetation Communities	0	Rainforest
Slope	0	utilising footnote to table A3.2 of the guidelines to State Planning Policy SPP 01/03
Aspect	3.5	
Total	**3.5**	**Sum of indices is 5.5 or below denoting a Low Hazard. Automatically low hazard as vegetation is rainforest**

This confirms a rating of Low on the site

Picnic Area (day use)

KEY LAND CHARACTERISTIC	INDICE	COMMENTS
Vegetation Communities	0	Rainforest
Slope	0	utilising footnote to table A3.2 of the guidelines to State Planning Policy SPP 01/03
Aspect	3.5	
Total	**3.5**	**Sum of indices is 5.5 or below denoting a Low Hazard. Automatically low hazard as vegetation is rainforest**

This confirms a rating of Low on the site

All of the sites addressed above are noted as Very High Hazard on the Draft Planning issued by the State Government.

The SPP 2013 is a Planning Policy (instrument) referred to under the Sustainable Planning Act. Its requirements bind all persons and override Council Bushfire Hazard Plans.

SPP 2013 states that being located in a Medium, High or Very High Hazard area triggers the need for compliance with AS 3959.

Footnote 24 to the SPP 01/03 and Footnote 34 to The SPP Guideline states "A natural Hazard management area may be defined using a different term (e.g. bushfire prone area; flood affected area)." This confirms the designation of a Natural Hazard Area (Medium and High Hazard defined by the SPP) as a bushfire prone area and therefore requiring Construction complying with the Australian Standard.

2.5 **Building Construction**

All buildings are in a Designated Risk Area. There is a requirement by Scenic Rim Regional council that any Buildings within this area be constructed in accordance with the Australian Standard for Construction in Bushfire Prone Areas. The levels determined effect the types and usage of materials in relation to the type of Bushfire Attack, which may occur as assessed under the Standard. The Level of Bushfire Attack is assessed taking the vegetation types, slope, and distance from vegetation into account. The most common elements affected are Windows and flyscreening, with some restrictions on cladding and timber types. A comprehensive breakdown is available in either the National Construction Code or the Australian Standard for Construction in Bushfire Prone Areas. Extracts of these documents are not provided due to copyright reasons. Full details can be obtained from your building designer or certifier.

Note . The construction levels are issued as a guide only, with more detailed assessment required at time of construction.

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Column 1 Specific Outcomes	Column 2 Solutions
	maintained. *Note:* *Compliance with this specific outcome may be demonstrated by the preparation of an erosion and sediment control program.*
Natural Hazards Management – Bushfire	
SO11 Development maintains the safety of people and property by — (a) avoiding High Bushfire Hazard Areas; or (b) appropriate siting.	S11.1 Development located in a bushfire hazard area shown on OV Map 3.1 ensures that— (a) Buildings are constructed in accordance with the *Australian Standard AS3959-1991 (Construction of Buildings in bushfire-prone areas)*; and (b) Building designers make reference to the document entitled *Building in Bushfire Prone Areas – Information and Advice (SAA HB 36-1993) by the CSIRO and Standards Australia*; and

2. SITE AND HAZARD ASSESSMENT

2.1. Discussion with Responsible Fire Authority

The fire management report has not been discussed with the First Officer of the Rural Fire Brigade.

2.2. Vegetation Types

The vegetation type predominate to this site is as scheduled below. Note that under SPP 2013, differing vegetation types are used. This report does not refer to these but does take into account draft mapping prepared under different methodology and published by the State Government.

VEGETATION TYPE	STATE PLANNING POLICY INDICE	AS 3959 CATEGORY	COMMENTS
(2) Grassy Eucalypt and acacia forest, exotic pine plantations, Cyprus pine forests, wallum heath	6	B	For the purposes of construction level assessment under AS 3959-2009, woodland is the appropriate vegetation type to us due to fuel load.
Native Grasslands (ungrazed), open woodlands, canefields	5	G	Note that where canopy cover is less than 30% AS 3959 uses the surface fuel load. State variation (Qld) to Section 3.7.4.0 of Volume 2 Building Code of Australia states that *"The requirements of (a) do not apply when the classified vegetation is Group F rainforest (excluding wet sclerophyll forest types), mangrove communities and grasslands under 300mm high."* This is interpreted as stating that where these communities exist within a Designated Bushfire Prone Area construction in accordance with AS 3959 is not required in relation to this vegetation.

Building Class requirements AS 3959-2009

2.5.1. FDI 40
2.5.2. Vegetation Classification B

Reception
2.5.3. Land slope Downslope >5 to 10 degree

Distance of site from Predominate vegetation class	Bushfire Attack Level
0-<9	BAL -FZ
9-<13	BAL-40
13-<19	BAL-29
19-<28	BAL-19
28-<100	BAL-12.5

Camp Zone 1
2.5.4. Land slope Downslope >5 to 10 degree

Distance of site from Predominate vegetation class	Bushfire Attack Level
0-<9	BAL -FZ
9-<13	BAL-40
13-<19	BAL-29
19-<28	BAL-19
28-<100	BAL-12.5

Camp Zone 2
2.5.5. Land slope Downslope >5 to 10 degree

Distance of site from Predominate vegetation class	Bushfire Attack Level
0-<9	BAL -FZ
9-<13	BAL-40
13-<19	BAL-29
19-<28	BAL-19
28-<100	BAL-12.5

Walk In Camping 1
2.5.6. Land slope Downslope >5 to 10 degree

Distance of site from Predominate vegetation class	Bushfire Attack Level
0-<9	BAL -FZ
9-<13	BAL-40
13-<19	BAL-29
19-<28	BAL-19
28-<100	BAL-12.5

Camp Zone 3
2.5.7. Land slope Downslope >15 to 20 degree

Distance of site from Predominate vegetation class	Bushfire Attack Level
0-<15	BAL -FZ
15-<21	BAL-40
21-<31	BAL-29
31-<42	BAL-19
42-<100	BAL-12.5

Prestige Camping
No construction levels required as the site is in a LOW HAZARD area, which is not a Designated Bushfire Prone Area in accordance with the Building Code of Australia

Picnic Area (day use)
No construction levels required as the site is in a LOW HAZARD area, which is not a Designated Bushfire Prone Area in accordance with the Building Code of Australia
Note:
The levels shown above are based on Method 1 of the AS 3959-2009. It is possible that lower construction levels can be obtained by using Method 2 of AS 3959-2009,combined with site-specific fuel loads, and assessed on an individual building basis.
Construction levels for elevations of a building that are subject to shielding from the fire sources can be reduced in accordance with 3.5 of AS 3959-2009 by one level but not below BAL-12.5 All fire sources on adjoining sites and across roads must be considered when utilising this reduction.
Due to the nature of the vegetation coverage on this site, this option will not be available.

2.6. **Ecological Requirements**

There are no specific ecological requirements in relation to bushfire management. This report provides an Alternative Solution to the clearing of buffer areas as set out in the State Planning Policy SPP01/03, and the Sustainable Planning Act.

Note;
The State Planning Policy SPP 01/03 requires that Medium and High Hazard/Risk areas be identified as Natural Hazard Management Areas.

Footnote 24 to the SPP 01/03 and Footnote 34 to The SPP Guideline states "A natural Hazard management area may be defined using a different term (e.g. bushfire prone area; flood affected area)."

This confirms the designation of a Natural Hazard Area (Medium and High Hazard defined by the SPP) as a bushfire prone area and therefore requiring Construction complying with the Australian Standard.

SPP 2013 states that being located in a Medium, High or Very High Hazard area triggers the need for compliance with AS 3959.

The Category of Bushfire Attack referred to in the Australian Standard is different to the Hazard/Risk area referred to above.

Extensive modification of the existing vegetation types including that on adjoining sites could result in a change of Category of Bushfire Attack and therefore variation in the Level of construction required.

It is the responsibility of the owner of the site to ensure that plantings subsequent to their occupation of the site do not reduce the safety of their buildings in a manner, which could require a higher level of Construction than that originally utilised

(b) For heath, shrub and scrub vegetation classifications, a nominal value of 45 km/h shall be used for wind speed to determine rate of spread.

NOTE: Wind speeds are measured and reported for a height of 10 m above ground level.

A2

CB2 This Standard uses specified Fire Danger Index values for different regions based on the advice of local authorities (as shown in Table 2.1). The values shown are for the Forest Fire Danger Index (FFDI), calculated using the equations of Noble, I.R., Bary, G.A.V., and Gill, A.M., 1980 (Ref. 6). Grassland fire behaviour is modelled using the Grassland Fire Danger Index (GFDI) using the equations published by Purton, C.M., 1982 (Ref. 17). Since the fire behaviour model for grassland is different from those of other fuel types, there is no single mathematical relationship between values of the Forest Fire Danger Index (FFDI) and the Grassland Fire Danger Index (GFDI). In order to continue the use of Tables 2.4.2–2.4.5, equivalent representative values of the GFDI were selected as shown:

FDI in Tables 2.1 and 2.4	*Grassland Fire Danger Index (Purton 1982) deemed equivalent*
40	*50*
50	*70*
70	*100*
80	*110*
100	*130*

Thus, the specific value of the GFDI used to generate the flame length and radiant output in Paragraph B7 for Table 2.4.3 (FDI 80) was a GFDI of 110. Should an entirely site-specific calculation be needed then a data set should be obtained from the authority having jurisdiction for the site.

B3 STEP 2—VEGETATION CLASSIFICATION

Determine the vegetation classification—

A1

(a) in accordance with Clause 2.2.3; and

(b) select the appropriate potential surface fuel load (w), overall fuel load (W) and classified vegetation height (VH) from Table B2 or other data sets provided by the relevant fire authority for the site.

NOTE: Both the understorey and the canopy should be considered in the assessment. The rate of spread for forest fires should be determined using the understorey fuel loads. Flame heights should be determined on the basis of both the combined understorey and canopy fuels (overall fuel loads) for forest fires.

CB3 The vegetation classification system in Section 2 and in this Appendix is based on a national system developed by R. Specht (Ref. 4). Some States and Territories have developed their own systems for vegetation classification, which may vary in extent or description to those provided herein.

For example, in NSW, a system has been established by D. Keith (Ref. 5) and fuel loads have been extensively researched for that State. This may not be comparable to other States/Territories, which may have significantly different fuel loads or different descriptions for a similar vegetation classification.

Consultation with relevant fire authorities is important to establish any variations from the values provided in Table B2 below.

TABLE B1

VEGETATION TYPES, FUEL TYPES, AND CORRESPONDING FIRE BEHAVIOUR MODELS

Fuel types	Fire model	Fire behaviour equation
Forest, Rainforest and Woodland	McArthur, 1973 and Noble et al, 1980	$R = 0.0012 * FDI * w$
Shrubland, Scrub and Heath	Catchpole et al. 1998	$R = 0.023 * V^{1.21} * VH^{0.54}$
Tussock Moorland	Marsden–Smedley et al.1995	$R = 0.024 * V^{1.312} * \exp(-0.0243 * M_f) * (1 - \exp(-0.116 * \text{age}))$
Grassland	Noble et al. 1980	$R = 0.13 * GFDI$

LEGEND:

R = rate of spread (km/h)
FDI = McArthur Fire Danger Index and is dimensionless
w = surface fuel load (t/ha)
VH = average height of classified vegetation (m)
V = average wind speed at 10 m above ground (km/h)
M_f = moisture factor used for Tussock Moorland only and is dimensionless
age = age of vegetation used for Tussock Moorland only (yrs)
GFDI = Grassland Fire danger Index as shown in Table B1(A)

TABLE B1(A)

GRASSLAND FIRE DANGER INDEX VALUES FOR USE IN TABLE B1

FDI in Tables 2.1 and 2.4	Grassland FDI (Purton 1982) deemed equivalent
40	50
50	70
70	100
80	110
100	130

TABLE B2

VEGETATION CLASSIFICATION AND FUEL LOAD

Vegetation classification (see Clause 2.2.3)	Vegetation type (see Figure 2.3)	Fuel type	Surface fuel load (t/ha)	Overall fuel load (t/ha)	Vegetation height (m)
Forests	1, 2, 3, 4	Forest	25	35	—
Woodlands	5, 6, 7, 8, 9	Woodlands	15	25	—
Shrubland	10, 11, 12	Shrub and heath	15	15	1.5
Scrub	13, 14	Shrub and heath	25	25	3
Mallee/Mulga	15	Shrub and Heath	8	8	3
Rainforest	16, 17, 18	Forest	10	12	—
Tussock Moorland	Not Shown	Tussock Moorland	17	17	$M_f = 5$ age = 20 y
Grassland	19, 20, 21, 22, 23, 24, 25, 26, 27, 28	Grassland	4.5	4.5	—

State-wide Bushfire Prone Area Mapping

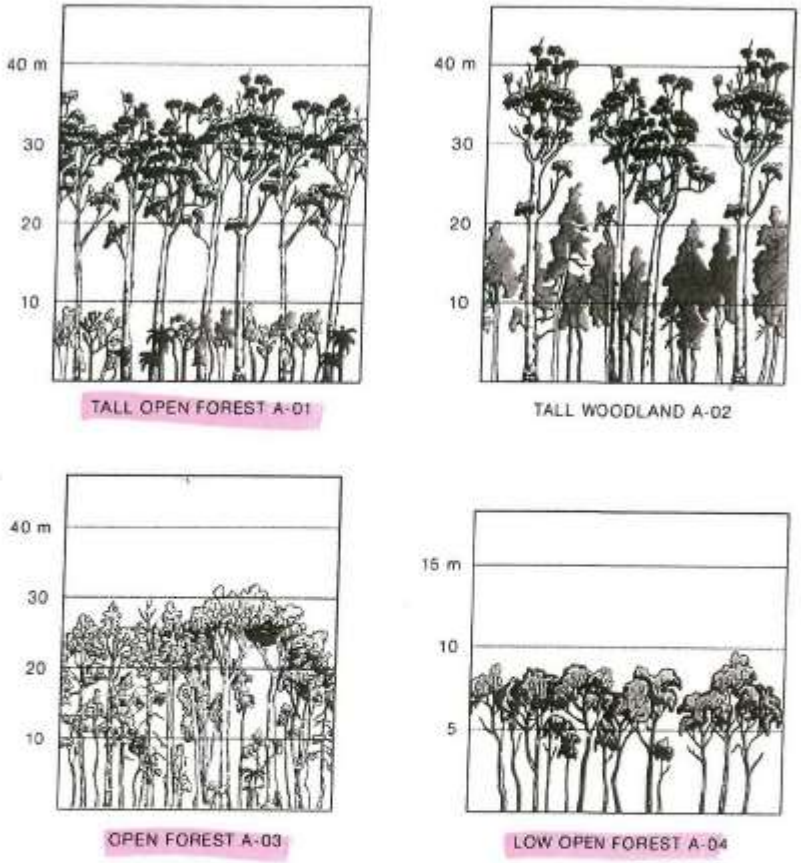
Vegetation Hazard Classes and Potential Fuel Loads

(Summary of updated descriptions and labels)

30 Sep 2014

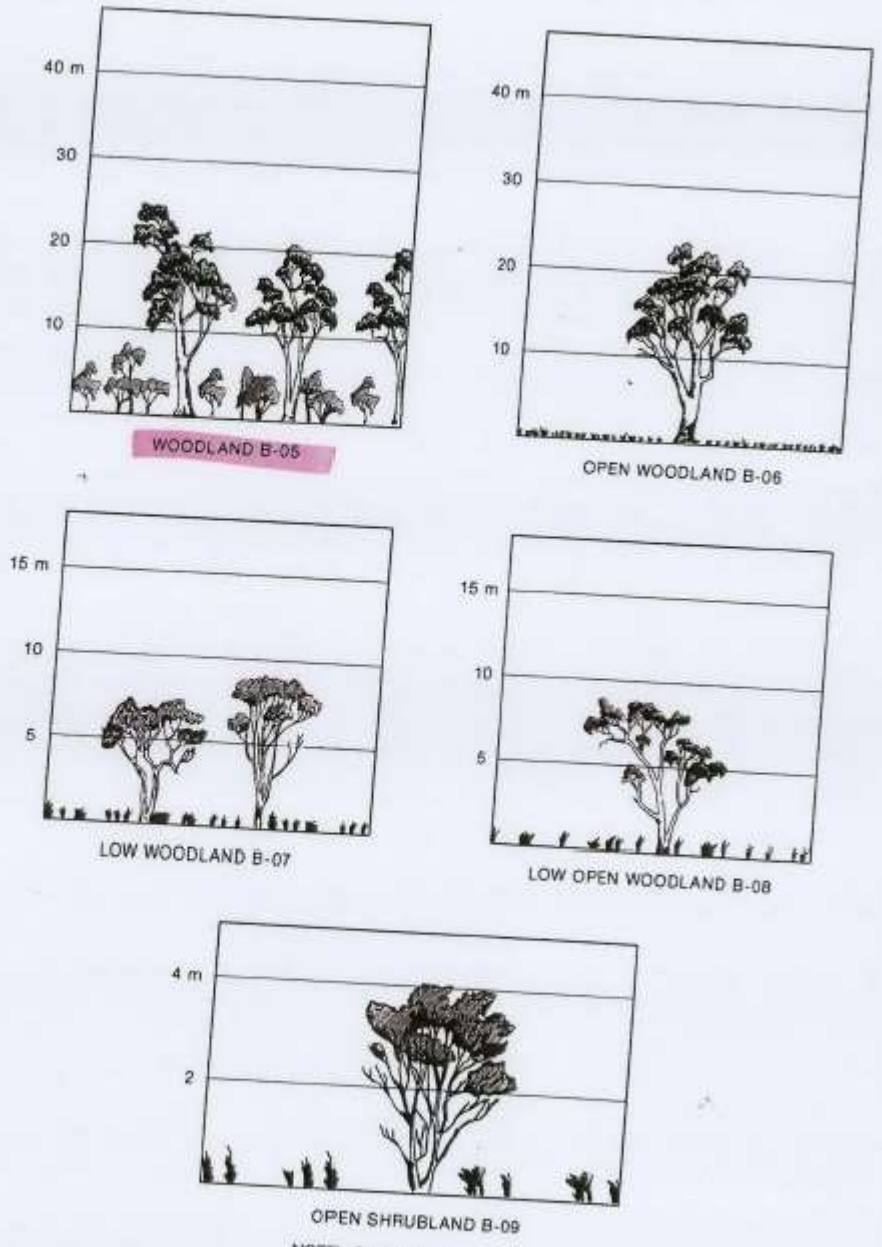
Table 1. Vegetation Hazard Class Descriptions and Potential Fuel Load

Broad Vegetation Group / Vegetation Hazard Class	*Potential Fuel Load*
BVG 1. Complex mesophyll to notophyll vine forests of the Wet Tropics bioregion.	
1.1 Complex mesophyll to notophyll vine forests	2.6
BVG 2. Complex to simple, semi-deciduous mesophyll to notophyll vine forest, sometimes with Araucaria cunninghamii (hoop pine).	
2.1 Complex to simple, semi-deciduous mesophyll to notophyll vine forest	3.5
BVG 3. Notophyll vine forest/ thicket (sometimes with sclerophyll and/or Araucarian emergents) on coastal dunes and sandmasses.	
3.1 Notophyll vine forest	4.5
3.3 Notophyll vine thicket	4.4
BVG 4. Notophyll and notophyll feather palm or fan palm vine forest on alluvia, along streamlines and in swamps on ranges	
4.1 Notophyll and notophyll palm or vine forest	4.5
BVG 5. Notophyll to microphyll vine forests, frequently with Araucaria spp. or Agathis spp. (kauri pines)	
5.1 Notophyll to microphyll vine forests	3.9
5.2 Notophyll to microphyll vine forest with sparse overstorey	3.9
5.5 Sedgeland within Notophyll to microphyll vine forests	3.9
BVG 6. Notophyll vine forest and microphyll fern forest to thicket on high peaks and plateaus.	
6.1 Montane Notophyll vine forest and microphyll fern forest	3.9
6.3 Montane Notophyll vine thicket and microphyll fern thicket	3.9
BVG 7. Semi-evergreen to deciduous microphyll vine thicket.	
7.1 Semi-evergreen to deciduous microphyll vine forest	6.0
7.2 Sparse semi-evergreen to deciduous microphyll vine forest	6.0
BVG 8. Wet eucalypt tall open forest on uplands and alluvia.	
8.1 Wet eucalypt tall open forest	35.0
8.2 Wet eucalypt tall woodland	23.9
BVG 9. Moist to dry eucalypt open forests to woodlands usually on coastal lowlands and ranges.	
9.1 Moist to dry eucalypt open forests on coastal lowlands and ranges	24.1
9.2 Moist to dry eucalypt woodland on coastal lowlands and ranges	17.2
9.3 Shrubland within moist to dry eucalypt on coastal lowlands and ranges	12.7
BVG 10. Corymbia citriodora (spotted gum) dominated open forests to woodlands on undulating to hilly terrain.	
10.1 Spotted gum dominated open forests	20.8
10.2 Spotted gum dominated woodlands	18.0



NOTE: See Table 2.3.

FIGURE 2.4(A) CLASSIFICATION OF VEGETATION—FOREST



NOTE: See Table 2.3.

FIGURE 2.4(B) CLASSIFICATION OF VEGETATION—WOODLAND

APPENDIX 4
ATTACHMENTS IN RELATION TO "RISK MANAGEMENT"

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3. RISK MANAGEMENT PLAN

3.1. Agencies / Persons Responsible

The responsible Fire Authority is the Rural Fire Service Queensland through the Rural Fire Brigade being responsible for Bush Fires and the Queensland Fire and Emergency Service being responsible for Structural Fires

It is the responsibility of the Owners of the properties to ensure that the relevant measures required by this Management Report are in place prior to inspection by the Council and the Building Certifier and to ensure that those measures are in place prior to the occupation of any buildings, which are the subject of this report. It is the responsibility of Council and Building Certifiers to ensure that relevant measures within their responsibility are in place prior to the issuance of any certification.

3.2. Bushfire Safety Objective

The objective of this report is to minimise potential risk to life and property by protecting the buildings from the effects of bushfire.

3.3. Aims

The aims to achieve this objective are to mitigate the effect of the bushfire attack mechanisms of: -

3.3.1. Radiant Heat
3.3.2. Direct Flame Contact
3.3.3. Wind
3.3.4. Ember Attack
3.3.5. Smoke

3.4. Functional Requirements

The functional requirements to achieve this objective are: -

3.4.1. The provision of safe conditions for fire fighters
3.4.2. The provision of safe conditions for residents
3.4.3. Ensure adequate and safe access to and from the property
3.4.4. Ensure adequate and safe water supply to the property and the establishment of fire fighting water reserves
3.4.5. Provide a system of fire breaks and trails to protect the building component
3.4.6. Remove vegetation that is considered dangerous and a hazard in Fire Conditions
3.4.7. To ascertain the required standard of construction of the buildings in accordance with the requirements of the National Construction Code and the Australian Standard for Construction in Bushfire Prone Areas or the provision of a satisfactory alternative solution
3.4.8. Facilitate the return to " normalcy"

3.5. Proposed Fire Fighting Infrastructure

3.5.1. Each of the proposed buildings, including all amenities buildings, and the Walk in Camping 1, are to have a minimum dedicated fire fighting water reserve of 5000l at all times.
3.5.2. This reserve can be in the form of a Tank or an in ground swimming pool and must be in place at the time of completion of the new Building. In the event of a tank being used, the tank must be located a minimum of 9m from the nearest building, have flat standing area immediately adjacent, and be no further than 20m from the building and be located between the building and the road .The tank storage can comprise part of a larger tank providing the normal outlet is positioned to reserve 5000l in the bottom for fire fighting purposes only. Provide a 50mm male cam lock fitting outlet for fire brigade purposes only. The tank is to be of non -combustible materials.
3.5.3. In the event of a pool being used, the pool must be readily accessible from the road by fire fighting vehicle .
3.5.4. A tank farm with the equivalency of 4 concrete community tanks of capacity 22,500 litres each is to be located adjoining the main carpark in the area marked as having a tank.
3.5.5. A concrete community tank of capacity 22,500 litres is to be located at each of the locations shown on the plan
3.5.6. The community and tank farm tanks are to have fittings and access requirements as noted for household tanks.
3.5.7. Each of the tanks in the camping areas is to be provided with a diesel powered pump and sufficient hosing to reach the camp area extremities.
3.5.8. It is preferable that the pump be connected to a reticulated system comprising bushfire hydrants as described in the support information accompanying this report.

3.5.9. Pumps are to be subjected to a regular and documented maintenance schedule.

3.6. Camping Fires and Bar-b-ques (open fires)

3.6.1. All wood (or similar) burning camping fires and bar-b-gues shall be contained. Bar-b-gues are to be in a fireproof container/housing. Campfires are to be in a pit with a minimum of 3m hardstand surrounds.

3.6.2. Facilities above are to have signs advising of safety requirements including wet dousing of fire after use.

3.6.3. Use of these is to be strictly controlled during fire season and in accordance with the requirements of any Fire Bans.

3.7. Construct a Fire Trail/Emergency Access track

3.7.1. The existing trails indicated on the plans are to be upgraded to meet the standards set out in the Fire Management report except for gradient. Turning and protection areas are to be formed with a minimum dimension of 9m at a maximum of 400m intervals and at the end of each dead end track.

3.7.2. A new fire trail is to be established as indicated on the plans.

3.7.3. Existing overgrown trails are to be reinstated within a time period of 12 months after the opening of the centre.

3.7.4. All Building Envelopes are to have a 6m wide defendable space, generally complying with the requirements (except for width) of the vehicular fire trail requirements to the whole perimeter. This space is not to be obstructed by structures or landscaping.

3.7.5. The road access and all boundary crossings through fences to these trails can be either a gate or a fence cutting point consisting of strainer posts 3.6m apart with fencing wire between

3.8. Vegetation Management

3.8.1. All grass and existing mid storey vegetation within the Primary Vegetation Management Zone shall be kept to a maximum of 100mm at all times or be of less flammable or rain forest species. Existing trees within this area are to be reduced to give a noncontinuous canopy cover between trees with a total cover of less than 30% of the area .

3.8.2. All grass and midstorey vegetation in the Secondary Vegetation Management Zone to be kept to a maximum of 300 mm at all times by slashing and/or grazing with a reduction to 100mm at the commencement of the Bushfire Season.

3.8.3. Iconic and specialist plant species need not be removed as part of the vegetation management noted above in both zones.

3.8.4. All dead and damaged timber to be removed from the building envelopes and Primary Vegetation Management Zone, and removed from site.

3.8.5. Requirements noted above may be subject to State and Local Authority approval. Those approvals must be obtained prior to implementation of any of these measures.

3.8.6. The management referred to above is regarded as " Essential Management " under the Sustainable Planning Regulation .

The management is a component of the Construction Level. Therefore, the Building Certifier must ensure that the management has occurred in accordance with this report before issuing final certification

The management also forms part of the Alternative Solution to the management of buffer areas as set out in the State Planning Policy SPP01/03, and the Sustainable Planning Act.

Recent research (Project Vesta) indicates that tree canopy without mid storey and surface fuels forms an important filter for control of ember attack, which is responsible for in excess of 90% all bushfire related house fires.

3.9. Fire Trail Identification

3.9.1. Install and maintain permanent signage at each end and at intersections advising the purpose and location of the trail, generally as indicated on the plan that forms part of this report. 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 galvanised 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 signpost installed. Where the trail connects with a road or

boundary the signpost is to be within 2m of the boundary. At an intersection the signpost is to be within 5m of the intersection.

3.9.2. The operator will allocate trail numbers and install the numbering on the post.

3.9.3. All fire trail related signage is to be installed complete.

3.9.4. 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 as an appendix at the rear of this report.
(Note that the reference to the Gold Coast Guidelines is due to the intention by QFES/RFSQ to have this as the standard for the whole of Queensland)

3.9.5. 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 as an appendix at the rear of this report.

3.9.6. Master identification signs showing a plan of the whole of the site and identifying buildings, trails, identification signs and hydrant locations are to be located as indicated on the Fire Management Plan

3.10. Minimum Vehicular Fire Trail Standards

The Fire/Maintenance trail has: -

3.10.1. A minimum cleared width of 6m

3.10.2. A minimum formed width of 4m where possible.

3.10.3. A maximum gradient of 16% or one that has been satisfactorily test driven with the type of Fire Service Appliance that would be utilised on the site during a fire event with adequate drainage to prevent soil erosion and minimise ongoing trail maintenance

3.10.4. Turning /passing areas at a maximum of 400m with a maximum gradient of 5%

3.10.5. Where dead ends occur, turning circles or T turning areas are to be provided to comply with the requirements of the Bush Fire Code

3.11. Fencing

Any boundary fencing located adjoining bushland or a fire access trail is to be

3.11.1. A maximum of 1000mm high

3.11.2. At least 75 % transparency

3.11.3. Contain at least 1 personal gate to each 100m

3.11.4. Fencing between buildings should be of non-combustible materials.

3.12. Effluent Disposal Areas

Where possible, effluent disposal shall be located on the downhill side of the building envelope and be maintained in a band with a minimum 6m width. Grass in this area should be kept to a maximum of 50mm and any landscaping should be of Less Flammable Vegetation

3.13. Fire Trail and Fire Break Maintenance

3.13.1. The fire trails are to be kept mowed to a maximum of 50mm at all times and to be kept in a manner suitable for 4wd Fire Vehicles and to the satisfaction of the Fire Brigade.

3.14. Building Construction

All construction is to be in accordance with Australian Standard AS 3959 2009 Construction of Buildings in Bush Fire-Prone Areas and the Level of construction assessed under " Site and Hazard Assessment "

Amenity buildings are to be designed and constructed to provide bushfire protection shelters, with a building at each of the walk-in camping areas to also serve this purpose.

Note that it is our opinion that timber should not be used externally for BAL-29 plus construction even though under the Australian Standard situations could arise where it could be deemed acceptable.

However, heavy timber construction would be acceptable.

The plans lodged for Building Certification are to be assessed on this basis by the Building Certifier.
A final stage completion certificate (Form 21) issued by the Building Certifier is to be received prior to occupation of the building.
Buildings are not to be occupied until certification is received

Buildings are to be maintained in a manner that protects the integrity of the construction and building elements as outlined in this report

3.15. **Street Numbering**
Numbering is to be installed in accordance with the current Street Numbering System at time of completion of building.

3.16. **Less Flammable Landscaping**
Any landscaping within 10m of the buildings is to be Less Flammable, in accordance with the list enclosed as an Appendix at the rear of this Report

3.17. **Insurance**
Failure to comply with this management report may have a detrimental effect upon the Insurance of the subject Buildings.

3.18. **Emergency Response Procedures**

3.18.1. In the event of Fire Emergency, assistance is to be obtained by dialling 000.

3.18.2. A system is to be installed that will provide emergency warnings to all site occupants in the event of bushfire or other emergencies.

3.18.3. Basic fire fighting training and awareness is to be provided to all-key personnel on the site include group leaders.

3.18.4. The owner should read thoroughly the brochures contained and those recommended at the rear of this report. They contain valuable information that could assist in the saving of lives and property in a fire event!

3.19. **Community Awareness Strategies**

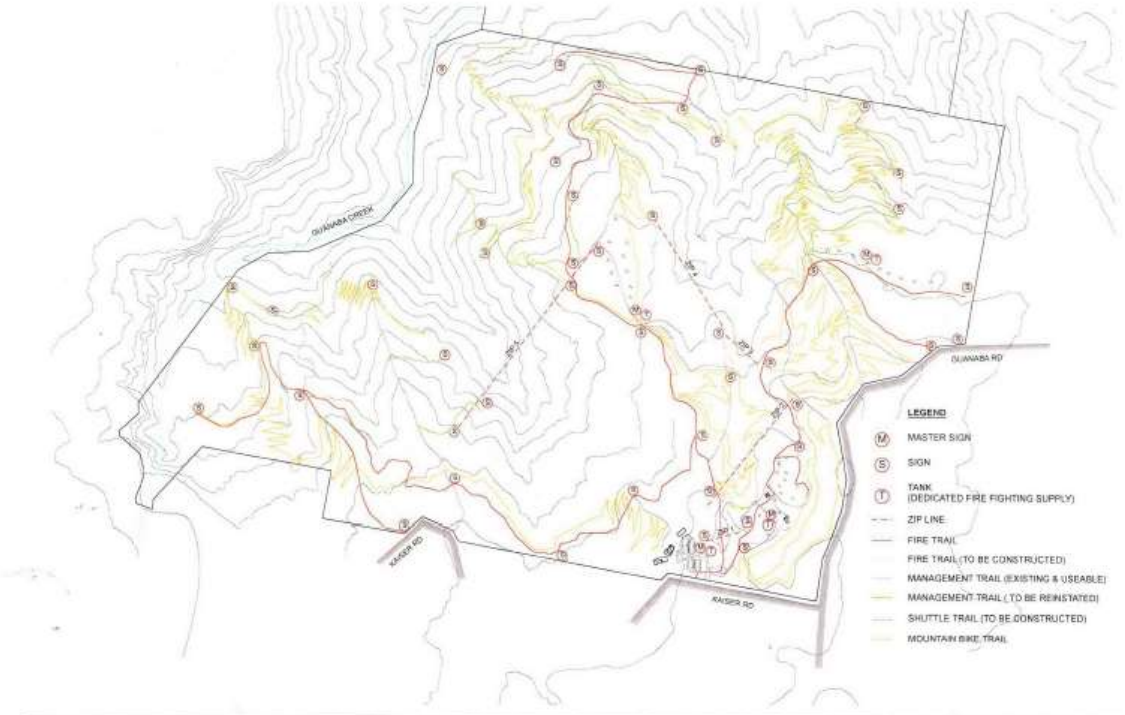
3.19.1. Each subsequent owner is to be provided with a copy of this Fire Management report with an alert placed on either Title or Council Rate searches that the Report is in existence and is to be made available to ensuing owners.

3.19.2. Multilingual signs are to be erected at the entrance to the site and to each of the camping and adventure courses advising of procedures to be taken in the event of bushfire.

3.20. **Administering Staff**
It is the responsibility of the owners to ensure compliance with this Report and the Town Plan, and to ensure that each of the new owners is provided with a copy of this report.

It is the responsibility of the Council and the Building Certifier to ensure that the relevant measures required by this management report are in place prior to the final completion stage inspection of any buildings on any sites which are the subject of this report as noted in Clause 3.1 of this report.

It is the responsibility of the ensuing owners of the properties to maintain the properties in the conditions outlined in this report.

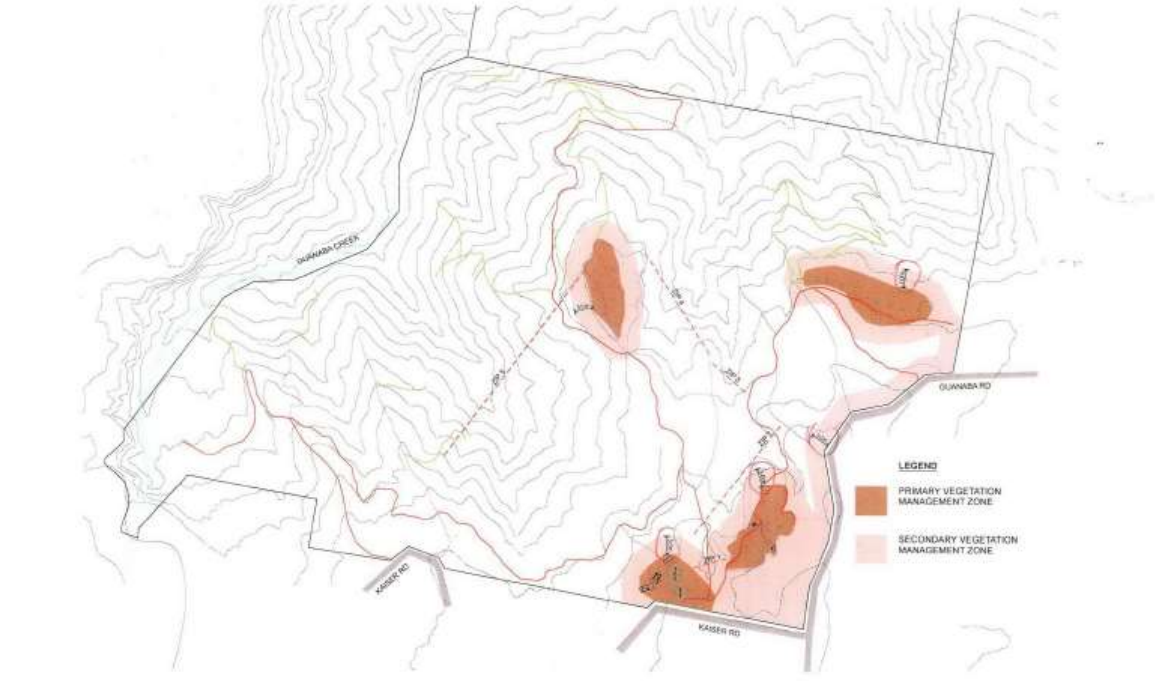


GUANABA EXPERIENCE

EMERGENCY MANAGEMENT PLAN

Eldon Bottcher Architect Pty. Ltd

FM-1797 FM-01



GUANABA EXPERIENCE

VEGETATION MANAGEMENT PLAN

Eldon Bottcher Architect Pty. Ltd

FM-1797 FM-03

FPA AUSTRALIA
Certified Business
Bushfire Planning & Design

GUANABA EXPERIENCE
BUSHFIRE MANAGEMENT REPORT-1
FM 1797-1
for
MT TAMBORINE CAMPING AND ACTIVITIES PTY LTD
at
98-196 GUANABA ROAD
TAMBORINE MOUNTAIN

PREPARED BY
ELDON BOTTCHER ARCHITECT PTY LTD
145 VARSITY PARADE
VARSITY LAKES
PH 07 55920082
EMAIL bushfires@eb-a.com.au

UDIA

Member Australian Institute of Architects

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DISCLAIMER

Experienced fire fighters with extensive knowledge of building have prepared this Report. Their practical knowledge of fire fighting has been backed up by academic study.

However, fire is an element of nature. Small natural occurrences can disastrously affect the outcome of the best planning. Human actions similarly can have disastrous results.

Whilst every care has been taken in the formulation of this management report, there can be no guarantee that even the strictest adherence to its recommendations can guarantee safety of life and property.

The authors of this report accept no responsibility for any damage to life or property caused by fire or any other cause to persons using land or structures, which could in any way be construed to be the subject of this report.

The report has been commissioned as the land falls within an area deemed a fire risk by the local authority.

As such, it must be recognized that structures upon this land and those using the structures could be deemed at risk.

Important Note;
The Australian Standard for Construction in Bush Fire Prone Areas has been reviewed and the new version, AS 3959-2009 came into force in Queensland on 1st October 2009 and the State Planning Policy is currently under review.

References made to these documents and measures required for compliance with these documents are correct at the time of preparation of this report. Delays in implementation of the works, which are the subject of this report, may mean that the revised Standard and Policy are in force and that the measures recommended in this report may no longer be current.
In that event, this report may have to be reprepared to maintain currency.
Note that there are references to both versions of AS 3959 in relation to the State Planning Policy. This is due to the State Planning Policy still containing references to the superseded version.

INTRODUCTION

This Fire Management Report has been written for the benefit of future occupants of this proposed site and developed in accordance with the requirements of;

- The Scenic Rim Regional Council Town Plan,
- The State Planning Policy SPP01/03 " Mitigating the Adverse Impacts of Flood, Bushfire and Landslide, and SPP 2013,
- Queensland Sustainable Planning Act
- The National Construction Code and
- Australian Standard AS3959,
- International Fire Safety Engineering Guidelines

This report has been prepared to provide an alternative solution to the requirements of the Sustainable Planning Act. These documents refer to clearing of buffer areas between the buildings and vegetation of 1.5 times the vegetation height This report reduces the buffer width by increasing the level of construction in accordance with the AS3959 and the National Construction Code and ensuring the ability of service intervention by the introduction of fire trails and defendable space, along with associated signage, access way protection, and water storage.

Note that SPP 2013 came into being on 2nd December 2013. whilst the SPP 01/03 lapsed in October 2013. The proposed methodology for calculating Bushfire Hazard is still in Draft form, and is under question. On this basis this report refers to both methodologies.

The report has been prepared as supporting documentation for a Material Change of Use (Building and Change of Use) Application.

1.1. **Address:**
98-196 Guanaba Road
Tamborine Mountain

1.2. **Local Authority**
Scenic Rim Regional Council

1.3. **R.P.D.**
Lot 3 on RP 181081

1.4. **Site area**
203.023ha

1.5. **Responsible Fire Authority**
Rural Fire Service Queensland via the rural fire brigade for rural fires and QFES for Structural fires.

1.6. **Potential Bushfire Hazard Rating.**
The hazard rating maps prepared for the Council show the ratings on this property ranging from Low to High.

1.7. **Land tenure**
Freehold

1.8. **Adjoining owners are:**
Freehold

1.9. **Current Land Use:**
Vacant

1.10. **Fire danger Index**
FDI 40 (nominated by AS 3959-2009)

1.11. **Topography**
Gorges and Mountains

1.12. **Predominant Wind Direction**

The predominate wind direction is from the South East. In times of severe fire weather the wind direction will be from the North West. The Topography will create microclimates, which will cause swirling, which will modify the apparent wind direction according to primary direction and velocity

1.13. **Slope**
Variable

1.14. **Aspect**
Variable
For Bushfire purposes, North-to-North West is appropriate.

1.15. **Fuel Type**
Grassy Eucalypt
Intact Rainforest

1.16. **Fire History**
There is evidence of a recent fire event

1.17. **Location of Access Tracks**
There are a substantial number of access tracks relevant to this application

1.18. **Location of Fire Breaks**
There are no formal firebreaks

1.19. **Location of existing fire fighting infrastructure**
There is no formal fire fighting infrastructure

1.20. **Historical and Cultural Sites**
There is no evidence of Historical and Cultural sites on the property.

2. SITE AND HAZARD ASSESSMENT

2.1. Discussion with Responsible Fire Authority

The fire management report has not been discussed with the First Officer of the Rural Fire Brigade.

2.2. Vegetation Types

The vegetation type predominate to this site is as scheduled below. Note that under SPP 2013, differing vegetation types are used. This report does not refer to these but does take into account draft mapping prepared under different methodology and published by the State Government.

VEGETATION TYPE	STATE PLANNING POLICY INDICE	AS 3959 CATEGORY	COMMENTS
Grassy Eucalypt and acacia forest, exotic pine plantations, Cyprus pine forests, wallum heath	6	B	For the purposes of construction level assessment under AS 3959-2009, woodland is the appropriate vegetation type to use due to fuel load.
Intact Rainforest, mangrove, intact riverine rainforest	0	F	Note that Rainforest is not considered as a fire threat within SPP 01/03, which is a policy called up by the Sustainable Planning Act. Where the SPP 01/03 (amended) index is, or is less than, 2 the hazard is automatically regarded as LOW and no further assessment is required. State variation (Qld) to Section 3.7.4.0 of Volume 2 Building Code of Australia states that *"The requirements of (a) do not apply when the classified vegetation is Group F rainforest (excluding wet sclerophyll forest types), mangrove communities and grasslands under 300mm high."* This is interpreted as stating that where these communities exist within a Designated Bushfire Prone Area construction in accordance with AS 3959 is not required in relation to this vegetation.

2.3. **Anticipated Bushfire Behaviour**
Bushfire behaviour noted below is as noted in State Planning Policy SPP 01/03

VEGETATION TYPE	ANTICIPATED BUSHFIRE BEHAVIOUR
Grassy Eucalypt and acacia forest, exotic pine plantations, Cyprus pine forests, wallum heath	Fire intensity may be severe with flame lengths to 20m, with a lesser attack from embers
Intact Rainforest, mangrove, intact riverine rainforest	Virtually fireproof

2.4. **Potential Bushfire Hazard Rating.**
Site inspection and assessment against the State Planning Policy indicates ratings across the whole of the site.

The ratings from the State Planning Policy are as scheduled below;
Note that SPP 01/03 has lapsed at time of preparing this report, whilst the revised methodology under SPP 1013 is being continually modified

However, current mapping for Scenic Rim Regional Council was prepared under this methodology, and it is therefore appropriate to use..

The ratings from the State Planning Policy SPP 01/03 are as scheduled below;

Reception

KEY LAND CHARACTERISTIC	INDICE	COMMENTS
Vegetation Communities	6	Grassy Eucalypt
Slope	3	Rolling hills
Aspect	3.5	North to North West
Total	**12.5**	**Sum of indices is between 6 and 12.5 denoting a Medium Hazard**

This confirms a rating of Medium on the site

Camp Zone 1

KEY LAND CHARACTERISTIC	INDICE	COMMENTS
Vegetation Communities	6	Grassy Eucalypt
Slope	3	Rolling hills
Aspect	3.5	North to North West
Total	**12.5**	**Sum of indices is between 6 and 12.5 denoting a Medium Hazard**

This confirms a rating of Medium on the site

Camp Zone 2

KEY LAND CHARACTERISTIC	INDICE	COMMENTS
Vegetation Communities	6	Grassy Eucalypt
Slope	4	Steep Hills
Aspect	3.5	North to North West
Total	**13.5**	**Sum of indices is 13 and above denoting a High Hazard**

This confirms a rating of High on the site

Camp Zone 3

KEY LAND CHARACTERISTIC	INDICE	COMMENTS
Vegetation Communities	6	Grassy Eucalypt
Slope	5	Gorges and Mountains
Aspect	3.5	North to North West
Total	**13.5**	**Sum of indices is 13 and above denoting a High Hazard**

This confirms a rating of High on the site

Picnic Area (day use)

KEY LAND CHARACTERISTIC	INDICE	COMMENTS
Vegetation Communities	0	Rainforest
Slope	0	utilising footnote to table A3.2 of the guidelines to State Planning Policy SPP 01/03
Aspect	3.5	
Total	**3.5**	**Sum of indices is 5.5 or below denoting a Low Hazard. Automatically low hazard as vegetation is rainforest**

This confirms a rating of Low on the site

All of the sites addressed above are noted as Very High Hazard on the Draft Planning issued by the State Government.

The SPP 2013 is a Planning Policy (instrument) referred to under the Sustainable Planning Act. Its requirements bind all persons and override Council Bushfire Hazard Plans.

SPP 2013 states that being located in a Medium, High or Very High Hazard area triggers the need for compliance with AS 3959.

Footnote 24 to the SPP 01/03 and Footnote 34 to The SPP Guideline states "A natural Hazard management area may be defined using a different term (e.g. bushfire prone area; flood affected area)." This confirms the designation of a Natural Hazard Area (Medium and High Hazard defined by the SPP) as a bushfire prone area and therefore requiring Construction complying with the Australian Standard.

2.5. Building Construction

All buildings are in a Designated Risk Area. There is a requirement by Scenic Rim Regional council that any Buildings within this area be constructed in accordance with the Australian Standard for Construction in Bushfire Prone Areas. The levels determined effect the types and usage of materials in relation to the type of Bushfire Attack, which may occur as assessed under the Standard. The Level of Bushfire Attack is assessed taking the vegetation types, slope, and distance from vegetation into account. The most common elements affected are Windows and flyscreening, with some restrictions on cladding and timber types. A comprehensive breakdown is available in either the National Construction Code or the Australian Standard for Construction in Bushfire Prone Areas. Extracts of these documents are not provided due to copyright reasons. Full details can be obtained from your building designer or certifier.

Note . The construction levels are issued as a guide only, with more detailed assessment required at time of construction.

Building Class requirements AS 3959-2009

2.5.1. FDI 40
2.5.2. Vegetation Classification B

Reception
2.5.3. Land slope Downslope >5 to 10 degree

Distance of site from Predominate vegetation class	Bushfire Attack Level
0-<9	BAL -FZ
9-<13	BAL-40
13-<19	BAL-29
19-<28	BAL-19
28-<100	BAL-12.5

Camp Zone 1
2.5.4. Land slope Downslope >5 to 10 degree

Distance of site from Predominate vegetation class	Bushfire Attack Level
0-<9	BAL -FZ
9-<13	BAL-40
13-<19	BAL-29
19-<28	BAL-19
28-<100	BAL-12.5

Camp Zone 2
2.5.5. Land slope Downslope >5 to 10 degree

Distance of site from Predominate vegetation class	Bushfire Attack Level
0-<9	BAL -FZ
9-<13	BAL-40
13-<19	BAL-29
19-<28	BAL-19
28-<100	BAL-12.5

Camp Zone 3
2.5.6. Land slope Downslope >15 to 20 degree

Distance of site from Predominate vegetation class	Bushfire Attack Level
0-<15	BAL -FZ
15-<21	BAL-40
21-<31	BAL-29
31-<42	BAL-19
42-<100	BAL-12.5

Picnic Area (day use)
No construction levels required as the site is in a LOW HAZARD area, which is not a Designated Bushfire Prone Area in accordance with the Building Code of Australia

Note:
The levels shown above are based on Method 1 of the AS 3959-2009.
Construction levels for elevations of a building that are subject to shielding from the fire sources can be reduced in accordance with 3.5 of AS 3959-2009 by one level but not below BAL-12.5 All fire sources on adjoining sites and across roads must be considered when utilising this reduction.

Due to the nature of the vegetation coverage on this site, this option will not be available.

It is recommended that construction levels are obtained by using Method 2 of AS 3959-2009,combined with site-specific fuel loads, and assessed on an individual building basis, even where slope does not exceed 20 degrees.

Construction levels for elevations of a building that are subject to shielding from the fire sources can be reduced in accordance with 3.5 of AS 3959-2009 by one level but not below BAL-12.5 All fire sources on adjoining sites and across roads must be considered when utilising this reduction.
Due to the nature of the vegetation coverage on this site, this option will not be available.

2.6. Ecological Requirements

There are no specific ecological requirements in relation to bushfire management. This report provides an Alternative Solution to the clearing of buffer areas as set out in the State Planning Policy SPP01/03, and the Sustainable Planning Act.

Note;
The State Planning Policy SPP 01/03 requires that Medium and High Hazard/Risk areas be identified as Natural Hazard Management Areas.

Footnote 24 to the SPP 01/03 and Footnote 34 to The SPP Guideline states "A natural Hazard management area may be defined using a different term (e.g. bushfire prone area; flood affected area)."

This confirms the designation of a Natural Hazard Area (Medium and High Hazard defined by the SPP) as a bushfire prone area and therefore requiring Construction complying with the Australian Standard.

SPP 2013 states that being located in a Medium, High or Very High Hazard area triggers the need for compliance with AS 3959.

The Category of Bushfire Attack referred to in the Australian Standard is different to the Hazard/Risk area referred to above.

Extensive modification of the existing vegetation types including that on adjoining sites could result in a change of Category of Bushfire Attack and therefore variation in the Level of construction required.

It is the responsibility of the owner of the site to ensure that plantings subsequent to their occupation of the site do not reduce the safety of their buildings in a manner, which could require a higher level of Construction than that originally utilised

3. RISK MANAGEMENT PLAN

3.1. Agencies / Persons Responsible

The responsible Fire Authority is the Rural Fire Service Queensland through the Rural Fire Brigade being responsible for Bush Fires and the Queensland Fire and Emergency Service being responsible for Structural Fires

It is the responsibility of the Owners of the properties to ensure that the relevant measures required by this Management Report are in place prior to inspection by the Council and the Building Certifier and to ensure that those measures are in place prior to the occupation of any buildings, which are the subject of this report. It is the responsibility of Council and Building Certifiers to ensure that relevant measures within their responsibility are in place prior to the issuance of any certification.

3.2. Bushfire Safety Objective

The objective of this report is to minimise potential risk to life and property by protecting the buildings from the effects of bushfire.

3.3. Aims

The aims to achieve this objective are to mitigate the effect of the bushfire attack mechanisms of: -

- 3.3.1. Radiant Heat
- 3.3.2. Direct Flame Contact
- 3.3.3. Wind
- 3.3.4. Ember Attack
- 3.3.5. Smoke

3.4. Functional Requirements

The functional requirements to achieve this objective are: -

- 3.4.1. The provision of safe conditions for fire fighters
- 3.4.2. The provision of safe conditions for residents
- 3.4.3. Ensure adequate and safe access to and from the property
- 3.4.4. Ensure adequate and safe water supply to the property and the establishment of fire fighting water reserves
- 3.4.5. Provide a system of fire breaks and trails to protect the building component
- 3.4.6. Remove vegetation that is considered dangerous and a hazard in Fire Conditions
- 3.4.7. To ascertain the required standard of construction of the buildings in accordance with the requirements of the National Construction Code and the Australian Standard for Construction in Bushfire Prone Areas or the provision of a satisfactory alternative solution
- 3.4.8. Facilitate the return to " normalcy"

3.5. Proposed Fire Fighting Infrastructure

- 3.5.1. Each of the proposed buildings, including all amenities buildings, are to have a minimum dedicated fire fighting water reserve of 5000l at all times.
- 3.5.2. This reserve can be in the form of a Tank or an in ground swimming pool and must be in place at the time of completion of the new Building. In the event of a tank being used, the tank must be located a minimum of 9m from the nearest building, have flat standing area immediately adjacent, and be no further than 20m from the building and be located between the building and the road .The tank storage can comprise part of a larger tank providing the normal outlet is positioned to reserve 5000l in the bottom for fire fighting purposes only. Provide a 50mm male cam lock fitting outlet for fire brigade purposes only. The tank is to be of non -combustible materials.
- 3.5.3. In the event of a pool being used, the pool must be readily accessible from the road by fire fighting vehicle .
- 3.5.4. A tank farm with the equivalency of 4 non combustible community tanks of capacity 22,500 litres each is to be located adjoining the main carpark in the area marked as having a tank.
- 3.5.5. A non combustible community tank of capacity 22,500 litres is to be located at each of the locations shown on the plan
- 3.5.6. The community and tank farm tanks are to have fittings and access requirements as noted for household tanks.
- 3.5.7. Each of the tanks in the camping areas is to be provided with a diesel powered pump and sufficient hosing to reach the camp area extremities.
- 3.5.8. It is preferable that the pump be connected to a reticulated system comprising bushfire hydrants as described in the support information accompanying this report.

3.5.9. Pumps are to be subjected to a regular and documented maintenance schedule.

3.6. Camping Fires and Bar-b-ques (open fires)

3.6.1. All wood (or similar) burning camping fires and bar-b-gues shall be contained. Bar-b-ques are to be in a fireproof container/housing. Campfires are to be in a pit with a minimum of 3m hardstand surrounds.

3.6.2. There is to be a maximum of 4 bar-b-que pits to each camping area. These pits are to be located to maximise distance from unmanaged vegetation.

3.6.3. Facilities above are to have signs advising of safety requirements including wet dousing of fire after use.

3.6.4. Use of these is to be strictly controlled during fire season and in accordance with the requirements of any Fire Bans.

3.7. Construct a Fire Trail/Emergency Access track

3.7.1. The existing trails designated as Fire and access trails on the plans are to be upgraded to meet the standards set out in the Fire Management report except for gradient. Turning and protection areas are to be formed with a minimum dimension of 9m at a maximum of 400m intervals and at the end of each dead end track.

3.7.2. New fire trails are to be established as indicated on the plans,

3.7.3. Existing overgrown trails to be reinstated as Fire or management trails are to be completed within a time period of 12 months after the opening of the centre.

3.7.4. All Building Envelopes are to have a 6m wide defendable space, generally complying with the requirements (except for width) of the vehicular fire trail requirements to the whole perimeter. This space is not to be obstructed by structures or landscaping.

3.7.5. The road access and all boundary crossings through fences to these trails can be either a gate or a fence cutting point consisting of strainer posts 3.6m apart with fencing wire between

3.8. Vegetation Management

3.8.1. All grass and existing mid storey vegetation within the Primary Vegetation Management Zone shall be kept to a maximum of 100mm at all times or be of less flammable or rain forest species. Existing trees within this area are to be reduced to give a noncontinuous canopy cover between trees with a total cover of less than 30% of the area .

3.8.2. All grass and midstorey vegetation in the Secondary Vegetation Management Zone to be kept to a maximum of 300 mm at all times by slashing and/or grazing with a reduction to 100mm at the commencement of the Bushfire Season.

3.8.3. Controlled burning can perform the initial management noted above, or where safe mechanical access is not possible. In this event, the burn is to be conducted using ecological burn methodologies by a burn team experienced in ecological burning.

3.8.4. Iconic and specialist plant species need not be removed as part of the vegetation management noted above in both zones.

3.8.5. All dead and damaged timber to be removed from the building envelopes and Primary Vegetation Management Zone, and removed from site.

3.8.6. Requirements noted above may be subject to State and Local Authority approval. Those approvals must be obtained prior to implementation of any of these measures.

3.8.7. The management referred to above is regarded as " Essential Management " under the Sustainable Planning Regulation .

The management is a component of the Construction Level. Therefore, the Building Certifier must ensure that the management has occurred in accordance with this report before issuing final certification

The management also forms part of the Alternative Solution to the management of buffer areas as set out in the State Planning Policy SPP01/03, and the Sustainable Planning Act.

Recent research (Project Vesta) indicates that tree canopy without mid storey and surface fuels forms an important filter for control of ember attack, which is responsible for in excess of 90% all bushfire related house fires.

3.9. Fire Trail Identification

3.9.1. Install and maintain permanent signage at each end and at intersections advising the purpose and location of the trail, generally as indicated on the plan that forms part of this

report. 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 galvanised 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 signpost installed. Where the trail connects with a road or boundary the signpost is to be within 2m of the boundary. At an intersection the signpost is to be within 5m of the intersection.

3.9.2. The operator will allocate trail numbers and install the numbering on the post.

3.9.3. All fire trail related signage is to be installed complete.

3.9.4. 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 as an appendix at the rear of this report.
(Note that the reference to the Gold Coast Guidelines is due to the intention by QFES/RFSQ to have this as the standard for the whole of Queensland)

3.9.5. 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 as an appendix at the rear of this report.

3.9.6. Master identification signs showing a plan of the whole of the site and identifying buildings, trails, identification signs and hydrant locations are to be located as indicated on the Fire Management Plan

3.10. Minimum Vehicular Fire Trail Standards

The Fire/Maintenance trail has: -

3.10.1. A minimum cleared width of 6m

3.10.2. A minimum formed width of 4m where possible.

3.10.3. A maximum gradient of 16% or one that has been satisfactorily test driven with the type of Fire Service Appliance that would be utilised on the site during a fire event with adequate drainage to prevent soil erosion and minimise ongoing trail maintenance

3.10.4. Turning /passing areas at a maximum of 400m with a maximum gradient of 5%

3.10.5. Where dead ends occur, turning circles or T turning areas are to be provided to comply with the requirements of the Bush Fire Code

3.11. Fencing

Any boundary fencing located adjoining bushland or a fire access trail is to be

3.11.1. A maximum of 1000mm high

3.11.2. At least 75 % transparency

3.11.3. Contain at least 1 personal gate to each 100m

3.11.4. Fencing between buildings should be of non-combustible materials.

3.12. Effluent Disposal Areas

Where possible, effluent disposal shall be located on the downhill side of the building envelope and be maintained in a band with a minimum 6m width. Grass in this area should be kept to a maximum of 50mm and any landscaping should be of Less Flammable Vegetation

3.13. Fire Trail and Fire Break Maintenance

3.13.1. The fire trails are to be kept mowed to a maximum of 50mm at all times and to be kept in a manner suitable for 4wd Fire Vehicles and to the satisfaction of the Fire Brigade.

3.14. Building Construction

All construction is to be in accordance with Australian Standard AS 3959 2009 Construction of Buildings in Bush Fire-Prone Areas and the Level of construction assessed under " Site and Hazard Assessment "

Amenity buildings are to be designed and constructed to provide bushfire protection shelters, with a building at each of the walk-in camping areas to also serve this purpose.

Note that it is our opinion that timber should not be used externally for BAL-29 plus construction even though under the Australian Standard situations could arise where it could be deemed acceptable.

However, heavy timber construction would be acceptable.

The plans lodged for Building Certification are to be assessed on this basis by the Building Certifier.

A final stage completion certificate (Form 21) issued by the Building Certifier is to be received prior to occupation of the building.
Buildings are not to be occupied until certification is received

Buildings are to be maintained in a manner that protects the integrity of the construction and building elements as outlined in this report

3.15. Street Numbering
Numbering is to be installed in accordance with the current Street Numbering System at time of completion of building.

3.16. Less Flammable Landscaping
Any landscaping within vegetation management zones is to be Less Flammable, in accordance with the list enclosed as an Appendix at the rear of this Report

3.17. Insurance
Failure to comply with this management report may have a detrimental effect upon the Insurance of the subject Buildings.

3.18. Emergency Response Procedures

3.18.1. In the event of Fire Emergency, assistance is to be obtained by dialling 000.

3.18.2. A system is to be installed that will provide emergency warnings to all site occupants in the event of bushfire or other emergencies.

3.18.3. Basic fire fighting training and awareness is to be provided to all-key personnel on the site include group leaders.

3.18.4. The owner should read thoroughly the brochures contained and those recommended at the rear of this report. They contain valuable information that could assist in the saving of lives and property in a fire event!

3.19. Community Safety/ Awareness Strategies

3.19.1. Each subsequent owner is to be provided with a copy of this Fire Management report with an alert placed on either Title or Council Rate searches that the Report is in existence and is to be made available to ensuing owners.

3.19.2. Multilingual signs are to be erected at the entrance to the site and to each of the camping and adventure courses advising of procedures to be taken in the event of bushfire. These procedures are to be developed as part of an overall emergency management plan for the whole of the centre to address all relevant emergency events that could readily occur on the site.

3.19.3. No smoking is to occur unless in Designated Outdoor Smoking Areas (DOSA)

3.19.4. A protocol is to be developed to manage occupation, usage and evacuation as appropriate of the various site facilities that relates to Fire Season, Fire Warnings and Severe Weather Alerts., and includes the receipt of such information (if possible) from the Rural Fire Service Gold Coast Office.

3.20. Administering Staff
It is the responsibility of the owners to ensure compliance with this Report and the Town Plan, and to ensure that each of the new owners is provided with a copy of this report.

It is the responsibility of the Council and the Building Certifier to ensure that the relevant measures required by this management report are in place prior to the final completion stage inspection of any buildings on any sites which are the subject of this report as noted in Clause 3.1 of this report.

It is the responsibility of the ensuing owners of the properties to maintain the properties in the conditions outlined in this report.

4. FIRE MANAGEMENT ACTION SUMMARY AND SCHEDULE

DEVELOPMENT REQUIREMENTS	BUILDING REQUIREMENTS	MAINTENANCE
Provision of fire access trails All dead and damaged timber to be removed from the areas indicated to be mowed and removed from site Signs placed at the driveway and trail entry indicating emergency access Provision of Fire Fighting Water supply tanks	Buildings to comply with the Australian Standard for Construction with in Bush Fire Prone Areas. No occupation until compliance with Standard and Management Report Emergency Fire Fighting supplies As set out on the accompanying plans and Section 3.5	Regular mowing and maintenance of the vegetation areas as set out in this report. Drive and fire trail access to be kept clear and accessible to satisfaction of the Fire Brigade. Maintenance of fire fighting facilities. Building materials are to be maintained in "as new " condition to preserve the integrity of the relevant materials.

5. APPENDICES

5.1. Form 15
5.2. Site Plans
5.3. Supporting Information:

(Note. These items below are referenced for information purposes only and are not to be construed as being part of the management report)

5.3.1. Prepare.Act.Survive
5.3.2. Rural property Fire Management Guide 2010
5.3.3. Notes for Landholders
5.3.4. Bushfire Action Guide
5.3.5. Bushfire Safety in Urban Fringe Areas
5.3.6. Water + Power -Vital for Fire fighting
5.3.7. Less Flammable Vegetation
5.3.8. Tree selection for Fire-Prone Areas
5.3.9. First Draft (specifying timber in bush fire zones)
5.3.10. External water spray system
5.3.11. Fire Retardant Coating Solutions
5.3.12. Archicentre Bushfire Design Guide
5.3.13. Section 3.8 Sign Types - Fire Trail Signage of the GCCC Natural Areas Management Unit Guidelines (Page 16) Signage
5.3.14. Trail Number and Key Point signage
5.3.15. Bushfire Hydrant detail
5.3.16. Tank detail
5.3.17. Recycled Water for Firefighting
5.3.18. Sample Easement Document
5.3.19. Bushfire Windows and Shutters
5.3.20. A guide to retrofit your home for better protection from a bushfire.
5.3.21. FireFly BAL-FZ System
5.3.22. Extracts from Sustainable Planning Act relating to clearing.
5.3.23. Bushfire Planning and Design Certification Scheme Update

We also recommend that the landholder obtains and reads the following;

5.3.24. Bushfire Hazard Planning in Queensland
5.3.25. Protecting your home against Bushfire
Both available from the Dept. of Local Government and Planning, and

5.3.26. Building in Bushfire Prone Areas
Available from Standards Australia

5.3.27. Fire in Bushland Conservation
Available from the National Heritage Trust

Signed

Eldon Bottcher
Grad. Dip. DBPA (UWS) Dip. Arch. (QIT), Cert. R.F.M. (USQ), F.R.A.I.A., M.A.I.E.S. M.UDIA AIFireE
Architect
BPAD-A Practitioner

APPENDIX 5.1
FORM 15

Compliance Certificate for building Design or Specification

15

NOTE	This is to be used for the purposes of section 10 of the *Building Act 1975* and/or section 46 of th *Building Regulation 2006*. RESTRICTION: A building certifier (class B) can only give a compliance certificate about whethe building work complies with the BCA or a provision of the QDC. A building certifier (Class B) ca not give a certificate regarding QDC boundary clearance and site cover provisions.
1. Property description **This section need only be completed if details of street address and property description are applicable.** **e.g. In the case of (standard/generic) pool design/shell manufacture and/or patio and carport systems this section may not be applicable.** The description must identify all land the subject of the application. The lot & plan details (e.g. SP / RP) are shown on title documents or a rates notice. If the plan is not registered by title, provide previous lot and plan details.	Street address *(include no., street, suburb / locality & postcode)* 98-196 Guanaba Road Tamborine Mountain Postcode Lot & plan details *(attach list if necessary)* Lot 3 on RP 181081 **In which local government area is the land situated?** Scenic Rim Regional Council
2. Description of component/s certified Clearly describe the extent of work covered by this certificate, e.g. all structural aspects of the steel roof beams.	Preparation of Bushfire Management Report
3. Basis of certification Detail the basis for giving the certificate and the extent to which tests, specifications, rules, standards, codes of practice and other publications, were relied upon.	Compliance with; The Acceptance of Design and Construction Provisions of the National Construction Code, The Bushfire Provisions of the National Construction Code, Australian Standard AS 3959, Queensland Sustainable Planning Act Bushfire Hazard Planning in Queensland International Fire Engineering Guidelines State Planning Policy SPP 01/03, SPP 2013 Scenic Rim Regional Council Town Plan Bushfire Management Constraint Code,

4. Reference documentation
Clearly identify any relevant documentation, e.g. numbered structural engineering plans.

Bushfire management Report entitled;
Bushfire management Report
for
Mt Tamborine Camping and Activities Pty Ltd
at
98-196 Guanaba Road Tamborine Mountain

5. Building certifier reference number

Building certifier reference number

6. Competent person details
A competent person for building work, means a person who is assessed by the building certifier for the work as competent to practise in an aspect of the building and specification design, of the building work because of the individual's skill, experience and qualifications in the aspect. The competent person must also be registered or licensed under a law applying in the State to practice the aspect.

If no relevant law requires the individual to be licensed or registered to be able to give the help, the certifier must assess the individual as having appropriate experience, qualifications or skills to be able to give the help.

If the chief executive issues any guidelines for assessing a competent person, the building certifier must use the guidelines when assessing the person.

Name (*in full*)
Eldon John Bottcher

Company name (*if applicable*)
Eldon Bottcher Architect Pty Ltd

Contact person
Eldon Bottcher

Phone no. *business hours*
07 55920082

Mobile no.
0412434134

Fax no.

Email address
architects@eb-a.com.au

Postal address
P.O.Box 3606
Robina Town Centre Postcode 4230

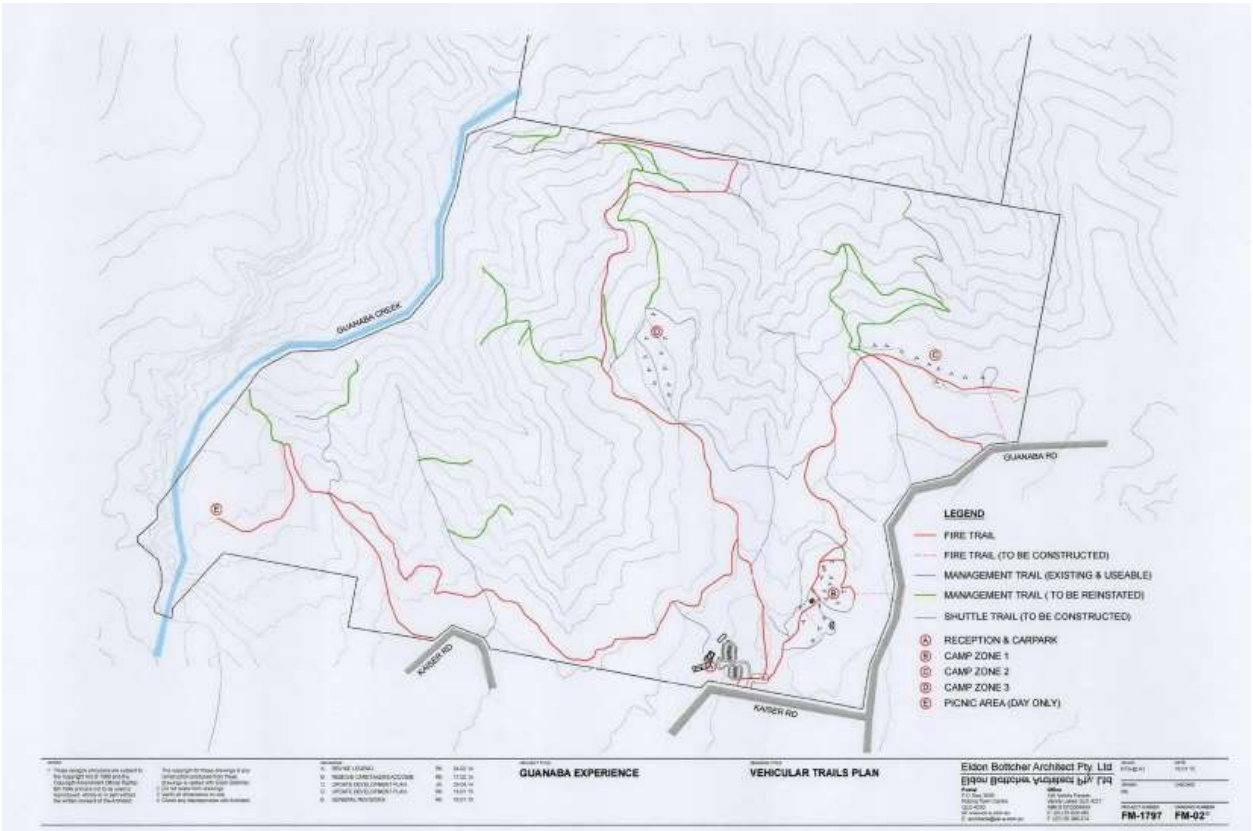
Licence or registration number (*if applicable*)
Reg Architect 1325
FPAA-BPAD-A Practitioner 16935
Associate Member Institution of Fire Engineers

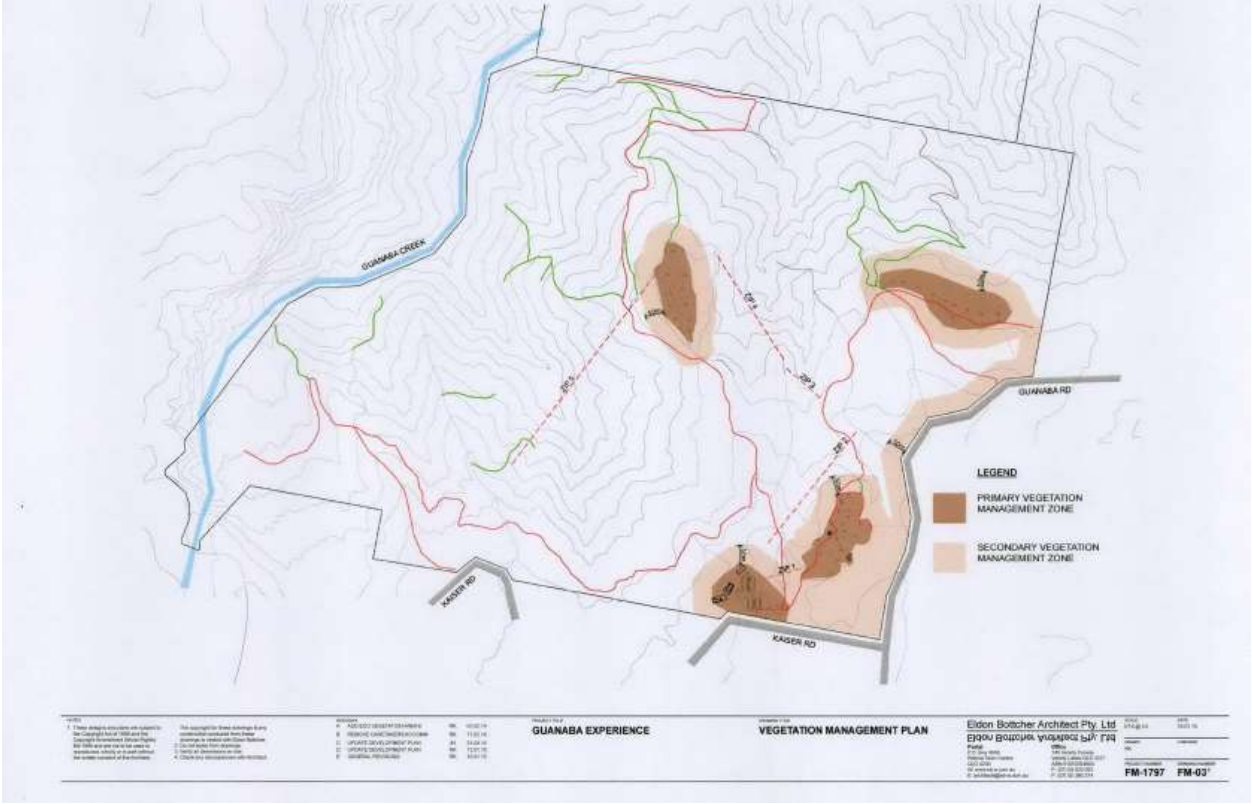
7. Signature of competent person
This certificate must be signed by the individual assessed by the building certifier as competent.

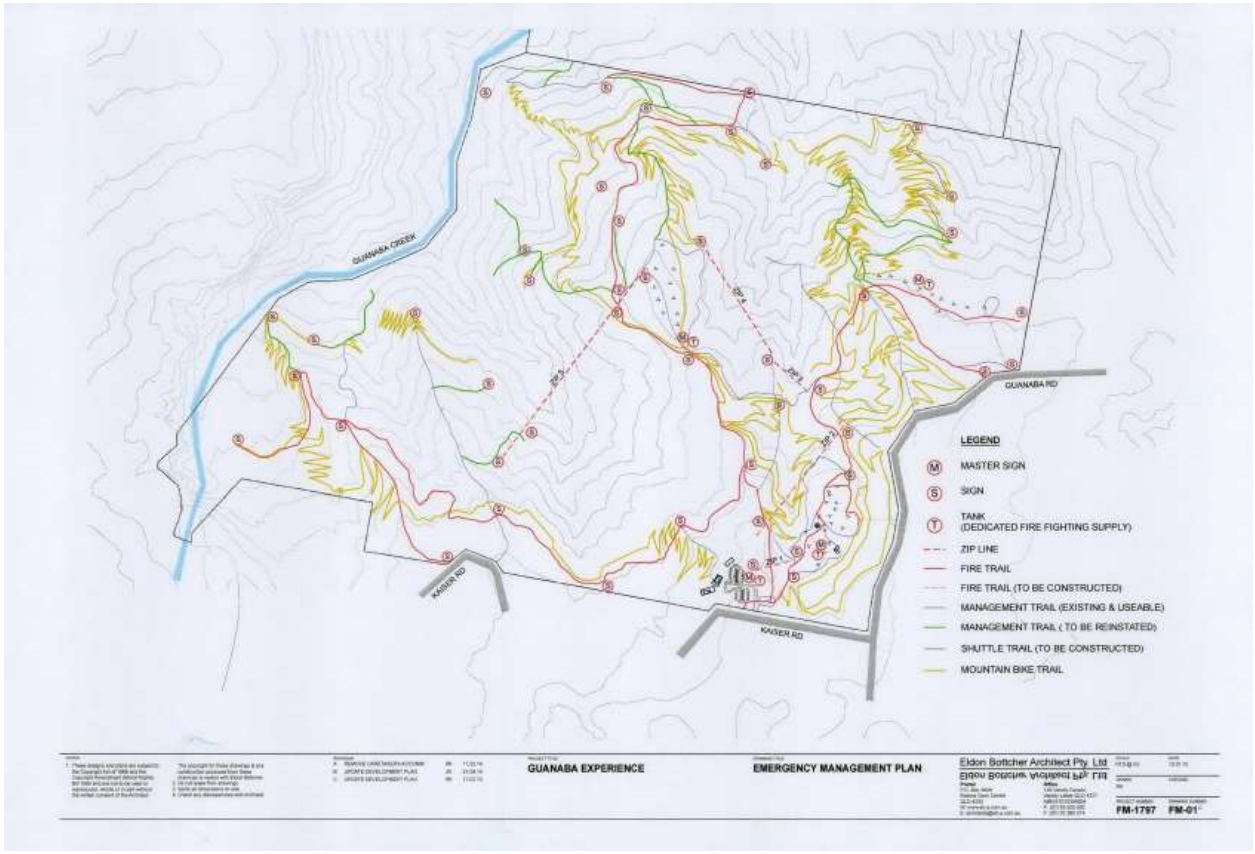
Signature

Date
19/01/15

APPENDIX 5.2
SITE PLANS


GUANABA CREEK
GUANABA RD
KAISER RD
KAISER RD
LEGEND
FIRE TRAIL
FIRE TRAIL (TO BE CONSTRUCTED)
MANAGEMENT TRAIL (EXISTING & USEABLE)
MANAGEMENT TRAIL (TO BE REINSTATED)
SHUTTLE TRAIL (TO BE CONSTRUCTED)
A RECEPTION & CARPARK
B CAMP ZONE 1
C CAMP ZONE 2
D CAMP ZONE 3
E PICNIC AREA (DAY ONLY)
GUANABA EXPERIENCE
VEHICULAR TRAILS PLAN
Eldon Bottcher Architect Pty. Ltd
FM-1797
FM-02


GUANABA CREEK
GUANABA RD
KAISER RD
KAISER RD
LEGEND
PRIMARY VEGETATION MANAGEMENT ZONE
SECONDARY VEGETATION MANAGEMENT ZONE
GUANABA EXPERIENCE
VEGETATION MANAGEMENT PLAN
Eldon Bottcher Architect Pty. Ltd
FM-1797
FM-03



GUANABA EXPERIENCE

EMERGENCY MANAGEMENT PLAN

Eldon Bottcher Architect Pty. Ltd

FM-1797

FM-01

APPENDIX 5.3
SUPPORTING INFORMATION

Are you bushfire prepared?

Are your family and home at risk?

1. Do you live within a few kilometres of bushland?
2. Does your local area have a bushfire history?
3. Is your home built on a slope?
4. Do you have trees and shrubs within 20m of your house?
5. 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

Department of Community Safety

RURAL FIRE SERVICE

Toward 2

Queensland Government

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

[illegible]

Some of the issues you need to consider

- [illegible]

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.

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.

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.

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.

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.

[illegible]

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.

[illegible]

... www.emergencyalert.gov.au.

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.

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

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, socks 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 cars 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.
- 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 in 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 fork 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.

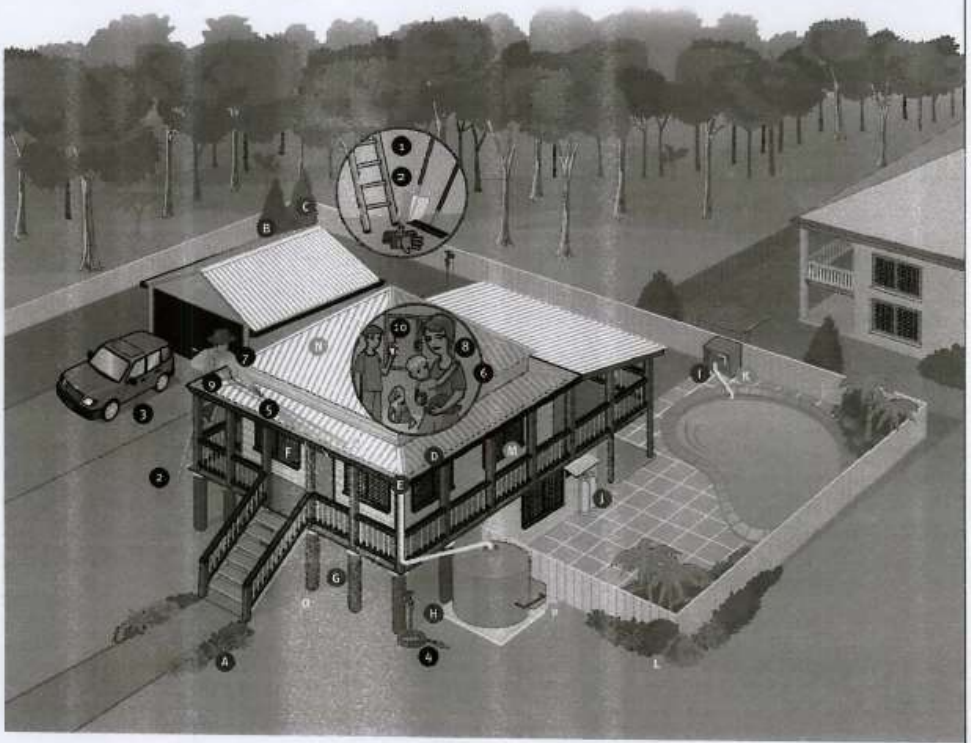
As fire approaches

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 HQ, 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).

- 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

Contingency Plan

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.

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.

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. Remember to regularly visit the website for changes and updates.

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).

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 relevant forecasts indicate fires would be difficult to control and pose a danger to communities.

Fire Wardens and fire permits

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 their 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 to 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 deployments 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.

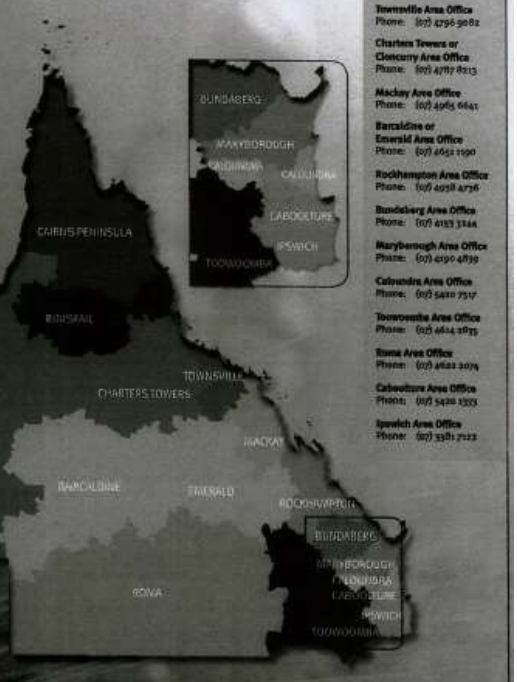
How do I become involved in the RFS?

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 make great friends and learn new skills. 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.

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) 4652 1190

Rockhampton Area Office
Phone: (07) 4038 4736

Bundaberg Area Office
Phone: (07) 4153 3344

Maryborough Area Office
Phone: (07) 4190 4839

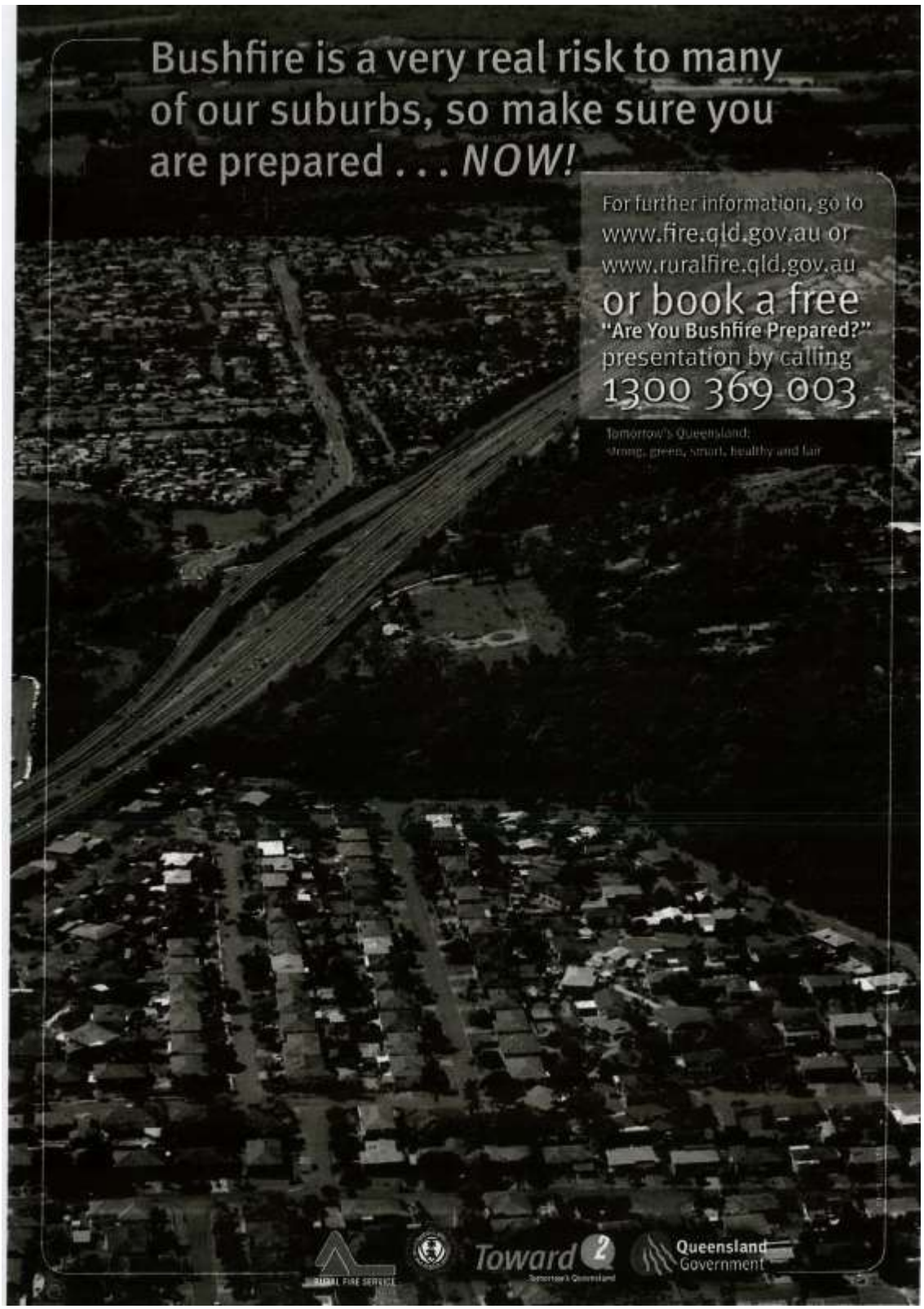
Caloundra Area Office
Phone: (07) 5420 7517

Toowoomba Area Office
Phone: (07) 4614 2835

Roma Area Office
Phone: (07) 4622 2074

Caboolture Area Office
Phone: (07) 5420 1503

Ipswich Area Office
Phone: (07) 3281 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 or 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
RURAL FIRE SERVICE
Toward Q2
Tomorrow's Queensland
Queensland Government

Rural Property Fire Management Guide 2010

Property Identification

Name of Property: _____

Real Property Description: _____

Tenure: _____

Size: _____

Owner: _____ **Spouse:** _____

Manager: _____ **Spouse:** _____

Postal Address: _____

Primary Contact: _____

Contact Details: _____

Queensland Fire and Rescue Service, Rural Operations

Local Rural Fire Brigade: _____ **Phone:** _____

Fire Warden: _____ **Phone:** _____

Rural Operations Area Office Details

Area Director: _____ **Phone:** _____

Neighbouring Property Details and Contacts

Name	Location	Phone	Radio

Radio Communications:

Property Channel: _____

Community Channel: _____

Neighbours Channel: _____

Brigade VHF Channel: _____ **UHF Channel:** _____

Parks/Forestry VHF Channel: _____

QFRS UHF Channel: _____ **VHF Channel:** _____

Response Resources Available:

Fire Fighting Equipment:

_____

_____

_____

Queensland Government

Personnel (on hand during fire season):

Name	Location	Contact

Plant:

Bores/Water Fill Points:

Name	Location	Contact

Training Requirements:

Risk Assessment

What are the key fire risks on your property?

What areas must be protected?

What assests need to be protected?

Fire History (problem areas, lightning strike locations, illegal ignition prone areas, impact of previous year's wildfires, etc)

HAZARD Reduction and Firebreaks:
(Attach map showing property boundaries, fencing, fire breaks and fuel types)
Fuel types/general:

Location of fire breaks/best access to fire breaks:

Hazard reduction target areas (including early burning):

Strategic fire breaks / burning:

Airstrip: Good / Maintained / U/S Lat: _____ Long: _____

O O O

Map Attached: Yes No

Landholder Fire Management Plan last updated:

By: _____ **Signed:** _____

Reviewed and understood by (staff / family, etc):

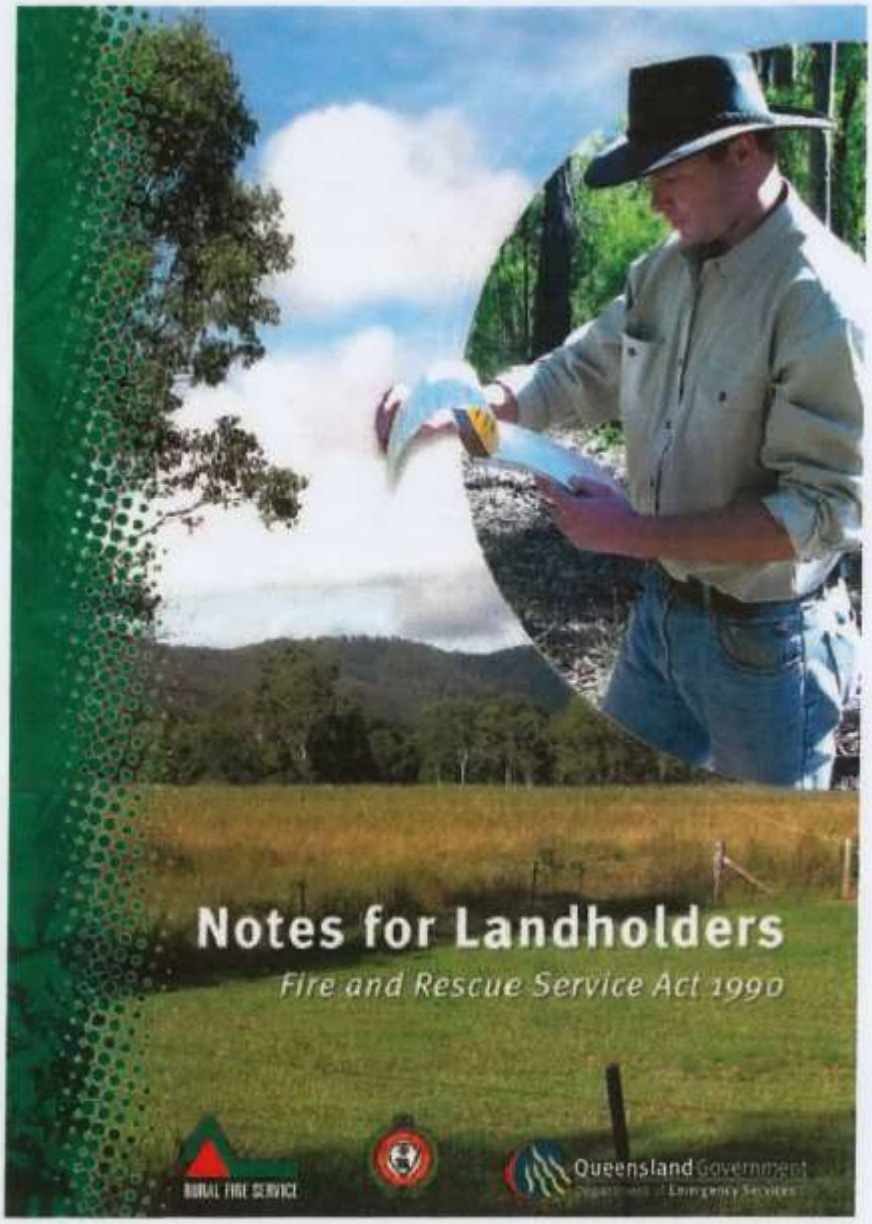
Name: _____ **Signed:** _____

Date: _____

Name: _____ **Signed:** _____

Date: _____

Queensland Government


Notes for Landholders
Fire and Rescue Service Act 1990
RURAL FIRE SERVICE
Queensland Government

Fire And Rescue Service Act 1990

This brochure contains a brief outline of the relevant parts of the *Fire and Rescue Service Act 1990* free from legal technicalities. The explanations are not intended to be exhaustive and if any Section of the Act is not fully understood, enquiries should be made at your local Rural Fire Service Office. Contact numbers are included in this brochure.

The *Fire and Rescue Service Act 1990* is the legal document supporting all activities relevant to emergency services personnel involved with the -

- prevention of fire
- response to fire
- response to other incidents endangering life, property and the environment.

It should be noted that the Act does not seek to prevent or prohibit the use of fire, but promotes the safe use of fire as a land management tool within the framework of the Fire Warden network and the Permit to Light Fire system.

A network of Fire Wardens and Chief Fire Wardens operates throughout the State. A Fire Warden is a voluntary officer responsible for providing sound advice to property owners on fire management issues. Fire Wardens control the use of fire through the issue of Permits to Light Fire to ensure the safety of the environment in their local community.

1. Permits to light fire

In Queensland, there is no designated "fire season" and a permit is required at all times for a fire that is larger than 2 metres in any direction.

The procedures for applying for a permit are –

- Obtain an "Application for a Permit to Light Fire" (Form RF 11A) from your Fire Warden. The application may be made in writing, by telephone, facsimile or orally.
- Notify each and every neighbour* of your intention to burn. Specific details of location, area and special precautions should be provided at this time.
- If requested, present the completed Form RF 11A to the Fire Warden to obtain a "Permit to Light Fire" (Form RF 10B).

*In this instance, 'neighbour' refers to the occupier of adjoining land

Notes for Landholders

Special notes –

- Only the Fire Warden has the authority to issue a permit.
- The Fire Warden has no authority to issue a permit outside his/her gazetted Fire Warden's district.
- The Fire Warden may impose such conditions on the permit as considered necessary and may direct that the local Rural Fire Brigade take charge of the operation.
- The Fire Warden has power to issue a permit even if one or more neighbours object to the burning. In such cases, the Fire Warden must include on the permit a condition that the neighbour must be given at least 2 hours prior notice by the permittee that the fire is to be lit.
- A Fire Warden may cancel a permit at any time, but must do so in writing.
- Rural Fire Service District Inspectors have an over-riding authority to issue permits in situations where disputes exist.
- Failure to obtain or comply with the conditions of a permit is an offence against The *Fire and Rescue Service Act 1990*. Penalties apply.

Powers of Chief Fire Warden

The Chief Fire Warden for the local Rural Fire District may issue the permit where there is no appointed Fire Warden for the district where a fire is to be lit. (If a Fire Warden is appointed and available, the Chief Fire Warden has no authority to issue such permit).

Cane Burning

Fires lit for the routine burning of sugar cane in accordance with the established practice of the industry are covered by a separate agreement under the *Fire and Rescue Service Act 1990*. Persons requiring further information on cane burning should contact their local Fire Warden or their Rural Fire Service District Office.

The rights of adjoining neighbours must be considered by the person lighting the cane (or residual trash or tops) in accordance with provisions outlined in the official Rural Fire Service documentation of 21 June 1993 (QFS 2831).

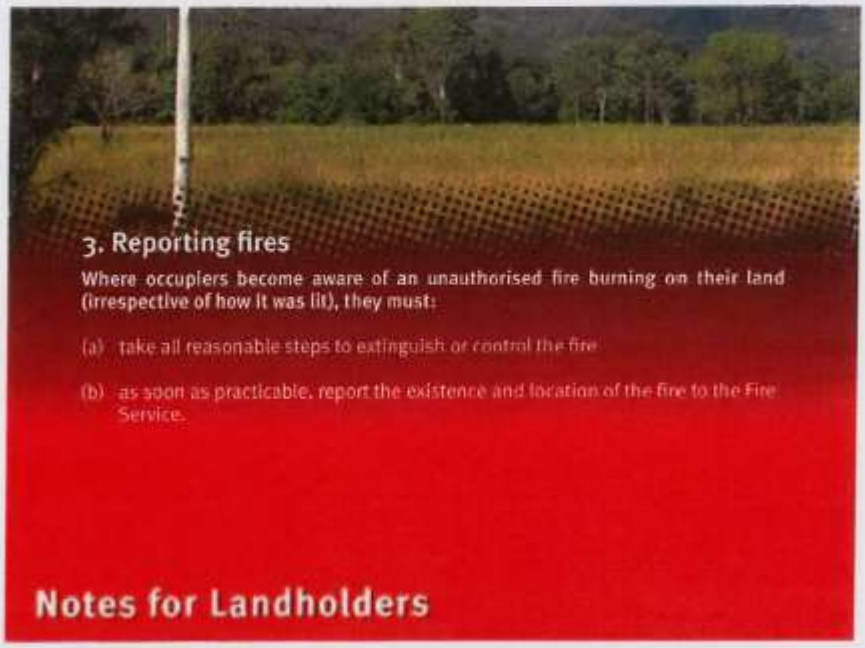
Fire and Rescue Service Act 1990

2. Fires not requiring a permit

Some fires are exempt from permit, provided that adequate precautions are taken to prevent the spread of fire. Exempt fires are those:

- in which neither the height, width nor length of the material to be consumed exceeds 2 metres
- lit for the purpose of burning the carcass of a beast
- at a sawmill lit for the purpose of burning sawdust or other residue resulting from the operation of a sawmill
- lit out-doors, if enclosed in a fireplace so constructed as to prevent the escape of fire or any burning material.

It is advisable to check Local Government Bylaws and Regulations which may be applicable to these types of fires.



3. Reporting fires

Where occupiers become aware of an unauthorised fire burning on their land (irrespective of how it was lit), they must:

(a) take all reasonable steps to extinguish or control the fire

(b) as soon as practicable, report the existence and location of the fire to the Fire Service.

Notes for Landholders

4. Fire Hazards

Any person creating a fire hazard may be instructed by an authorised fire officer to reduce the hazard. Failure to carry out these instructions renders the offender liable for prosecution and costs incurred in either reducing the hazard or in legal proceedings are recoverable by law.

The Commissioner, Queensland Fire and Rescue Service, may require any occupier of premises or land to:

- take measures to reduce the risk of fire starting
- reduce the potential danger to persons, property or the environment should a fire occur
- burn off or remove any flammable material subject to conditions
- through an authorised fire officer, order the extinguishment of any fire considered dangerous.

5. Emergency provisions

The Commissioner, QFRS, with the approval of the Minister, can declare a State of Fire Emergency when fire weather conditions become extremely dangerous. The restrictions are normally imposed over an entire local government area and prohibit the lighting of all or only certain types of fires, depending on the severity of the emergency. (Gas and electric barbecues may be used).

During a State of Fire Emergency:

- all open fires are prohibited
- all Permits to Light Fire issued in the designated area are cancelled
- other special conditions (or exemptions) may be imposed

Penalties for breaches of the Act are increased during a State of Fire Emergency.

Fire and Rescue Service Act 1990

6. Investigations of offences

All persons are required to supply their names and address when required by an authorised fire officer investigating a breach of the Act. Failure to do so is an offence in itself, irrespective of any other breach of the Act.

7. Offences/Penalties

Penalties apply to persons committing breaches of the Act. Depending on the severity of the breach, penalties may constitute fines, or, for criminal offences, fines and prison term with hard labour.

It is an offence against the Act to -

- fail to comply with any conditions of a permit
- leave a fire unattended
- fail to take reasonable measures to extinguish any fire in such circumstances as to allow the fire to escape into another property;
- provide misleading or false information in respect of an application for a permit

In addition, the person lighting the fire may be held responsible for any damage caused by the fire.

8. Damages

No proceedings under the *Fire and Rescue Service Act 1990* prevent a person seeking compensation at Common Law for damages caused by fire. However, a person holding a Permit to Light Fire and observing all conditions of the permit when lighting such fire, will not be held to be liable for damages, unless it can be proven that such actions were the result of reckless or malicious actions causing loss, injury or damage.

Notes for Landholders

9. Further information

Definitions *Definitions of terms used are –*

Term	**Definition**
Adjoining	Refers to the land mentioned in Section 64(3)(a) and (b) of the Act namely: (a) the land that touches some part of the land in question; or (b) not separated from that land by a watercourse, road or firebreak not less than 10 metres wide and clear of all flammable material in every direction.
Occupier of land	Refers to the person who owns or is charged by the owner or by law with the management of the land. It includes the situation where there is no person in actual occupation of the land.
Authorised Officer	Refers to a permanent officer of the Queensland Fire and Rescue Service, all auxiliary Urban Fire Officers, Assistant Commissioner Rural Operations, Regional Inspector, District Inspector, Rural Training Manager, Rural Training Officer

All Queensland legislation is accessible through the Internet at – www.legislation.qld.gov.au.

Rural Fire Service Offices

Southern Region	07 3284 3917	Northern Region	07 4799 7183
Bundaberg	07 4153 3244	Barcaldine	07 4651 1190
Caboolture	07 5499 1009	Cairns Peninsula	07 4039 8240
Ipswich	07 3202 1444	Charters Towers	07 4787 8213
Maryborough	07 4123 0542	Cloncurry	07 4742 2358
Miles	07 4627 1848	Emerald	07 4982 0001
Roma	07 4622 2074	Innisfail	07 4061 0650
Toowoomba	07 4639 9172	Mackay	07 4967 0834
		Rockhampton	07 4938 4736

www.ruralfire.qld.gov.au

Fire and Rescue Service Act 1990

BUSHFIRE
ACTION GUIDE

In bushfires, radiant heat, dehydration and asphyxiation are the main killers. **Well**-prepared houses resist brief exposure to fire, protecting occupants who can then save their homes.

BEFORE

BEFORE THE BUSHFIRE SEASON — *Prevent/Prepare*

- **Remove** rubbish, leaf litter and native shrubs close to buildings.
- Form a wide **firebreak** around your home, eg short, green grass (use mower, spade, rake), **trim** branches well clear of the house. **Clear** roof and gutters of leaves, twigs etc.
- Fit wire **screens** to doors, windows and vents, and enclose all gaps, roof eaves and the area under your house.
- Store wood, gas, petrol, paint etc well **clear** of the house.
- Keep **ladders** handy for roof access (inside and out). Fit **hoses** to reach all parts of the house and garden. If mains pressure water is not connected, obtain a high pressure pump.
- Check you have adequate **insurance** cover for bushfire.
- Agree on a household plan to leave **early** or stay to protect your home during a bushfire (see below). If leaving, plan when, where, how you will go and what to take.

DURING

IF A BUSHFIRE APPROACHES — *Leave or Protect*

Prepare as above, unless you have decided to leave early or are ordered to do so. Stay in the house after taking these precautions:

- Phone 000 — don't assume the fire service knows.
- **Turn off** gas. Put door mats inside. Close vents, windows, doors, and block gaps from the inside with **wet** towels.
- **Fill** baths, sinks, buckets and bins with reserve water.
- Plug downpipes with rags and fill **gutters** with water.
- Remove curtains, cross-tape windows and move furniture clear.
- Wear long, woollen or heavy cotton clothing, solid boots or shoes, a hat or woollen balacalva, and gloves.
- Hose down all walls, garden etc on sides **facing** the fire and watch for **spot fires** from flying sparks or embers.

AFTER

- As the main fire-front arrives, **go inside** with hoses, away from windows, while it passes (usually 5 to 15 minutes).
- Quickly **extinguish** any fires which may have started in, near, or under the house or roof. Check **inside** roof too.
- If the house is alight and **can't** be extinguished, move to **burnt** ground. **Don't go**-wait for help. Listen to battery radio for updates.

See over for action required if caught driving or on foot.

AUSTRALIA

[redacted]

BUSHFIRE ACTION GUIDE

IF CAUGHT IN A FIRE, DRIVING — *Shelter in Car*

- **Don't** drive into or near bushfires. If caught in a bushfire don't drive through flames or thick smoke.
- Stop in an area of **low** vegetation. Leave motor running and airconditioner (recycle), hazard lights and headlights **on**.
- Stay **inside** unless near safe shelter. Keep vents, windows and doors closed. **Lie** inside, below window level, under a woollen blanket for skin protection.
- After the main fire-front passes, if car is on fire or heat and fumes inside are severe, get out and move ro already burnt ground, keeping your whole body covered with the blanket.

The fuel tank is unlikely to explode in the period you need to stay in the car while being shielded from the deadly radiant heat of the main fire-front.

IF CAUGHT IN FIRE, ON FOOT — *Seek Shelter*

- **Don't panic** — cover all exposed skin and hair.
- Move **across-slope**, away from the fire-front, then **down-slope** towards the rear of the main fire-front.
- Find open or already-burnt ground. **Don't** try to outrun fire, or go uphill, or through even low flames, **unless** you can **clearly** see a safe area very close by.
- If you can't avoid the fire, lie **face-down** under a bank, rock, loose earth or in a hollow, or if possible get into a dam or stream, but not a metal water tank.

EMERGENCY SURVIVAL REQUIREMENTS

If faced with the dangers of body dehydration, smoke inhalation and radiant heat from flames, emergency protection is possible, even in high-intensity fires. Wrap yourself in a heavy, pure wool blanket and carry water to drink; use moistened blanket corner as a smoke mask.

Contact your local country/rural fire service for more information.

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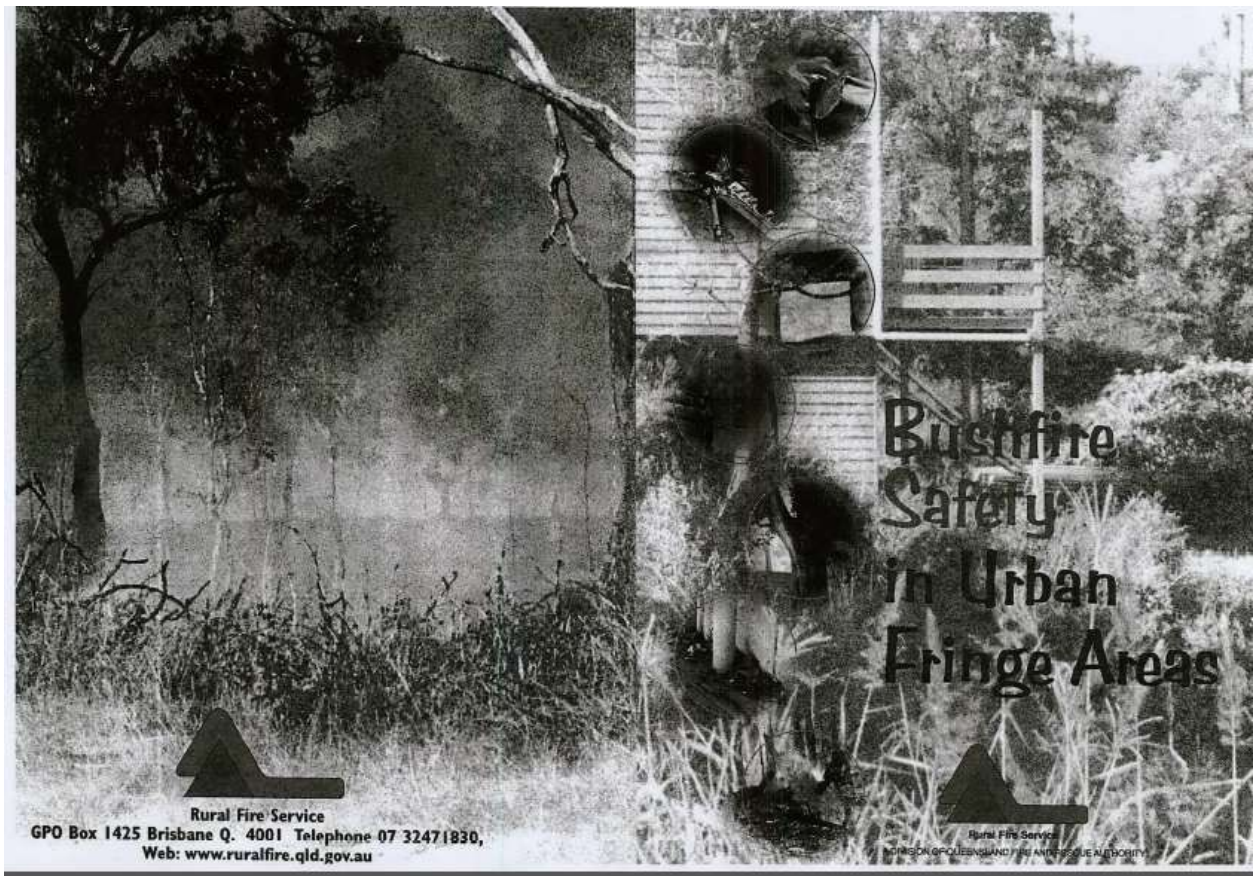
in consultation with the Australasian
Fire Authorities Council.
Disaster Awareness Program 5/1999

EMA
Emergency Management Australia

Hazard symbols courtesy of Earthwatch



Aim

Be aware of the risks of living in a bushland setting. Protection of your home and assets is your responsibility. This leaflet sets out the ways you can protect your house and family against bushfires. Inside, you will find an easy reference diagram which can be displayed in a prominent place.

Foreword

There are certain aspects of country living which many city dwellers find attractive, but many are reluctant to forego entirely the benefits of city life. For this, and other reasons, the development of acreage living and/or semi-rural residential estates on the fringes of Australia's major cities have seen considerable growth in recent years.

Frequently, families moving to these areas need to make a 'life style' adjustment. Living with the threat of wildfire is one such adjustment. City or suburban life does not adequately prepare a person for the sight, sound and smell of an approaching wildfire.

Whilst most full-time farmers are properly equipped to defend their properties against bushfires, few rural residential property owners have essential fire fighting tools such as - knapsack sprays, truck-mounted tanks, dozers/tractors and heavy equipment which would normally be used on larger farms to combat fire.

Before the fire season arrives, there are many things which can be done around the home to prepare for an advancing wildfire. The most important points to consider are -

- Reduce the fuel around your home. (Fuel is dried out material that will burn - branches, sticks, twigs, leaves, bark, grass etc.)
- Make your own plan for bushfire survival. The decision to stay and defend your home or evacuate depends on whether adequate preparations have been made. It is not always necessary to evacuate immediately.

Before the Fire Season

Take a critical look at your property at regular intervals each year, to review problem areas where fire may threaten.

Landscaping

Appropriate landscaping taken in the long term, can reduce the risk of fire damage. During a bushfire, a well designed garden will provide a green safety zone around the home.

The use of trees and plants in landscaping the property can reduce this risk by -

- decreasing fire intensity
- reducing wind speeds and turbulence
- catching flying embers and sparks
- shielding from radiant heat energy.

Vegetation

Smooth-barked trees are less easily ignited. Avoid trees which shed bark in long strands.

Trees should be located at a distance from the house sufficient to ensure that when fully mature the branches do not overhang the eaves of the house, dropping leaves into the gutters. Trees already growing close to the house should be pruned back from the roofline and regularly checked for regrowth in the direction of the house.

All trees and plants will burn if conditions are severe. Good design and maintenance of the property will reduce the risk of loss to fire.

More information on the use of fire retardant plants is available from DPI Forest Service, Queensland.

Precautions

If the house is situated in a bushland setting, extra precautions should be taken, for example:-

- Clear fuels around the house for at least 30 metres.
- Trim under fences and remove accumulated undergrowth.
- Keep grassed areas trimmed and well-watered.
- Ensure that entry to your property is clearly marked and wide enough for larger fire fighting vehicles to gain access. Consider ample turnaround space.
- Check that firefighting equipment is in reliable working condition.

Fires generate more than just smoke: they generate embers, ash, burning debris and cinders which can be blown ahead of the fire front. Research shows that burning embers and sparks are the most frequent cause of buildings catching fire.

Is your property prepared? Use this checklist.

- Keep a note of the telephone number of your local fire brigade. ❒
- All eaves and roof vents should be boxed in or covered with fine wire mesh. ❒
- Screens or shutters should be installed and underfloor areas enclosed, if possible. ❒
- Ensure that external house timbers have a sound coat of paint. ❒
- Secure roof and clean gutters of dry leaf debris. ❒
- Store flammable items well away from the house (eg woodpiles, boxes, paper, outside furniture, flammable liquids etc.) ❒
- Point LPG gas tank valves away from the house. ❒
- Check that firefighting equipment is operational (eg portable diesel or petrol pump, taps, nozzles, hoses should reach all sides of the building). ❒
- In most bushfires, the mains water supply is likely to fail and electric power supplies will probably be cut off. ❒
- A reserve water supply is recommended (eg tanks, dam or swimming pool). ❒

Unattended Property

When a bushfire is in your locality

- If a fire threatens, notify your local fire brigade. Do not assume someone else has advised them.
- Fill knapsacks, all available buckets, handbasins and the bath with water.
- Close all windows and doors.
- Wet towels and block gaps between doors and floor.
- Have buckets of water in the ceiling with a ladder at the manhole.
- Block downpipes and fill gutters with water.
- Move the car into a clear space and wind up windows. Unlock all doors, but leave them closed.
- Remain calm and co-operate with firefighting officers.

When a bushfire approaches your property

- Keep children and household pets inside the house away from the approaching fire.
- Dress family members in protective clothing (wool and pure cotton provide excellent insulation from radiated heat - do not wear synthetic materials.)
- Use a damp handkerchief as a mask. Keep it damp.
- Assemble and test that firefighting equipment is operational (eg check pump pressure).
- Wet down roof, house and garden, especially on the side of the approaching fire.
- Keep watch for spot fires on or around the house.
- Drink small quantities of water frequently to prevent heat exhaustion. Do not drink from brigade tanks or knapsacks as they may contain fire retardant chemicals.
- Once the fire front has passed, check the house thoroughly for small spot fires, smouldering material or glowing embers.
- Check inside the roof, each room, furniture; then check the exterior. Keep checking for several hours.

Evacuation ?

Education Authorities have plans for safe evacuation of children in times of major fires. Make sure you know of these plans. If children are at a nearby school, check if they are to be sent home or evacuated as a group to another location.

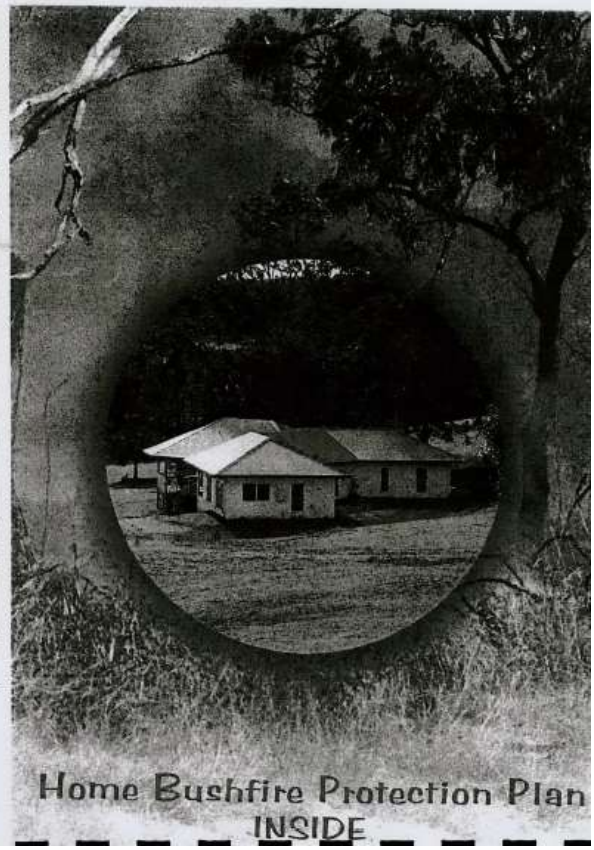
If you intend to evacuate any members of the family, plan ahead of time -

- leave well before the fire front arrives
- where to stay
- how to make the decision to leave
- how to travel

If ordered to evacuate, remain calm and assemble everyone at an appropriate point. Do not overload any vehicle. Turn on headlights. Drive carefully, and never attempt to drive through thick smoke.

Once you have reached the assembly centre report to a senior person, and give the names of everyone in your party.

For more detailed information, please refer to 'Construction of Buildings in Bushfire Prone Areas'- available from Standards Australia. Other publications offering general information - 'Bushfire Prone Areas, Siting and Design of Residential Buildings' and 'Protecting your Home against Bushfire Attack' are available from the Queensland Department of Communications and Information, Local Government, Planning and Sport, or Rural Fire Service, GPO Box 1425 Brisbane, Q. 4001
Telephone 07 32471830.
www.ruralfire.qld.gov.au



Home Bushfire Protection Plan

INSIDE

Options for Home Bushfire Protection

LONG TERM FIRE PRECAUTIONS

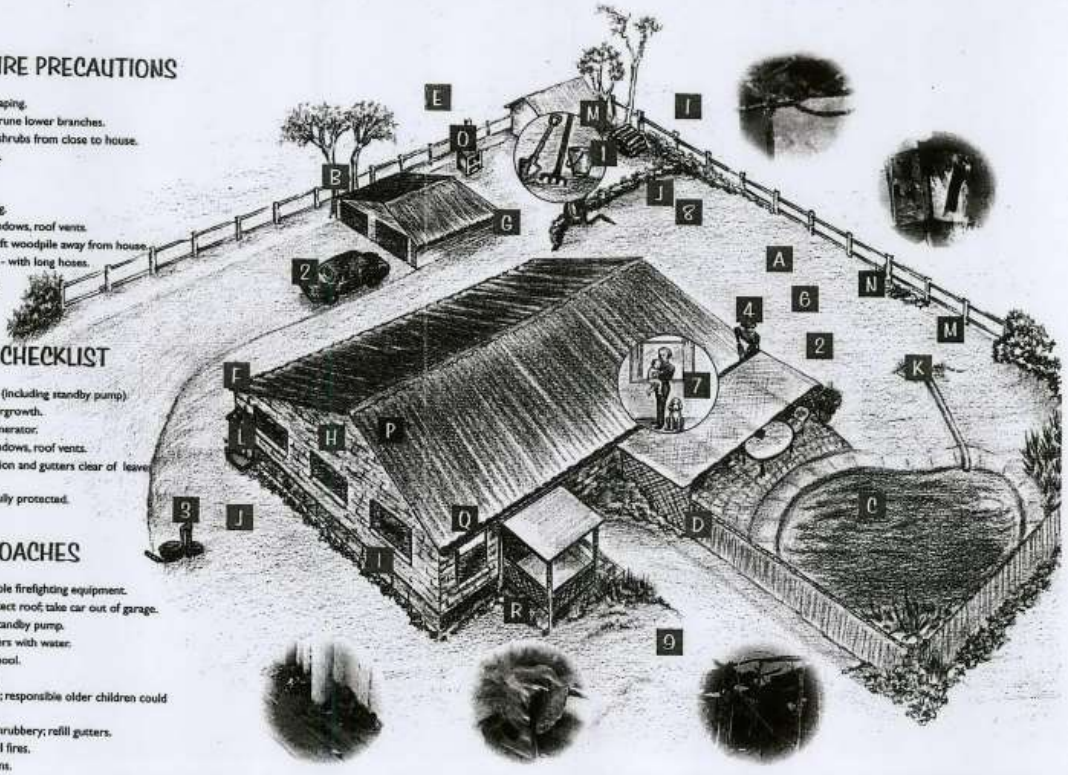
- **A** Reduce fuel by proper landscaping.
- **B** Use smooth-barked trees - prune lower branches.
- **C** Clear overhanging trees and shrubs from close to house.
- **D** Plant low-flammability shrubs.
- **E** Plant a wind break.
- **F** Enclose all eaves.
- **G** Fill ends of corrugated roofing.
- **H**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

PRE-SUMMER CHECKLIST

- **M** Check firefighting equipment (including standby pump).
- **N** Clear fences of rubbish, undergrowth.
- **O** Check spark arrestor on incinerator.
- **P** Check all screens: doors, windows, roof vents.
- **Q** Ensure roof is in good condition and gutters clear of leaves and rubbish.
- **R** See that under-floor area is fully protected.

AS FIRE APPROACHES

- **1** Fill knapsacks, buckets; assemble firefighting equipment.
- **2** Place ladder and hose to protect roof; take car out of garage.
- **3** Attach hoses to taps, check standby pump.
- **4** Block downpipes and fill gutters with water.
- **5** Call roll, check children at school.
- **6** Dress in protective clothing
- **7** Keep children, and pets inside; responsible older children could help in some way.
- **8** Wet down house and close shrubbery; refill gutters.
- **9** Watch lawn and roof for small fires.
- **10** Follow fire officer's instructions.



Be aware of the risks of living in a rural environment and be prepared in case of bushfire.

Educate children about fire safety and survival.

Join your local Rural Fire Brigade. Keep names and telephone numbers of your local Rural Fire Brigade Officers by the telephone.

For further information or general fire protection safety matters, contact the Rural Fire Service District Office nearest to you -

SOUTHERN REGION

Redcliffe	*07 3284 3917*
Ipswich	*07 3202 1444*
Bundaberg	*07 4153 3244*
Caboolture	*07 5499 1009*
Maryborough	*07 4123 0543*
Miles	*07 4627 1848*
Roma	*07 4622 2074*
Toowoomba	*07 4639 9172*

NORTHERN REGION

Charters Towers	*07 4722 1183*
Barcaldine	*07 4651 1190*
Cairns North	*07 4052 3240*
Cairns South	*07 4054 4333*
Townsville	*07 4787 8213*
Cloncurry	*07 4742 2358*
Mackay	*07 4951 8836*
Rockhampton	*07 4938 4736*

Rural Fire Service

A Division of Queensland Fire and Rescue Authority

WATER *plus* POWER

Vital for Firefighting

WATER plus POWER
Vital for Firefighting

The trend towards rural residential living has increased the dangers to life and property from wildfire. The risk of losing life and property during a bushfire or grassfire is affected by many factors: the location and accessibility of the property, the amount and type of surrounding vegetation, the condition and placement of buildings and the availability of water.

The garden hose can save your house in a bushfire, if the right preparations have been made. But an emergency water supply will be needed, because in most bushfires the mains water supply is likely to fail and electric power supplies will probably be cut off.

The emergency supply needs to be gravity fed, unless you put in a petrol/diesel pump to provide water pressure.

Here's how to keep the water up to a fire.

Store It

If your house is on mains water, you can run it through a storage tank, so that the tank is always full. If you use tanks make sure that a water supply for fire fighting is always kept in reserve. A swimming pool or dam is fine.

How Much to Store?

To protect the house itself, you need a minimum of 1,000 litres - preferably more. For a sprinkler system, allow at least 22,000 litres - plus a further supply for household fire fighting.

Where reticulated water is not available, a 45,000 litre tank is recommended as backup water supply.

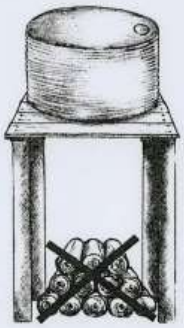
Raise It

Your emergency supply should be gravity fed. Put the tank on a raised stand, and put another small tank in the ceiling. Fit a tap to the ceiling tank, for filling buckets.

CAUTION:- Be aware that under extreme bushfire conditions, elevated water supply tanks may crack as reinforcing metal expands. Plastic pipes above ground may also fail.

Protect It

A metal tank stand may buckle in the heat of a bushfire, so put a heat shield around it - corrugated iron is fine. Do not store the woodheap, or any other flammable material, under the tank stand.



Tanks should be fitted with a 50mm female Camlock coupling to enable the Rural Fire Brigade appliance to couple up to them and should be fitted with a gate or ball valve.

Pump It

If you are mechanically minded, a small pump can be a real help in boosting water pressure for your hoses. A small 3.75 kW (5 hp) petrol or diesel pump is all you need. Make sure the pump can be operated by any member of the family. Check the pump on high fire danger days to be sure it is fuelled and starts readily. (A key start ignition system is of course ideal). But don't rely on a pump unless you are prepared to maintain it in working order.

If you wish to use an electric pump to secure your property in the event of a house fire, ensure there is an independent supply from a pole mounted switch and meter box.

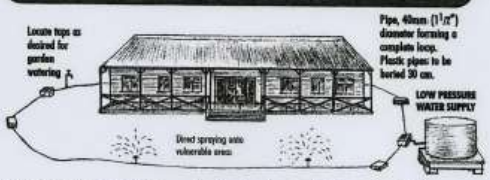
Sprinklers & Hoses

Sprinkler systems can be extremely valuable in defending your home against wildfire, provided you have sufficient water supplies. You will need at least 22,000 litres of water from a tank, dam or swimming pool. Do not rely on mains water except to help replenish the water tanks. The system need not be elaborate. An extension of your garden watering system can be used to wet the most vulnerable areas of the house, such as the immediate surrounding garden or lawn area, under floors, roofs, eaves, LP gas cylinder and timber balcony areas.

Run the reticulation system into a loop right around the house. Put in gate or ball valves and hose couplings at each corner, so you can deliver the full force of water wherever you need it.

Remember that plastic water pipes are likely to melt. Use metal pipes, or bury plastic ones at least 30 cm underground. Make sure you have enough hoses to cover all the house. If they are plastic, you will need to take them inside while the fire front passes, to stop them melting.

For Fire Protection



Locate 25 mm (1") gate valves and hose couplings opposite the corners of the house. Hoses of sufficient length to cover the whole of the house (e.g. 10m) should be available for fire fighting. Shut-off nozzles should be fitted.

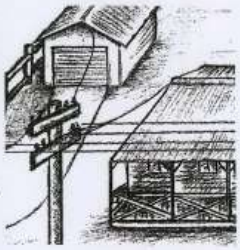
Ground level or roof sprinklers may be fitted if sufficient water is available.

Petrol/diesel pump (5h.p./3.75kW) for fire fighting - connect to allow bypass of any electrical pump. The pump should be in a shed or otherwise enclosed, giving a 45 cm airspace around pump.

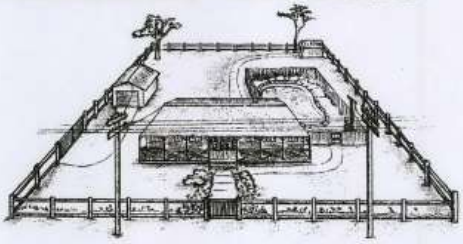
Using Electricity

Electric power normally fails during the early stages of a house fire if the meter and switch box is consumed by the fire.

Have the power supply connected to a pole mounted meter and switch box with independent power supplies to both the house and pump, sheds etc.



Minimise the Risk



- Fires are spread and fuelled by flammable material on the ground. Clear away all dried grass, dead leaves and branches, brush etc under trees near your house.
- Clean out your gutters. Consider installing mesh or gutter guard.
- Ensure the roof and roof capping is well sealed to prevent entry of sparks. Also check for gaps near the chimney and guttering where embers may accumulate .
- Place appropriate fire extinguishers in prominent and easily accessible locations.
- Set up sprinklers to keep the ground, roof and walls damp. A portable diesel or petrol pump drawing water from your tank, pool or dam is ideal. It will make you independent of pressure loss in mains water or power failure.
- Maintain a well cut green lawn around the house, with well spaced trees, to act as a break.
- A wide gravel or paved drive will provide additional protection.
- Keep wooden trellises and other timber addition to a minimum and use metal support posts around the house.
- Avoid the real danger of wind blown debris and embers starting fires under your house by covering in all underfloor areas.
- Check walls for cracks and gaps. A well sealed wall increases your protection against wind blown sparks.
- A roof of low profile is the safest. Securely fix metal roofing to withstand high velocity "fire storm" winds.
- Protect vents and windows externally with fine wire mesh to prevent spark entry.
- Store firewood well away from the house.
- Store flammable fuels well away from the house.
- Increase your safety by paving around buildings with masonry, slate or concrete.
- Masonry garden walls help stop embers blowing onto house walls and deflect grass fires.
- Ensure farm animals are in a well cleared, preferably bare, paddock or large yard.
- Keep all your firefighting equipment in one convenient location and easily accessible.
- Connect large diameter gate valve fittings to the outlet of your tanks to provide ample water supply to your firefighting pump.
- Ensure that all pumps and hoses are working well by testing fire equipment regularly. The hoses should reach every part of the house.

LESS FLAMMABLE VEGETATION (After C. Tran)

The following species are proposed within Inner Radiation Zones & gullies. The balance of species for Outer Zones are to include locally indigenous species, such as Ficus obliqua, & F. platypoda.

SPECIES	COMMON NAME
Trees	
Macaranga tanarius	Macaranga
Melicope elleryana	Pink Flowered Doughwood
Elaeocarpus reticulatus	Blueberry Ash
Glochidion ferdinandii	Cheese Tree
Acmena smithii	Lilly-pilly
Ficus platypoda	Rock Fig
Ficus macrophylla	Moreton Bay Fig
Cupaniopsis anacardioides	Tuckeroo
Eupomatia laurina	Bolwarra
Palms	
Archontophoenix cunninghamiana	Piccabeen Palm
Livistona australis	Cabbage Tree Palm
Shrubs	
Persoonia cornifolia	Broad-leaved Geebung
Hibiscus heterophyllus	Native Rosella
Alpinia caerulea	Native Ginger
Melastoma affine	Blue Tongue
Dodonea triquetra	Forest Hop Bush
Cassine australis	Red Olive Plum
Groundcovers	
Crinum pendunculatum	Spider Lily
Alocasia brisbaniensis	Cunjevoi
Myoporum acuminatum	Coastal Boobialla
Lomandra longifolia	Spiny-headed Mat Rush
Lomandra hystrix	Mat Rush
Lomandra multiflora	Many-flowered Mat Rush
Carpobrotus glaucescens	Angular Pigface
Hibbertia scandens	Climbing Guinea Flower
Hibbertia obtusifolia	Grey Guinea Flower
Hardenbergia violacea	Native Sarsaparilla
Scaevola calendulacea	Scented Fan Flower
Viola hederacea	Native Violet
Ferns	
Cyathea cooperi	Straw Treefern
Todea barbara	King Fern

DISCLAIMER

Determined by research in Gold Coast Hinterland by Chuong Tran as part of his PHD Research Project.

The use of these plans must be supplemented by other fire mitigation strategies (Zoning/Landscape Management etc) to ensure maximum preparedness to wildfire.

Under extreme conditions, these plants will be less effective and may increase hazard. Be sure to plant outside / away from structures.

Fire Safety Publications

Tree Selection for Fire-Prone Areas

Flammability

All plants will burn, but some are more tolerant of fire than others.

Severe fires cause more damage. Low to moderate fires scorch or burn plants. High-intensity fires incinerate plants. Young plants are more susceptible to damage than mature plants.

Features of plants that provide protection from fire include:

- high salt content of leaves

- high moisture content of leaves

- low volatile oil content of leaves

- thick bark protecting conductive tissues and dormant buds

- seeds enclosed in woody capsules

- dense crown

- lowest branches out of reach of ground fires

Plants that retain or accumulate dead leaves and twigs will burn, especially if this material is continuous from the ground to the crown. Trimmed cypress hedges, for example, are an extreme fire hazard.

Volatile oils in leaves of eucalypts, callistemons and melaleucas burst into flames on heating and increase fire intensity.

Thick bark will protect trees, but may be a fire hazard if it is loose, fibrous or stringy. These types of bark easily ignite and encourage fire to spread through the crown of the trees. Wind can carry burning bark, especially loose, flaky or ribbon bark, away to start new fires - a process called "spotting"

Ability to regenerate

Many plants can regrow or regenerate after a fire. Native plants have evolved with fire and most will regenerate well. They have survival mechanisms such as dormant buds, thick bark and thick, woody capsules to protect seeds, or they store seed in the soil. Introduced plants have few survival mechanisms, but burn less readily than most natives.

Eucalypts can reshoot from dormant buds beneath their bark. Casaurinas and some acacias reshoot from roots. Some eucalypts, acacias, tea-trees, banksias, hakeas and callistemons regenerate from seed. Seed of many acacias is stored in the soil and germinates after fire. Larger acacias are more tolerant of fire than smaller ones.

If crowns and trunks of native species such as eucalypts, acacias and casaurinas are killed by fire, the tree will often reshoot from the stump when felled.

Introduced deciduous trees, such as poplars and willows, reshoot from roots, and oaks reshoot from stumps when the fire-killed crown and trunk is felled. Most pines will not recover if more than half their foliage is burnt, although Canary Island pine, Ponderosa pine, Aleppo pine, and Redwood are more fire-tolerant than this.

After the fire

Ground cover and prunings from fodder trees may provide supplementary stockfeed when pastures are burnt. Saltbush, most casaurinas, several species of eucalypt and acacia, poplars and willows are all fodder trees.

Fire-damaged shelterbelts will still protect stock from wind and sun, so retain them until new shelterbelts are established.

Fire-tolerant plants may provide a valuable refuge and source of food after a fire for wildlife such as small marsupials, nectar-feeding birds, bees and other insects.

c - prefers cool climate,

x - extensively naturalised: might be declared noxious weed in some areas.

The more fire resistant native trees and shrubs include:

- Acacia cyclops
- Acacia glandulicarpa
- Acacia howittii
- Acacia iteaphylla
- Acacia melanoxylon
- Acacia pravissima
- Acacia prominens
- Acacia terminalis
- Acacia vestita
- Acmena smithii
- Agonis juniperina
- Angophora costata
- Atriplex spp.
- Brachychiton populneus
- Casuarina cristata
- Casuarina cunninghamiana
- Eucalyptus maculata
- Ficus macrophylla
- Hakea salicifolia
- Hakea suaveolens
- Heterodendrum oleifolium
- Lagunaria patersonii
- Melaleuca lanceolata
- Melia azedarach
- Myoporum insulare
- Pittosporum undulatum
- Tristania conferta West Australian Coastal Wattle
- Hairy Pod Wattle
- Sticky Wattle
- Gawler Range Wattle
- Blackwood
- Ovens Wattle
- Golden Rain Wattle
- Cedar Wattle
- Hairy Wattle
- Lilly Pilly
- Juniper Myrtle
- Apple Jack
- Saltbush
- Kurrajong
- Belah

- River She-Oak
- Spotted Gum
- Moreton Bay Fig
- Willow Hakea
- Sweet Hakea
- Cattlebush
- Pyramid Tree
- Moonah
- White Cedar
- Boobialla
- Sweet Pittosporum
- Brush Box

Introduced plants that are hard to burn include:

- Acer campestre
- Acer negundo
- Acer platanoides c
- Acer pseudoplatanus c
- Aesculus hippocastanum c
- Alnus jorullensis
- Calodendrum capense
- Castanea sativa c
- Celtis occidentalis
- Ceratonia siliqua
- Cercis siliquastrum
- Coprosma repens
- Cornus capitata c

Corynocarpus laevigatus

- Elaeagnus angustifolia
- Fagus sylvatica c
- Fraxinus spp. x
- Griselinia littoralis
- Ilex aquifolium
- Laurus nobilis
- Liridendron tulipifera c
- Olea europaea x
- Photinia glabra
- Photinia serrulata c
- Pittosporum eugenioides
- Platanus orientalis
- Populus spp.
- Prunus laurocerasus
- Prunus lusitanica

- Quercus canariensis
- Quercus cerris c
- Quercus ilex
- Quercus robur
- Salix babylonica
- Schinus molle
- Sorbus aucuparia c
- Tamarix aphylla
- Tilia vulgaris c
- Ulmus spp. Common Maple
- Box-Elder maple
- Norway Maple
- Sycmore
- Horse Chestnut
- Evergreen Alder
- Cape Chesnut
- Sweet Chestnut
- Hackberry
- Carob
- Judas Tree
- Mirror Bush
- Evergreen Dogwood
- New Zealand Laurel
- Russian Olive
- Common Beech
- Ash
- New Zealand Broadleaf
- Holly
- Laurel
- Tulip Tree
- Olive
- Red-leaf Photinia
- Chinese Hawthorn
- Tarata
- Plane
- Poplar
- Cherry Laurel
- Portugal Laurel
- Algerian Oak
- Turkey Oak
- Holm Oak
- English Oak

- Weeping Willow
- Pepper-Tree
- Rowan
- Athel
- Linden
- Elms

Ground cover plants that are hard to burn include:

- Ajuga reptans
- Atriplex spp.
- Carpobrotus spp.
- Coprosma 'kirkii'
- Delosperma 'alba'
- Drosanthemum floribundum
- Gazania spp.
- Hedera spp.
- Hellaxthemum spp. c
- Kennedia spp.
- Kochia spp.
- Lampranthus multiradiatus
- Myoporum parvifolium
- Portulacaria spp.
- Pelargonium spp.
- Rhadgodia spp.
- Rosmarinus officinalis prostatus
- Rosemary (prostrate form)
- Santolina spp.
- Verbena peruviana
- Vinca spp.
- Bugle
- Saltbush
- Pigface
- Gazanias
- Clinging types of ivy
- Sunroses
- Coral Peas
- Bluebushes
- Noonflower
- Creeping Myoporum
- Jade Plants
- Pelargoniums
- Saltbush
- Stonecrops

first draft

A NEWSLETTER FOR BUILDING DESIGN PROFESSIONALS FROM BORAL TIMBER

specifying timber in bush fire zones

Changing weather patterns over the last decade are indicating that Australian summers will become hotter and drier than ever before. This will have a significant impact on the bush fire season each year and in turn, on the professional building designer's role in the creation of structures that are better designed for bushfire-prone areas.

However, it is important to note that this does not mean that timber cannot be used when designing structures for bushfire-prone areas. In fact, there are a number of hardwood timber species that are classified as naturally resistant.

Blackbutt is listed as a "naturally fire resistant timber species" and can therefore be specified for use in bush fire zones

From the Editor

The subjects covered in this issue of First Draft are a direct response to requests from subscribers for technical information on specific timber issues. First Draft is designed to be an information resource on technical issues, so please keep the requests coming and we'll do our best to fill its pages with the information that building design professionals are looking for.

First Draft is also designed to be a resource for inspiration – a place to showcase the use of hardwood timber in some of the best building design work in the country. If you have worked on a project using hardwood timber, which you think demonstrates excellence in design, please contact me with the details. We'd like to feature the work of our subscribers.

Enjoy this issue!

MALCOLM JOHNSTON

Editor, First Draft

Email: Malcolm.Johnston@boral.com.au

Australian Standard 3959 – 1999 (AS 3959) was developed to provide standard guidelines for specifying timber products for use in bushfire-prone areas.

AS 3959 does not impose any restrictions on the use of timber when applied to the interior of a building, therefore hardwood timber flooring, structural wall framing and roof trusses are acceptable. There are no requirements for elements commonly found in backyard structures such as pergolas, gazebos, pool surrounds, fences or garden sheds.

The Australian Standard restrictions do apply to the specification of timber on the external treatment of a structure such as window frames, exterior cladding, eaves, facias, decking and exposed posts.

Refer to each state authority for site assessment requirements. If these do not exist use the methodolofy outlined in AS 3959.

AS 3959 requires that a site assessment be made and the building be classified according to the vegetation type, its proximity to the proposed building and the slope of the land leading to the site. Vegetation types such as forests and tall shrubs represent a mid to upper range of fuel sources.

Buildings are categorised into one of the following four classes to which construction level requirements are applied.

- Buildings that are less than 15 metres from vegetation represent an "extreme risk" and therefore require Level 3 Construction.
- Buildings ranging from 15 – 40 metres from vegetation represent a "high risk" and therefore require Level 2 Construction.
- Buildings ranging from 40 – 100 metres from vegetation vary in risk according to the slope of land. Sites which slope more than 10 degrees represent a "medium risk" and therefore require Level 1 Construction; sites which slope less than 10 degrees represent a "low risk" and are therefore not restricted to a specific construction level.

Continued on page 3

The floor was a critical choice because so much of it would be visible in such a large open space," says Jim.

Boral Timber Uni-Nail tongue and groove 80mm strip flooring in Blackbutt Classic Grade was installed over the bearers and joist floor structure and was finished using Basic Coatings StreetShoe XL in satin.

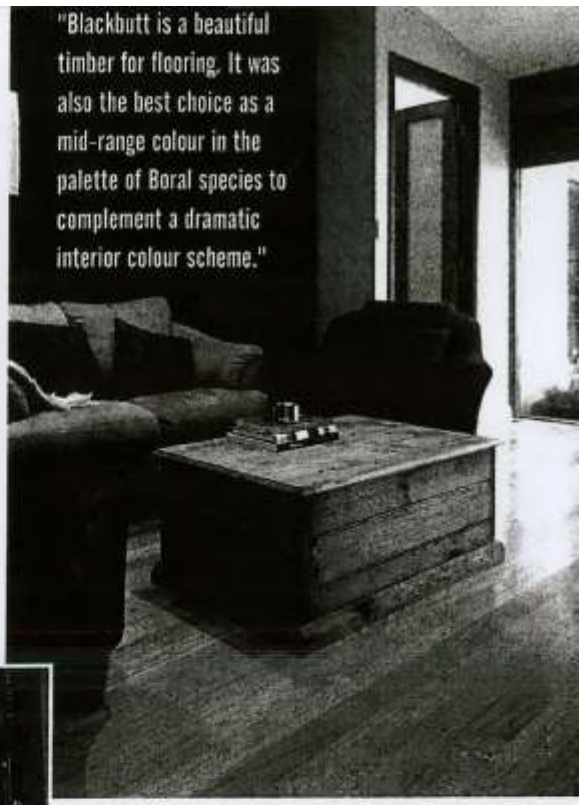
"The timber floor enhanced the consistency of colour and finish from the front of the house to the back," continues Jim. "It has created uniformity in its simplicity."

Project Summary

Architect: Jim Mitchell, Mitchell Partners Architects, Sydney
Phone 02 9712 4470

Builder: Owner Builder

Boral Timber products used: Blackbutt Uni-Nail tongue and groove strip flooring in Classic Grade, finished with Basic Coatings StreetShoe XL in satin; F27 structural hardwood



Pictured left, F27 hardwood in Blackbutt (usually specified for structural applications) has been used for shelving in a tall feature column that emphasises the height of the ceilings. A deep groove was routed into the edges of each board to slide over aluminium rails, concealing the fixing mechanism for a very clean finish.

specifying timber in bush fire zones ...continued

- Level 1 Construction permits the use of timber for exterior cladding, window frames, eaves, facias, decking and exposed posts but they must be either treated with a fire retardant or be of a naturally resistant timber species. There are no restrictions on elements that are close to the ground (less than 400mm).
- Level 2 Construction permits the same use of timber as for Level 1 but requires that elements close to the ground are also either treated with a fire retardant or be of a naturally resistant timber species.
- Level 3 Construction permits the same use of timber as for Level 2 but also requires that exposed balustrades and open subfloor timbers be either treated with a fire retardant or be of a naturally resistant timber species.

As with all regulations, it is necessary to check with the local approving authority for specific requirements.

Some hardwood timber species are classified as naturally fire resistant. These are generally the high-density timber species such as Blackbutt, Spotted Gum, Ironbark and Turpentine. In order to meet AS 3959 requirements, timber must be at least 18mm thick.

Boral Timber supplies 19mm decking timber in Blackbutt and Spotted Gum which can be specified under Construction Levels 1, 2 and 3. Boral's other decking species can be applied to Construction Level 1 and these include Australian Beech, Swan River Reds and Mixed Hardwoods. Boral Timber also supplies hardwood posts, beams and external cladding.

It is recommended that a continuing hazard reduction program be put in place to reduce vegetation around buildings and to minimise the intensity of any bushfire hazard. This can be enhanced by subdivision layout, use of appropriate landscaping species and the location of buildings relative to surrounding vegetation.

>>

For a full list of construction requirements for bush fire zones as outlined in AS 3959 visit the Australian Standards website at www.standards.com.au or phone 1300 654 646.

TESTAMONIALS:

"Thank you for your wonderful response to our request for bushfire protection. Both Bruce and I were amazed at how the system was able to cover the whole area of the wall and wide verandah so effectively and gives us a feeling of security now with our cedar home so high up and surrounded by bush."

Ele & Bruce
BARRINGTON NSW

"I researched every system for bushfire protection that I could find and decided that Bushfire Alleviation's was definitely the best. I must say that in actual operation it far surpassed what I had expected. I have been particularly impressed with some of the design ideas such as the roof cavity micro system and fire suppressant. This has given me an enormous amount of peace of mind because of my position on the ridge above such dense bush in this Blue Mountains area."

Steve
YELLOW ROCK NSW

"This letter is sent to let you know how pleased we are with the fine job you and your company did in installing your unique bushfire prevention system at our Tennyson home. We had been concerned with the hazards of living in our beautiful environment for some time and after rebuilding our 500 square metre deck we knew that the time had come for a serious look at fire prevention.

Your expert advice in the materials required, your concern with keeping the installation as unobtrusive as possible and your personal concern with the look of the finished job made this a pleasant experience.

My family and I feel a lot safer knowing that in the future we have the best chance of avoiding a possible loss of life. Know that I would recommend your company to anyone looking for bushfire prevention for their home."

Joachim
TENNYSON NSW

Your Local Distributor:

BUSHFIRE ALLEVIATION SYSTEMS
40 Christina Crescent LALOR PARK NSW 2147
Ph 02 9624 8404 Mob. 0418 201737 or 0402 561 570
bushfires@ozemail.com.au

BUSHFIRE PRO

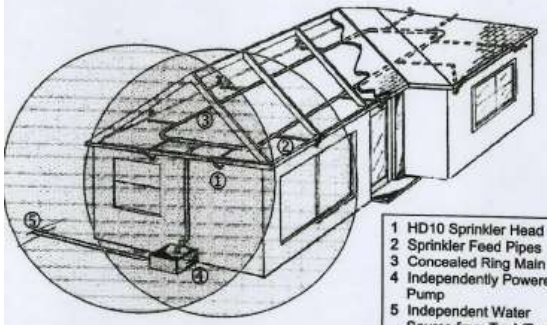
Bushfire Alleviation Systems

Proven Sprayer/Sprinkler Systems for Rural, Residential & Commercial Bushfire Protection

Developed in collaboration with Fire Agencies, Bushfire Engineers & CSIRO over the past 8 years, Bushfire Pro now leads the world in Bushfire Protection Systems

NOW AVAILABLE NATIONALLY

DIAGRAM OF A TYPICAL SYSTEM



THE HEART OF THE BUSHFIRE PRO SYSTEM IS THE HD10 SPRINKLER/SPRAY HEAD

(Current International and Australian patent applications are in place for this)

Shown below is a comparison between currently available sprinkler/sprayers/nozzles being used with permanently installed systems. Most have been designed for agricultural or garden use and don't distribute water in the required volume or direction for effective building protection during bushfires.

	STATIC SPRAY NOZZLES	BUTTERFLY SPRINKLERS	BUSHFIRE PRO HD 10
Spray Pattern Diameter	approx 5.0 metres	approx 6.0 metres	approx 17 metres
Water Req. @ 200 kpa	approx 3 LPM	approx 15 LPM	approx 9.5 LPM
Sprays Forward	No	Yes	Yes
Sprays Backward	No	No	Yes
Sprays Sideways	Yes	No	Yes
Adjustable	No	No	Yes
Built Filter	No	No	Yes

HOW IT WORKS

Rotating spray heads protrude from the building facia. Water flow under pressure from a diesel or petrol powered pump is forced from the jets forcing the water under centrifugal force to exit in a variety of directions simultaneously. Because the water is placed between the fire and the building, any wind driven flame or ember will be also accompanied by water. You will often see a fireman advance on a fire with his hose spraying in a wide pattern to protect him from the radiant heat - The ***BUSHFIRE PRO*** System works in much the same way. The adjustability of the HD10 makes it very effective for use under decks and stairways etc.

OPTIONS

Fire Suppressant Additive

Dosed into the water at the pump, this very concentrated polymer is virtually undetectable by sight or feel, yet increases the cooling capacity of water enormously, while being environmentally friendly and safe to handle.

Roof Cavity Protection

Many homes are lost to bushfire from ingress of burning material into roof cavities. These can be protected by micro sprinklers fed from the main pipe system. This also allows a valve to supply water to a hose for use inside the building during a bushfire in case of internal fire.

Ist Line of Defence

A separate water circuit at the outer edge of the property can give great help in mitigating the effect of the fire before it reaches the building.

Automation

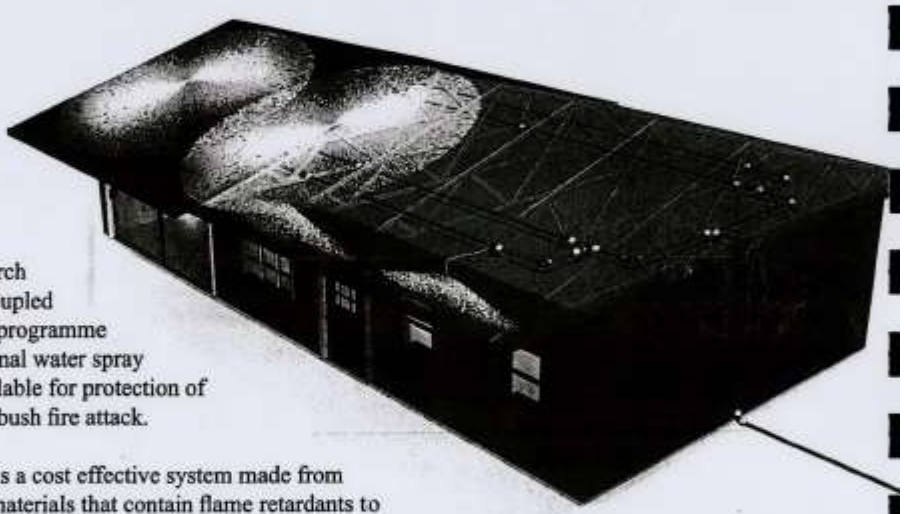
The ***BUSHFIRE PRO*** fully automatic unit will operate your system in your absence and does not need mains electric power. Ember attack will initially activate the system which is computer linked to sensors which can differentiate between this and flame attack. Embers may arrive much earlier than the main fire, so ***BUSHFIRE PRO*** will activate on the arrival of ember attack and then stop when the area has been doused sufficiently. It will continue this until the arrival of the fire galvanizes it into non-stop action for maximum protection.

ALL BUSHFIRE PRO SYSTEMS ARE COMPLETELY INDEPENDENT OF MAINS POWER & WATER SUPPLIES

For maximum protection of life and property against bush fires

External Water Spray System

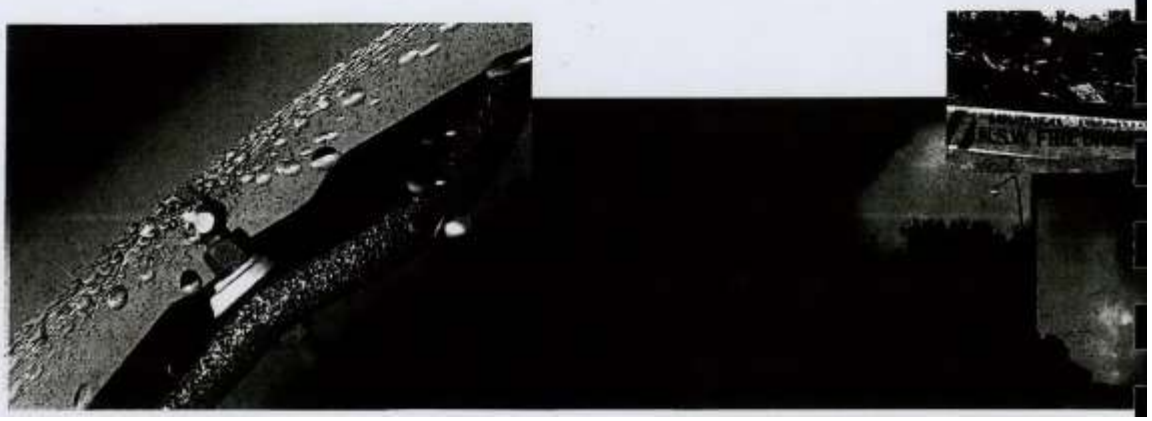
All pipe is located in the roof space.
No unsightly pipe on the roof.



After years of research and development coupled to an extensive test programme a new **EWSS** (external water spray system) is now available for protection of life and property in bush fire attack.

Fire-Pro® - EWSS is a cost effective system made from advanced polymer materials that contain flame retardants to inhibit flame propagation.

Fire- Pro® - EWSS is available as a D.I.Y. system or installed by a Calair Pipe Systems professional.



Pipe & Fittings

Pro-Pipe II® pipe & fittings are designed to allow installation without welding, gluing, threading or requiring special tools. The design allows for quick and easy installation that results in a lower installed cost.

Spray Nozzles

Advanced spray nozzle design provides maximum droplet size at minimal pressure to prevent early depletion of available water supply. The low profile of the spray nozzle is unobtrusive with minimum impact on building aesthetics.

ROOF SPRAY

The RS1 roof spray is designed for protection of the roof area including, the ridge and gutters, from flying embers. It will provide coverage over a 5 metre area and is supplied with a cup seal and hose adaptor for easy installation.

spray pattern of roof spray

spray pattern of ceiling drencher

WINDOW DRENCHERS

The ED1 drencher is designed to protect windows and doors from the high radiant heat of approaching bush fire and is activated by heat sensors. It will provide coverage over a 4 metre area and is supplied with a mounting flange and hose adaptor for easy installation.

Heat Sensors

Special heat sensors are located at strategic points to detect rising temperature. At 95°C the heat sensors send a signal to the solenoid valves to open and provide water to the window drenchers.

Flexibility is the key

The hose assembly HS1 is designed to accommodate thermal expansion and contraction over large temperature variations.

HS1 Hose Assembly is supplied with Nut & Tail connectors to allow for quick and easy installation. The Hose Assembly and Connectors are crimped for added security.

Low Voltage Solenoid Valves

High flow/low voltage solenoid valves are installed in the branch lines feeding the window drenchers and are automatically activated by the heat sensors.

Power supply

Long life Alkaline batteries provide power to activate the solenoid valves. The12volt power supply is supplied with plug connectors for easy installation.

CALAIR® PIPE SYSTEMS
email: sales@calair.net.au
web: www.calair.net.au
A.B.N. 44 096 559 877

Local branch or distributor:

PRO PIPE II®

3D Fire Safety Centre

Fire Retardant Coating Solutions: ✓Bushfire ✓Commercial ✓Domestic

The 3D Fire Safety Centre offers a range of passive fire control paints and coatings. Passive fire protection has a vital role in establishing and maintaining an ongoing overall protection in commercial and domestic premises. Important applications are within homes located in bushfire risk areas that must meet with the AS-3959 (construction in bushfire prone areas) requirements. All Cease-Fire products have been tested to meet with the appropriate BCA fire standards. The Cease-Fire coatings range will be launched in October 2005 and will be available nationally throught 3D Paint and Colour stores.

Cease-Fire Timber FR

Cease-Fire Timber FR is a water based intumescent fire retardant three component solid colour coating system. It is developed to meet the performance requirements for "Fire Retardant Timber" as defined in AS/NZS 3838:1998 and the weather exposed durability test ASTM/D.2898 accelerated age weathering as called for in AS 3959. All three individual components must be used as directed to comply with the requirements. The coating system is suitable for both exterior and interior applications where fire retardant performance within domestic premises is required.

PART 1 – Primer: A premium quality white timber primer that has been formulated to provide the ideal base for the CFT Fire Retardant coating. 1 coat required. The product can be applied by brush, roller or spray.

PART 2 – Fire retardant coating: Intumescent fire retardant coating that is the heart of the coating system. It has been formulated to provide maximum protection against fire. The coating can be applied by brush, roller, or airless spray. Refer to Product Technical Data Sheet for more information.

PART 3 – Exterior topcoat: The topcoat is available in gloss or low sheen. This premium quality topcoat has been designed to provide a long life protection for the Timber FR coating system. It is tintable to most exterior paint colours and can be applied by brush, roller or spray. Two coats are required.

Cease-Fire Fabric FR

Fabrics are one of the most combustible items in homes or commercial premises. They represent a significant fuel load in the event of fire. Cease-Fire Fabric FR is a colourless and odourless fabric fire retardant for interior fabrics, textiles and furniture.

Fabric FR can be used to fire retard a broad range of fabrics. The objective of the product is to retard ignition and halt the spread of flame. These vital performance factors can play a significant role in containing the spread of flames through the interior of a home or a building. The product has been tested to AS 1530-3:1999 and performs as required within this standard.

By using Cease-Fire Fabric FR to fire retard all soft furnishings that are potentially a danger, the risk of fire spreading within the building can be significantly reduced.

Matador FR Solid Colour

Cease-Fire Matador FR Solid Colour paint system for timber is an intumescent fire retardant two component solid colour paint system for commercial interiors. It delivers world class fire retardant protection to substrates such as soft wood timbers, plywood and MDF board for interior applications.

The system has been tested to the fire hazard properties required under BCA Specification C1.10a and achieved a Group 1 result. This fire retardant performance makes the system applicable to commercial applications where a AS/NZS 3837 Group 1 rating is specified and demanded on timber.

The two part system consists of a water based white fire retardant self-priming base coat which may be tinted as desired. The base coat is then over coated with a solvent based clear durable top coat.

Where premium interior timber fire protection is required the Matador FR Solid Colour paint system delivers!

The Matador FR Solid Colour is suitable for professional application only. Where works are for BCA Compliance within commercial buildings, the product must be applied by a professional fire retardant coatings applicator.

Due to the some times complex nature of the BCA commercial building fire standards approval process CFT would like to recommend that users consult with, as appropriate, Councils, Private Building Surveyors and Fire Service personnel for a project specific approval prior to application of the product.

Please refer to detailed technical data sheet for more information. Note - BCA Compliance is contingent upon Building Surveyor reviewing durability statements and allowing the use of a fire-retardant coating to make the timber substrates comply with the Fire Hazard Properties (Group Numbers).

CEASE-FIRE TECHNOLOGIES

3D Paint & Colour

Paint & Colour Coomera
1/64 Siganto Drive
Oxenford QLD 4210
Ph: 07 5573 2100
Fax: 07 5573 2600

Archicentre
Bushfire Design Guide

1

ARCHICENTRE BUSHFIRE DESIGN GUIDE

Protection from bushfires for both people and property has become a significant issue, with legislation now in place in most states to regulate construction in designated bushfire-prone areas.

Archicentre, the housing advisory service of the Royal Australian Institute of Architects, has played a pivotal role in bushfire situations, sending teams of experts into fire zones to assess damage and to assist people who suddenly face the prospect of rebuilding.

As bushfire risk grows, so does the need for good design. By using sound architectural design principles, the home can appropriately respond to the environment and at the same time minimise the threat of being lost to a bushfire. An Archicentre architect can show you how. This guide is for anyone intending to build, rebuild or renovate their homes in bushfire-prone areas. Before you begin your building project, Archicentre asks you to consider taking professional advice to ensure that a bushfire resistant design is put in place.

CHOOSING A SITE

Houses should be sited to minimise the risk - this may mean keeping away from steep hillsides where the intensity of the fire can double for each 10 degrees of slope, or ensuring enough cleared land is available between the house and the bush. The extent of cleared land required varies according to the type of vegetation in proximity to the land. Where the available building area is limited, design issues for bushfire-prone areas become paramount and expert advice is required.

LANDSCAPING

Several landscaping features can slow the momentum of a bushfire. These include rivers, lakes, dams, swimming pools, irrigated or green summer crops, orchards, vegetable gardens, sporting ovals or tennis courts. Many tree species have been classified as bushfire-resistant and can be used as wind breaks and barriers. These include native as well as imported species.

DESIGN DEVELOPMENT

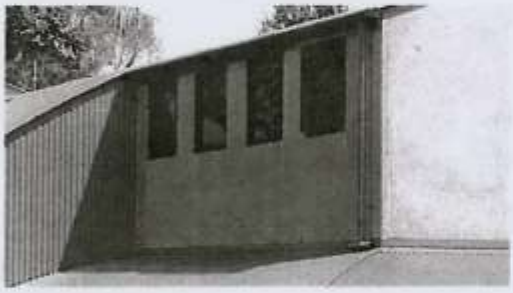
All bushfire design principles seek to protect the home from burning debris.

The key differences between bushfire design and traditional architectural design are that bushfire design uses a plan with a simple roofline, a minimum of angles and a range of fire-resistant alternative construction materials. These measures are put in place to protect a home from burning debris.

Good design for bushfire-prone areas seeks to protect the house and its occupants from the five major dangers:-

- wind
- radiant heat
- direct flame
- ember attack
- smoke

Principles such as simple rooflines, uncomplicated layouts, window protection, inbuilt water storage, fire-resistant materials (where necessary) and sprinkler systems can be integrated to achieve good protection as well as good design.



ESSENTIAL CONSTRUCTION REQUIREMENTS

Houses are classified by legislation as being in low, medium, high or extreme bushfire attack areas, or as being in the flame zone. There are no requirements for the low category, and the flame zone category is always subject to separate assessment by authorities. For the medium, high and extreme categories of bushfire attack, the Building Code of Australia and Australian Standard 3959 set out levels of acceptable construction, summarised briefly below. Non-combustible materials are generally acceptable, but the use of timber is sometimes restricted as follows:

Floors

Timber is acceptable in most categories of bushfire attack, however if the floor is not enclosed, or in the case of the extreme bushfire attack category, it must be sheeted underneath with non-flammable material or constructed using "fire-retardant treated timber". If the floor is closer than 600mm to the ground, it should be enclosed or constructed using "fire-retardant treated timber". "Fire-retardant treated timber" is not currently commercially available in Australia, however 7 species of timber comply with the criteria:-

- Blackbutt
- Spotted gum
- Merbau (Imported rainforest timber!)
- Turpentine
- Red Ironbark
- Red River Gum
- Silver Top Ash

Note that the term "treated timber" commonly refers to copper/chrome/arsenic treatment which is meant to protect against moisture, rotting and termites. It does not have any fire-retardant value and in fact the fumes from burnt "treated timber" could be toxic.

Supporting Posts

These can be timber provided they stand on 75mm high metal shoes or are constructed in "fire-retardant treated timber" for a minimum of 400mm above ground level. In the extreme bushfire attack category, they must be "fire-retardant treated timber" for the full height.

External doors

External doors must have weather strips or draught excluders and tight fitting metal flyscreens (aluminium, steel or bronze). For the high risk category, aluminium mesh cannot be used and any leadlight windows must be protected by non-combustible shutters or toughened glass. For the extreme category, timber doors must be "fire-retardant treated", have a non-combustible covering, be protected by non-combustible shutters or be solid core doors at least 35mm thick.

Roofing

Roofs can be tiled or sheeted, but timber shakes or shingles are not acceptable. All types of roofs must have all junctions sealed and be fully sarked. Sheeted roofs can only be metal or fibre-cement except in the extreme risk category where fibre-cement or aluminium sheeting cannot be used. Rooflights may be thermoplastic sheeting for the medium category but not for high or extreme risk categories, where wired glass (not toughened) is needed.

Eaves

Eaves must be enclosed and gaps sealed. If timber is used in the high risk category, it must be "fire-retardant treated", while in the extreme risk category aluminium cannot be used.

Fascias

For the medium risk category fascias can be timber, but for the high risk category they must be "fire-retardant treated". For the extreme risk category, fibre-cement or aluminium sheet cannot be used.

Gutters and Downpipes

These should have metal leaf guards. Systems for water retention can help protect the eaves and dampen flying debris which may gather during fire. By connecting them to a recirculating sprinkler system the wetting time can be prolonged.

Verandahs and Decks

Verandahs and decks can be timber, but sheeted or tongue and grooved flooring should be treated in the same way as floors. Where the height above ground is less than 400mm, all joints must be covered or sealed. Spaced decking boards must be 5mm apart and the underside must not be enclosed (to allow access for firefighting). For high and extreme categories, decking timbers must be "fire-retardant treated". There must be a separation between decking timbers and the rest of the house to prevent the spread of fire into the building.

Water and Gas Pipes

All water and gas pipes should be metal where exposed, or buried at least 300mm in the ground.

IDEAS FOR BUSHFIRE RESISTANT CONSTRUCTION

• Simple shapes without too many re-entrant corners

• Metal cladding and roofing; metal rooflights instead of dormer windows and metal roller shutters for windows and doors.

• Water tank (10,000 litres minimum) with a diesel fuel pump helps avoid water pressure and power problems.

• Toughened glass or laminated glass with heat-absorbing interlayer

• Concrete floors

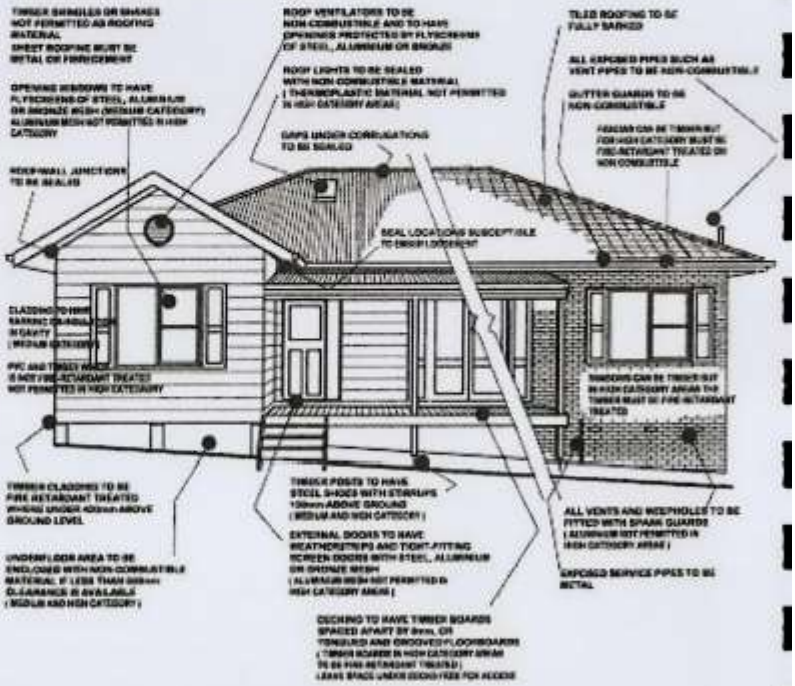
• Radiant heat barriers (fences, masonry walls) on the danger side of the house.

• Design for high wind strength

• Downpipe valves to enable easy filling of gutters

• Active, external sprinkler system with appropriate metal pipes and brass sprinkler heads.

BUSHFIRE PROTECTION DESIGN DETAILS FOR MEDIUM AND HIGH RISK CATEGORIES



For information on regulations, refer to the Building Code of Australia under the heading *Housing Provisions*. Here you will learn how to build and what to build with under the heading "Acceptable Construction Practice". All construction must be in accordance with Australian Standard AS 3959-"Construction of Buildings in Bushfire-prone areas". To find out if your home is situated in a Designated Bushfire-prone Areas, contact your local council.

Archicentre is the largest provider of design reports and house inspections in Australia. Phone us today for advice on designing your fire-resistant dream home on 1300 13 45 13.

National Telephone 1300 13 45 13

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530 Glenferrie Road
Hawthorn Victoria 3122
Tel: (03) 9819 4877 Fax: (03) 9819 5413

Queensland
70 Merivale Street
South Brisbane QLD 4101
Tel: (07) 3846 4957 Fax: (07) 3846 4970

Northern Territory
1 Shephard Street
Darwin NT 0800
Tel: (08) 8941 4544 Fax: (08) 8981 3042

New South Wales
479 Darling Street
Balmain NSW 2041
Tel: (02) 9555 5111 Fax: (02) 9555 5011

Tasmania
Top Floor, 2 Castray Esplanade
Battery Point, Tasmania 7004
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Western Australia
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Adelaide SA 5000
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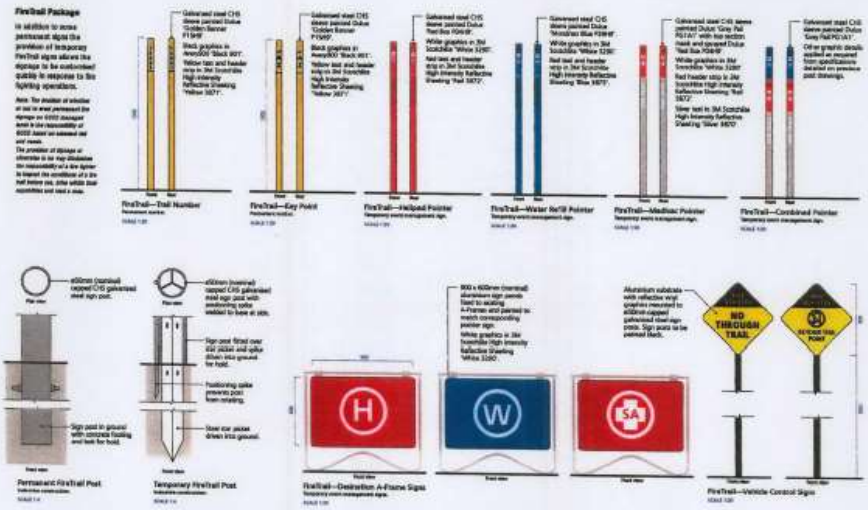
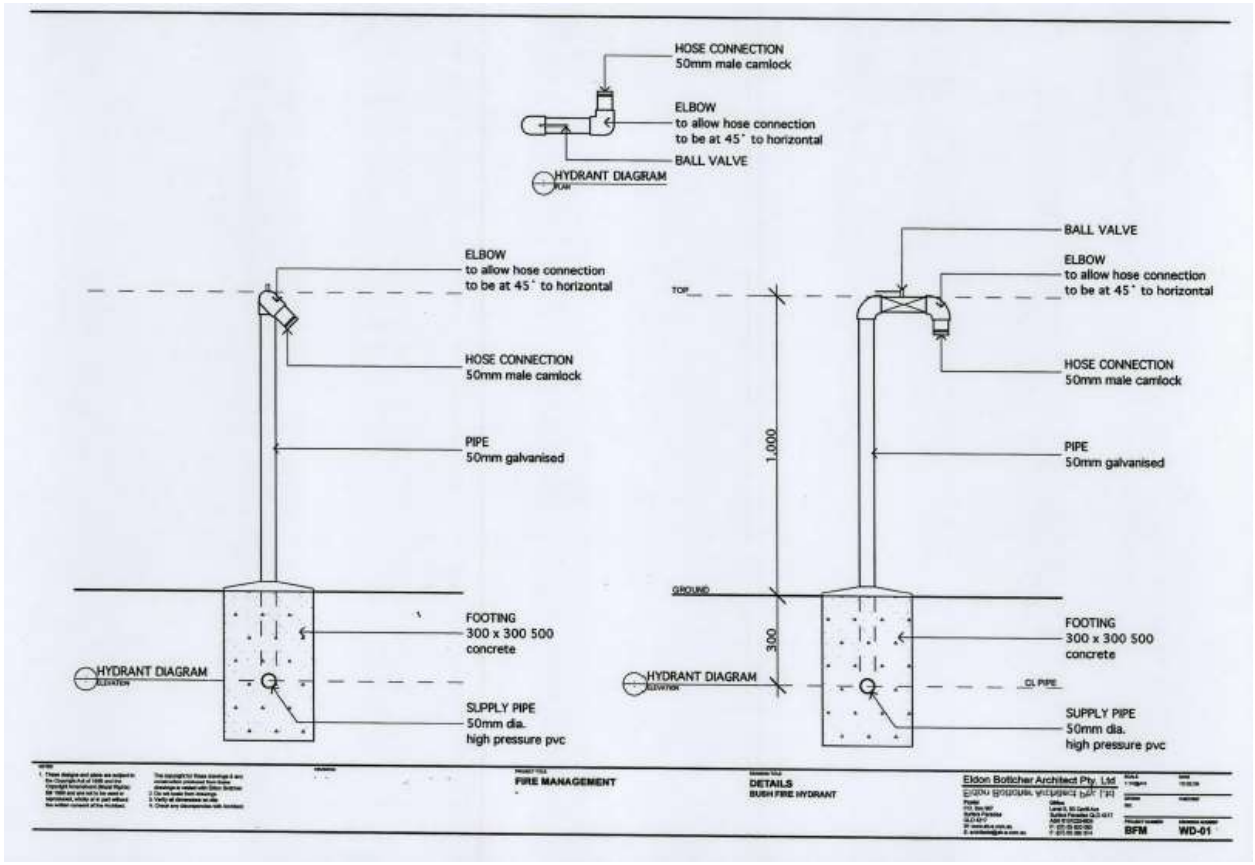
Australian Capital Territory
2A Mugga Way
Red Hill ACT 2603
Tel: (02) 6273 2353 Fax: (02) 6273 1953

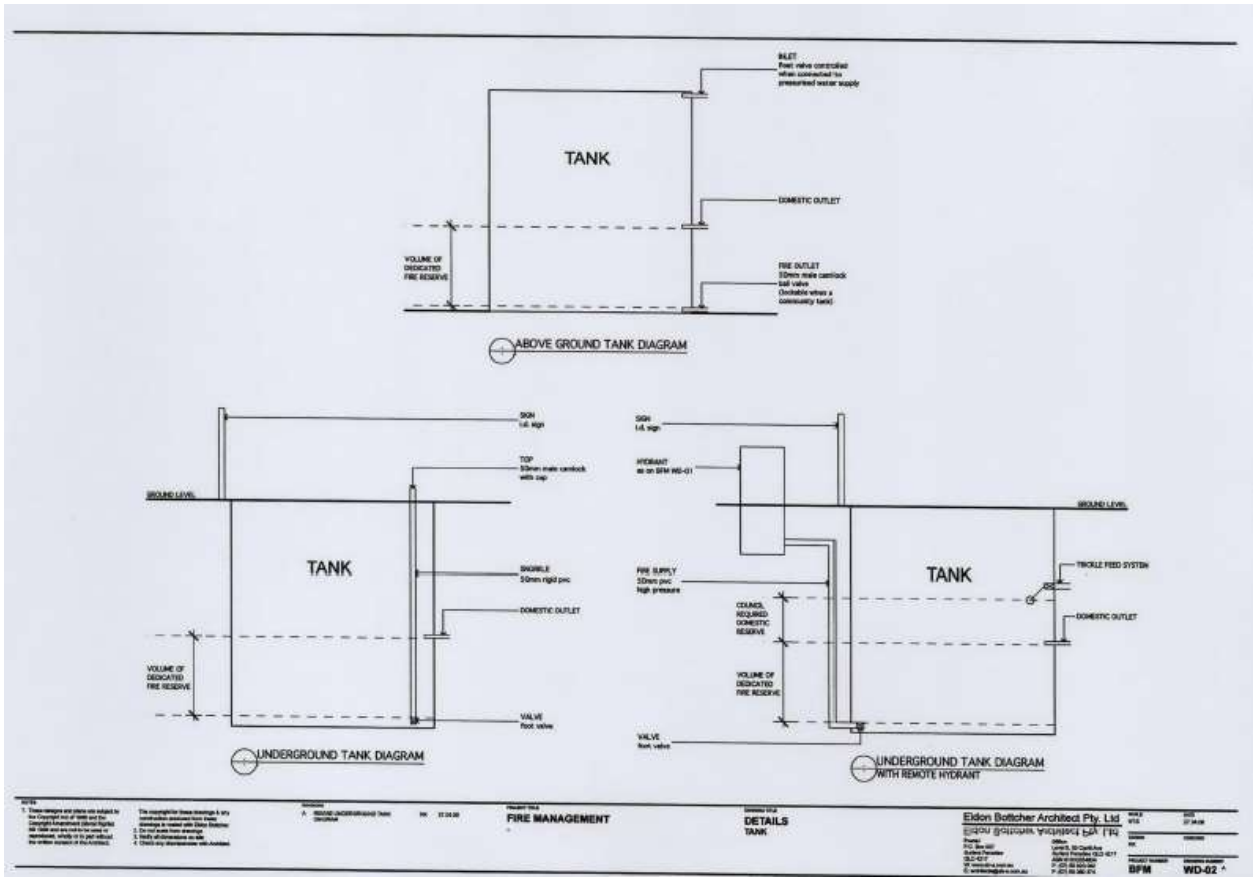


Mapping Symbols (cont.)

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 CC		
DIVISION COMMAND	BLUE DC	STAGING AREA (where resources are available)	BLUE SA
SECTOR COMMAND	BLUE SC	BASE CAMP	BLUE BC
HELIPAD	BLUE	AIR BASE (fixed wing and/or helicopter base)	BLUE AIR
WATER POINT VEHICLE (Firefighting Water Supply)	BLUE WV	WATER POINT HELICOPTER (Helicopter water supply)	BLUE WH
AMBULANCE LOCATION	BLUE AMB	ABORIGINAL SITE OR ARTIFACTS	BLUE
THREATENED PROPERTY	BLUE	ENDANGERED FLORA	BLUE
HISTORICAL SITE (Building or structure)	BLUE	ENDANGERED FAUNA	BLUE


HOSE CONNECTION
50mm male camlock
ELBOW
to allow hose connection
to be at 45° to horizontal
BALL VALVE
HYDRANT DIAGRAM
ELBOW
to allow hose connection
to be at 45° to horizontal
HOSE CONNECTION
50mm male camlock
PIPE
50mm galvanised
FOOTING
300 x 300 500
concrete
HYDRANT DIAGRAM
SUPPLY PIPE
50mm dia.
high pressure pvc
BALL VALVE
ELBOW
to allow hose connection
to be at 45° to horizontal
TOP
1,000
HOSE CONNECTION
50mm male camlock
PIPE
50mm galvanised
GROUND
300
FOOTING
300 x 300 500
concrete
HYDRANT DIAGRAM
CL PIPE
SUPPLY PIPE
50mm dia.
high pressure pvc
FIRE MANAGEMENT
DETAILS
BUSH FIRE HYDRANT
Eldon Bottcher Architect Pty. Ltd
BFM
WD-01


TANK
DOMESTIC OUTLET
VOLUME OF
DEDICATED
FIRE RESERVE
FIRE OUTLET
ABOVE GROUND TANK DIAGRAM
SIGN
TOP
GROUND LEVEL
TANK
DOMESTIC OUTLET
VOLUME OF
DEDICATED
FIRE RESERVE
VALVE
UNDERGROUND TANK DIAGRAM
SIGN
HYDRANT
GROUND LEVEL
FIRE SUPPLY
TANK
TRICKLE FEED SYSTEM
COUNCIL
REQUIRED
DOMESTIC
RESERVE
DOMESTIC OUTLET
VOLUME OF
DEDICATED
FIRE RESERVE
VALVE
UNDERGROUND TANK DIAGRAM
WITH REMOTE HYDRANT
FIRE MANAGEMENT
DETAILS
TANK
Eldon Bottcher Architect Pty. Ltd
BFM
WD-02

Recycled Water for FireFighting

Report summary from the Queensland Steering Committee considering the health risks to firefighters from using Class A+ recycled water for firefighting operations.

The Water Crisis

In some parts of Queensland, particularly the South East, water supplies are critically low due to the stresses of drought and population increase. One key solution is to use highly treated recycled water (Class A+, the highest class described in the Queensland Water Recycling Guidelines) to supply non-drinking water needs via a second system of pipework, also known as dual reticulation. In the most efficient dual reticulation system designs, fire flows are transferred from the drinking water pipe system to the recycled system. Recycled water would therefore be the only water available for firefighting.

Addressing Firefighter Concerns

The Queensland Fire and Rescue Service (QFRS) and the United Firefighters Union (UFU) expressed concerns about the possibility of health risks to firefighters if recycled water is used for firefighting. These concerns have focused on the risk of exposure to contaminants in recycled water through inhalation of aerosols, contact with skin, eyes or mucus membranes, and through wounds and burns. Treatment of burns victims was of particular concern to firefighters.

In response, the Queensland Department of Emergency Services convened a Steering Committee comprising representatives of the UFU, QFRS, Queensland Health, the Environmental Protection Agency and the Department of Natural Resources, Mines and Water to oversee a health risk assessment process to investigate the concerns of the Department and the UFU.

Conducting The Risk Assessment

The Steering Committee commissioned an independent health risk assessment by consulting firm GHD. This risk assessment looked at the risks that could arise from the use of Class A+ recycled water for firefighting. To accurately focus the risk assessment, the Steering Committee asked the Consultants to assess the water quality and management system at a particular recycled water treatment plant at Springfield, near Ipswich. GHD concluded that, with appropriate controls in place, Class A+ recycled water from a similar plant could be safely used for firefighting in Queensland. GHD also made recommendations regarding the management of treatment plants producing Class A+ recycled water and operational protocols for use of recycled water by firefighters.

Key Recommendations:

Recycled Water Management Plan (RWMP)

To ensure the consistent production and safe management of Class A+ recycled water for firefighting use, 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.

Developing Operational Protocols

In dual reticulation areas, firefighters will be provided with, and only drink, bottled potable water during firefighting operations. When available, only potable water should be supplied to decontamination showers. First aid drenching for burns and cleaning other wounds will be undertaken with potable water wherever reasonably possible. However, as the principal requirement is to cool the burn, if no potable water is available, Class A+ recycled water should be used. If recycled water is used, the burn should be washed later with drinking water and medical authorities advised that recycled water had been used in first aid. Drinking water for first aid burns treatment will be available from Flushing Points running parallel to recycled water supplies. Flushing Points will also provide potable water where decontamination showers are required. Firefighters will shower with potable water upon return to the station following firefighting with recycled water. Finally, training and education procedures will be developed to brief operational firefighters using Class A+ recycled water.

Additional Recommendations

Where new treatment plants are to commence supplying Class A+ recycled water for firefighting purposes these would be expected to be in compliance with the above recommendations and include mandatory validation, verification, water quality monitoring and audit procedures to ensure all controls are in place and working effectively. To ensure the recycled water provider is meeting their obligations as outlined in the RWMP, compliance with the RWMP should be independently verified through a third party audit. Also, the Queensland Government will maintain a watching brief over new research and technology developments including improved methods for detection and removal of possible contaminants in Class A+ recycled water.

In Conclusion

The Steering Committee has concluded that, provided the appropriate controls are implemented, Class A+ recycled water is safe for firefighting.

More information, including the full consultancy report is available on DESPORTAL.

Ian Mitchell
Assistant Commissioner
QFRS Brisbane Region
Chair

Queensland Government
Department of Emergency Services

Dealing Number

OFFICE USE ONLY

Privacy Statement
Collection of this information is authorised by the Land Title Act 1994 and the Land Act 1994 and is used to maintain the publicly searchable registers in the land registry. For more information about privacy in NR&W see the department's website.

1. Grantor | **Lodger** (Name, address, E-mail & phone number) | **Lodger Code**

2. Description of Easement/Lot on Plan | **County** | **Parish** | **Title Reference**

Servient Tenement (burdened land)
Easement

#Dominant Tenement (benefited land)

NOT APPLICABLE

not applicable if easement in gross

3. Interest being burdened
FEE SIMPLE

#4. Interest being benefited
FEE SIMPLE

not applicable if easement in gross

5. Grantee Given names | Surname/Company name and number | (include tenancy if more than one)

THE STATE OF QUEENSLAND REPRESENTED BY THE DEPARTMENT OF COMMUNITY SAFETY

6. Consideration
$1.00

7. Purpose of easement
FIRE PREVENTION, FIRE FIGHTING, EMERGENCY ACCESS & EVACUATION PURPOSES

8. Grant/Execution

The Grantor for the above consideration grants to the Grantee the easement over the servient tenement for the purpose stated in item 7 and the Grantor and Grantee covenant with each other in terms of:- *the attached schedule; *the attached schedule and document no. ; *document no.

* delete if not applicable

Witnessing officer must be aware of his/her obligations under section 162 of the Land Title Act 1994

.....signature

.....full name

.....Qualification

Witnessing Officer

/ /
Execution Date

.....
Grantor's Signature

(Witnessing officer must be in accordance with Schedule 1 of Land Title Act 1994 eg Legal Practitioner, JP, C Dec)

.....signature

.....full name

.....Qualification

Witnessing Officer

/ /
Execution Date

.....
Grantor's Signature

(Witnessing officer must be in accordance with Schedule 1 of Land Title Act 1994 eg Legal Practitioner, JP, C Dec)

.....signature

.....full name

.....qualification

Witnessing Officer

/ /
Execution Date

.....
Grantee's Signature

(Witnessing officer must be in accordance with Schedule 1 of Land Title Act 1994 eg Legal Practitioner, JP, C Dec)

Title Reference – To Issue

EASEMENT FOR ACCESS

1. **Definitions and Interpretation**

Definitions

1.1 The following words have these meanings in this easement unless the contrary intention appears.

(a) **Act** means *Fire and Rescue Service Act 1990*.

(b) **Grantee** means the person described in item 5 of the form 9 Easement and where the cont allows, includes the Grantee's tenants, employees, agents, licensees and invitees.

(c) **Grantor** means the person described in item 1 of the form 9 Easement and includes successi registered proprietors of the Servient Tenement from time to time and, where the context allov includes the Grantor's contractors, tenants, employees, agents, licensees and invitees.

(d) **Loss** includes claim, liability, damage, cost and expense.

(e) **Servient Tenement** means the land described as that in item 2 of the form 9 Easement, a each and every part of it (including any subdivided parts of it).

Interpretation

1.2 In this easement, unless the contrary intention appears:

(a) a reference to this easement or another instrument includes any variation or replacement either of them; and

(b) a reference to a statute, ordinance, code or other law includes regulations and other instrumen under it and consolidations, amendments, re-enactments or replacements of any of them; and

(c) the singular includes the plural and vice versa; and

(d) the word person includes a firm, a body corporate, an unincorporated association or an authorit and

(e) a reference to a person includes a reference to the person's executors, administrators, successor substitutes (including, but not limited to, persons taking by novation) and assigns; and

(f) an agreement, representation or warranty on the part of or in favour of two or more person binds or is for the benefit of them jointly and severally; and

(g) if a period of time is specified and dates from a given day or the day of an actor event, it is to b calculated exclusive of that day; and

(h) a reference to a day is to be interpreted as the period of time commencing at midnight an ending 24 hours later; and

(i) where the word "includes" or "including" appears, the words "without limitation" are taken t appear immediately after that word.

1.3 Headings are inserted for convenience and do not affect the interpretation of this easement.

2. **Grant of easement**

Easement for access

Title Reference – To Issue

2.1 The Grantor grants the Grantee non-exclusive pedestrian access and vehicular access to the Servient Tenement at all times and the right to use the Servient Tenement for purposes related to its functions under the Act.

Grantor's own use of Servient Tenement

2.2 The rights granted under this easement are subject to the right of the Grantor and other persons lawfully entitled to use the Servient Tenement from time to time, to use or continue to use the Servient Tenement for the purposes for which it is developed.

Grantee's obligation not to obstruct

2.3 Except in the case of emergency, the Grantee must take all reasonable steps not to obstruct the Servient Tenement in any manner that will prevent or unreasonably restrict the Grantor's use of the Servient Tenement or the Grantor's exercise of its rights under this easement, or the use or rights of any other person lawfully entitled to use the Servient Tenement.

Grantee's acknowledgement

2.4 The Grantee acknowledges that use of this easement this easement is not exclusive.

Grantor to comply with law

2.5 The Grantor must comply with all relevant laws.

3. **Easement to run with the land**

3.1 This easement is intended to run with the Servient Tenement and to:

(a) benefit and bind the Grantor and every successive registered proprietor of the Servient Tenement or any part of it; and

(b) benefit and bind the Grantee.

4. **Exercising rights**

Exercise of rights

4.1 The Grantee must ensure that, in exercising its rights under this easement, it does so in a way that causes as little disruption and inconvenience as reasonably possible to the use and occupation of the Servient Tenement by all people entitled to use and occupy the Servient Tenement.

5. **Maintenance**

5.1 The Grantor must maintain and repair the Servient Tenement in a good and safe condition.

6. **Purpose of easement rights**

6.1 In accordance with State Planning Policy 1/03, the purpose of this easement is to:

(a) provide adequate road access for fire fighting or other emergency vehicles; and

(b) safe evacuation routes in the event of an emergency.

ALTERNATIVE/ADDITIONAL CLAUSE:

(a) provide an adequate and accessible water supply for fire fighting purposes.

Title Reference – To Issue

7.2 The rights given under this easement do not affect any statutory protection from liability in relation to the exercise of those rights duties and functions.

7. **Notices**

7.1 A notice, approval, consent or other communication concerning this easement:

(a) may be given by a party or an authorised officer; and

(b) must be in writing; and

(c) must be left at the address of the addressee or sent by pre-paid ordinary post (air mail if posted to or from a place outside Australia) to the address of the addressee or sent by facsimile to the facsimile number of the addressee.

7.2 A notice, approval, consent or other communication takes effect from the time it is received, unless a later time is specified in it.

8. **Grantee may do anything Grantor should have done**

The Grantee may do anything that the Grantor should have done under this easement, but which the Grantor has not done or has not, in the Grantee's opinion, done properly. The Grantee may recover the cost of doing this from the Grantor as a liquidated debt, payable on demand.

First bushfire shutters pass full Flame Zone testing, Building Products Portal, Safety Products Directory, Architectural Products Por

First bushfire shutters pass full Flame Zone testing - PAARHAMMER WINDOWS

First bushfire shutters pass full Flame Zone testing

Provided By : PAARHAMMER WINDOWS

Paarhammer Sonnenschutz are the first and only company in Australia to manufacture shutters to the highest Bushfire Attack Level of Flame Zone BAL-FZ in accordance to the new AS 3959-2009.

Paarhammer are the first and only company in Australia to manufacture shutters to the highest Bushfire Attack Level of Flame Zone in accordance to the new AS 3959-2009.

These shutters have not only passed computer simulations, they have been through a vigorous real life fire test at extreme temperatures for a lengthy period of time. The testing was performed by NATA-accredited Exova Warrington Fire Testing Laboratories at Dandenong, Victoria.

Shutters have been a feature for centuries in countries around the Mediterranean with a similar climate to Australia. Now shutters not only provide shading and improve energy efficiency but also make building in bushfire prone areas possible and safe. They can be a decorative feature to any home, new or old, traditional or modern.

Paarhammer shutters are custom made as single, double or bi-fold with Colorbond or powdercoated finishes and their own frame as per the Australian Standard. Patent Pending.

These shutters come with all hinging and locking hardware and the frame can be fitted within the window reveal or surface mounted to the wall face.

While these shutters compliment Paarhammer bushfire windows and doors approved to BAL-40 perfectly, they are also available to be used in conjunction with other window brands and can be retro-fitted.

Manufactured in Victoria, Paarhammer's innovative products for BAL-29, BAL-40 and BAL-FZ are available Australia wide.

Independent comprehensive tests like these performed by a NATA-accredited facility allow building professionals and homeowners to choose appropriate products for buildings in bushfire prone areas.

For more information please contact Paarhammer on 03 5368 1999.

Tags: Windows, Doors, Sliding windows, Sliding doors, Energy rated windows, Bushfire Attack Level of Flame Zone, BAL-FZ

Features & Benefits

Xtreme® Windows & Doors Flame Zone

1 Bushfire Features
Xtreme® Flame Zone fully integrated System is a compact design that overcomes spacial and aesthetic restrictions other fire systems prescribe

2 It is a cost efficient solution.

3 Provides full Flame Zone protection requiring FZ rating.

4 Fully Compliant to AS3959-2009, and AS1530.8.2-(2007).

5 The system can easily be activated externally by fire fighting authorities.

6 Excellent radiant heat shielding properties.

7 Utilises standard toughened glass.

8 Unobtrusive design.

9 Easily maintained.

10 Light weight.

11 Energy Efficiency Options are available.

12 Xtreme® Flame Zone System is available in a wide range of window and door sizes, styles, colours and combinations.

13 Windows are available in Sliding, Casement, Awning and Fixed.

14 Doors are available in Sliding, Sliding Stacker, Hinged and Bifold.

15 Maximum width of Xtreme® Flame Zone Window System is 3000mm with height at 1500mm.

16 Maximum width of Xtreme® Flame Zone Door System is 2400mm with height at 2400mm.

17 Maximum Glass area is 2.4m².

18 Available in powdercoat finishes, woodgrain imaged or galvanised finish.

19 Stainless steel screens are fitted to all opening sashes as per AS3959, -2009.

Product Range

Xtreme® Windows

Available in Sliding, Casement, Awning and Fixed.

Windows are glazed with 5mm toughened glass or 5mm combinations in IGU's (Insulated Glass Unit).

Maximum height is 2400mm with width at 2400mm.

Maximum glass area is 2.4m².

Larger systems are available upon consultation with Trend ®Windows & Doors Xtreme® Specialists.

Xtreme® Doors

Available in Sliding, Sliding Stacker, Single or Double Hinged and Bifold Doors.

Doors are glazed with 6mm toughened glass or 6mm combinations in IGU's (Insulated Glass Unit).

Maximum height is 2400mm with width at 2400mm.

Maximum glass area is 2.4m².

Larger systems are available upon consultation with Trend ®Windows & Doors Xtreme® Specialists.

Please note that drawings are not to scale

Welcome to Miglas Australia

High Performance Double Glazed Windows & Doors - Melbourne

Always leaders, always different Miglas raises the industry bar again.

NEW BUSHFIRE WINDOWS & DOORS - Miglas Fireguard 40™

Miglas introduces the first and only NATA laboratory tested Bushfire window and door range up to and including BAL-40.

Call us today on **[03 9728 3999]** or **click here** for further information.

Miglas - Innovation beyond Double Glazing

Miglas provide the highest quality Australian-made and designed double glazed windows and doors. Miglas combines the advantages of both timber windows and aluminium windows to create a low maintenance, energy efficient and thermally stable window and door system. This unique double glazed window and door system provides comfort and protection in the harsh Australian climate all year round whilst allowing you full architectural freedom with a wide range of styles, sizes and colours.

Regulations for new construction in Bushfire prone areas require assessment for Bushfire attack levels (BAL). Call Miglas today for more information.

EXTERIOR

DURABLE EXTERIOR
- Weather resistant aluminium exterior
- Over 120 powder coat colours
- Low maintenance – free yourself from painting
- Full façade capability

INSULATING DOUBLE GLAZING
- Optimal thermal performance
- Reduced sound penetration
- All options to match your needs

SUPERIOR GASKETS & SEALS
- Double Sash Gaskets
- Minimal air leakage and thermal loss
- Latest Thermoplastic elastomer technology

RATINGS
- Bushfire Rated & compliant – Up to Bushfire Attack Level 40
- N6 Wind load Ratings

INTERIOR

SUSTAINABLE TIMBER
- Hardwoods low conductive properties assist in natural insulation
- Superior Australian Hardwood strength
- Suitable for all internal finishes to match interior décor

PREMIUM HARDWARE RANGE
- Truth® Hardware for window range
- Fully concealed multi-point sash locking system
- Fully concealed sash operator
- Large Sash size capabilities
- Wider opening, without a chain
- Foldable designer operation handle
- Automation options available
- Stainless options available

INSECT SCREENING
- All screening material options available
- Easy to remove & clean

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News

Residential Excellence - Miglas Windows & Doors contributes

Architect - Builder - Owner

Miglas provides what you need for your project

A guide to retrofit your home for better protection from a bushfire

Building and renovation ideas to better prepare your home in a bushfire situation.

Prepare. Act. Survive.

Use these building ideas as part of your overall bushfire survival plan.

CFA | PREPARE. ACT. SURVIVE. FireReady Victoria

Building Commission

Victoria We will rebuild


The FIRST system to pass
FASCIA, EAVES & ROOF
BAL-FZ ROOF SYSTEM Tested to AS 1530.8.2
"We don't aim to SCARE.
We aim to PROTECT"
Lightweight
Flexible
Affordable
For more information contact:
Trevor Kempster - National Sales Manager
Mobile: 0400 966 899 - Email: trevor@tbafirefly.com.au
or
visit - www.tbafirefly.com.au - today
FIREFLY
Firetherm
PASSIVE FIRE PROTECTION

Schedule 24 Clearing of native vegetation—not assessable development under schedule 3, part 1, table 4, item 1

schedule 3, part 1, table 4, item 1(e) and (f)

Part 1 Clearing and other activities or matters—general

1 Clearing and other activities or matters for land generally

(1) Clearing under a development approval for a material change of use or reconfiguring a lot, if the approval is given for a development application—

(a) for which the chief executive is a concurrence agency for clearing vegetation; or

(b) if a lot to which the application relates is less than 5ha—for which a local government is the assessment manager.

(2) Clearing an area of vegetation within a watercourse or lake for an activity (other than an activity relating to a material change of use of premises or the reconfiguring of a lot) if—

(a) the clearing is—

(i) subject to an approval process and is approved under the Act or another Act; or

(ii) a necessary and unavoidable consequence of an activity authorised by a permit issued under the *Water Act 2000*, section 269; or

(iii) a necessary and unavoidable consequence of an activity carried out under the document called 'Riverine Protection Permit Exemption Requirements' approved by the chief executive of

the department that administers the *Water Act 2000* and published on that department's website; and

(b) either—

(i) the clearing is under a self-assessable vegetation clearing code other than if the vegetation is in an area shown on the regulated vegetation management map or a PMAV as a category A area; or

(ii) the area is less than 0.5ha of a least concern regional ecosystem shown on the regulated vegetation management map or PMAV as a category B area; or

(iii) the area is less than 0.5ha shown on the regulated vegetation management map or PMAV as a category C, R or X area.

(3) Clearing vegetation in an area declared under the Vegetation Management Act, section 19F if the clearing is carried out—

(a) under the management plan for the area; and

(b) for 1 or both of the following purposes—

(i) a purpose mentioned in the Vegetation Management Act, section 22A(2)(b), (c), (f), (g), (h) or (j);

(ii) the purpose of establishing a necessary fence, firebreak, road or vehicular track and the clearing can not reasonably be avoided or minimised.

(4) Clearing vegetation—

(a) under a land management agreement for a lease under the *Land Act 1994*; and

(b) for 1 or more of the purposes mentioned in the Vegetation Management Act, section 22A(2)(b), (c), (d), (f), (g), (h) or (j).

(5) A traditional Aboriginal or Torres Strait Islander cultural activity, other than a commercial activity.

(6) A resource activity.

the department that administers the *Water Act 2000* and published on that department's website; and

(b) either—

(i) the clearing is under a self-assessable vegetation clearing code other than if the vegetation is in an area shown on the regulated vegetation management map or a PMAV as a category A area; or

(ii) the area is less than 0.5ha of a least concern regional ecosystem shown on the regulated vegetation management map or PMAV as a category B area; or

(iii) the area is less than 0.5ha shown on the regulated vegetation management map or PMAV as a category C, R or X area.

(3) Clearing vegetation in an area declared under the Vegetation Management Act, section 19F if the clearing is carried out—

(a) under the management plan for the area; and

(b) for 1 or both of the following purposes—

(i) a purpose mentioned in the Vegetation Management Act, section 22A(2)(b), (c), (f), (g), (h) or (j);

(ii) the purpose of establishing a necessary fence, firebreak, road or vehicular track and the clearing can not reasonably be avoided or minimised.

(4) Clearing vegetation—

(a) under a land management agreement for a lease under the *Land Act 1994*; and

(b) for 1 or more of the purposes mentioned in the Vegetation Management Act, section 22A(2)(b), (c), (d), (f), (g), (h) or (j).

(5) A traditional Aboriginal or Torres Strait Islander cultural activity, other than a commercial activity.

(6) A resource activity.

for accessing and extracting quarry material for road works under the *Transport Infrastructure Act 1994*.

(16) Clearing vegetation for community infrastructure mentioned in schedule 2.

(17) Clearing vegetation in an area for which a disaster situation declaration has been made if the clearing—

(a) is necessary to prevent or minimise—

(i) loss of human life, or illness or injury to humans; or

(ii) property loss or damage; or

(iii) damage to the environment; and

(b) happens during the period that started when the disaster situation declaration was made and ends on the later of the following days—

(i) the day that is 1 year after the day on which the disaster situation declaration was made; or

(ii) another day decided by the chief executive by written notice.

(18) Clearing vegetation that is necessary to carry out a cadastral survey of an existing property boundary, a geotechnical survey or a geological survey, if the area cleared is—

(a) for an area in which a survey is conducted—a maximum area of 10m by 10m; and

(b) for an area necessary for reasonable access to an area mentioned in paragraph (a)—a maximum of 10m wide.

(19) Clearing vegetation that is necessary to remediate contaminated land recorded in the environmental management register or contaminated land register.

(20) Clearing vegetation that is necessary to carry out activities authorised to be carried out at land on which an abandoned mine exists under the *Mineral Resources Act 1989*, section 344A.

(21) Clearing vegetation to which the Vegetation Management Act does not apply.

Part 2 Clearing for particular land

2 Freehold land

For freehold land, clearing vegetation that is—

(a) for a forest practice; or

(b) residential clearing; or

(c) necessary for essential management; or

(d) in an area shown on the regulated vegetation management map or a PMAV as a category X area; or

(e) for urban purposes in an urban area and the vegetation is—

(i) regulated regrowth vegetation; or

(ii) an of concern regional ecosystem or a least concern regional ecosystem shown on the regulated vegetation management map or a PMAV for the area as a category B area; or

(f) necessary for routine management in an area of the land and the vegetation is—

(i) regulated regrowth vegetation; or

(ii) a least concern regional ecosystem shown on the regulated vegetation management map or a PMAV as a category B area; or

(g) PDA-related development; or

(h) under a self-assessable vegetation clearing code other than if the vegetation is in an area shown on the regulated vegetation management map or a PMAV as a category A area; or

(i) for development—

(i) that is for an extractive industry under the Vegetation Management Act, section 22A(3) in a key resource area; and

(ii) to the extent it involves clearing regulated regrowth vegetation, other than in an area shown on the regulated vegetation management map or a PMAV as a category A area; or

(j) for development—

(i) that is a significant community project; and

(ii) to the extent it involves clearing regulated regrowth vegetation, other than in an area shown on the regulated vegetation management map or a PMAV as a category A area.

3 Indigenous land

For indigenous land, clearing vegetation that is—

(a) for a forest practice, other than on land on which the State owns the trees; or

(b) residential clearing; or

(c) necessary for essential management; or

(d) in an area shown on the regulated vegetation management map or a PMAV as a category X area; or

(e) for urban purposes in an urban area and the vegetation is—

(i) regulated regrowth vegetation; or

(ii) an of concern regional ecosystem or a least concern regional ecosystem shown on the regulated vegetation management map or a PMAV for the area as a category B area; or

(f) necessary for routine management in an area of the land and the vegetation is—

(i) regulated regrowth vegetation; or

(ii) a least concern regional ecosystem shown on the regulated vegetation management map or a PMAV as a category B area; or

(g) gathering, digging or removing forest products—

(ii) to the extent it involves clearing regulated regrowth vegetation, other than in an area shown on the regulated vegetation management map or a PMAV as a category A area; or

(j) for development—

(i) that is a significant community project; and

(ii) to the extent it involves clearing regulated regrowth vegetation, other than in an area shown on the regulated vegetation management map or a PMAV as a category A area.

3 Indigenous land

For indigenous land, clearing vegetation that is—

(a) for a forest practice, other than on land on which the State owns the trees; or

(b) residential clearing; or

(c) necessary for essential management; or

(d) in an area shown on the regulated vegetation management map or a PMAV as a category X area; or

(e) for urban purposes in an urban area and the vegetation is—

(i) regulated regrowth vegetation; or

(ii) an of concern regional ecosystem or a least concern regional ecosystem shown on the regulated vegetation management map or a PMAV for the area as a category B area; or

(f) necessary for routine management in an area of the land and the vegetation is—

(i) regulated regrowth vegetation; or

(ii) a least concern regional ecosystem shown on the regulated vegetation management map or a PMAV as a category B area; or

(g) gathering, digging or removing forest products—

(g) on land subject to a lease issued under the *Land Act 1994* for agriculture or grazing purposes to source construction timber to repair existing infrastructure on the land, if—

(i) the infrastructure is in need of immediate repair; and

(ii) the clearing does not cause land degradation as defined under the Vegetation Management Act; and

(iii) restoration of a similar type, and to the extent of the removed trees, is ensured; or

(h) by the owner on freehold land to source construction timber to maintain infrastructure on any land of the owner, if—

(i) the clearing does not cause land degradation as defined under the Vegetation Management Act; and

(ii) restoration of a similar type, and to the extent of the removed trees, is ensured.

excluded work—

1 *Excluded work*, for schedule 3, part 1, table 4, item 5, means maintenance work on a lawful work.

2 *Excluded work*, for schedule 3, part 1, table 4, item 5(a) also means carrying out alterations to existing lawful boat ramps, bridges, pontoons, slipways, wharves and jetties (the ***existing structures***) other than alterations—

(a) creating roofed structures, including sheds and gazebos; or

(b) that change the footprint of the existing structures; or

(c) to the dimensions or structural capacity of the existing structures; or

(d) that may affect safe navigable access to or from tidal water or to or from properties adjoining tidal

Vegetation management notification form for self-assessable codes

Important: It is the landholders' responsibility to provide the correct information to ensure notifications are valid

This form is required if you intend to clear regulated native vegetation represented on the Department of Natural Resources and Mines (DNRM) regulated vegetation management map under a self-assessable code or the Native Forest Practice Code. Please submit an online version of the form at www.dnrm.qld.gov.au or lodge this form at a DNRM business centre. A list of business centres is available at www.dnrm.qld.gov.au.

1. Owner details

All correspondence will be mailed to this address. The owner of the land can include a freehold owner, lease of an agricultural and grazing lease, a trustee on trust land, or the local government on a local government controlled road.

Name of owner giving notice:	
Preferred name:	
Phone number:	
Mobile phone:	
Fax number:	
Postal address:	
Local Government Area:	
Land tenure:	

Please supply Lot on Plan details for activities you wish to notify for under a self-assessable code.

Activities requiring Lot on Plan details only.

Activities requiring specific location information and, where required, exchange area details.

2. Remnant (Category B vegetation)

Purpose			Freehold	Leasehold *(See section 7.)*
Lot / Plan details Property details specific to each purpose				
Weeds				
Fodder				
Encroachment				
Native forest practice				
Property infrastructure Roads, tracks, fences, firebreaks, fire management lines, and pipelines				
Purpose	**GPS centroid** *(See section 5.)*	**Area (ha)**		
Thinning				
Property Infrastructure Built infrastructure – house, shed etc	**GPS:** **Activity:**			
High-value agriculture (HVA) (+ irrigated HVA) *For exchange areas (See section 6.)*	**Existing cropped area (ha)***		**Note: If an exchange area is required, please complete section 8.**	
	Exchange area? (Yes or No)	**Area (ha)**		

Footnote: * Total amount of cropped area on the **land** as at 2 December 2013.

Land is an area–

(a) consisting of a lot or lots that are owned by the same person or that have 1 or more common owners; or

(b) for an area mentioned in paragraph (a) that consists of more than 1 lot—are contiguous, other than for any road or watercourse between any of them.

3. Regrowth (Category C vegetation)

Purpose			Freehold	Leasehold *(See section 7.)*
Lot / Plan details Property details specific to each purpose				
Weeds				
Fodder				
Encroachment				
Public safety				
Environmental clearing				
Necessary infrastructure Roads, tracks, fences, firebreaks, fire management lines, and pipelines				
Purpose	**GPS centroid** *(See section 5.)*	**Area (ha)**		
Thinning				
High-value agriculture (HVA) (+ irrigated HVA) *For exchange areas (See section 6.)*	**Existing cropped area (ha)***		**Note: If an exchange area is required, please complete section 8.**	
	Exchange area? (Yes or No)	**Area (ha)**		
Necessary infrastructure Built infrastructure – house, shed etc.	**Yes/No:**			
	Activity:			
Extractive				

Footnote: * Total amount of cropped area on the **land** as at 2 December 2013.

Land is an area–

(a) consisting of a lot or lots that are owned by the same person or that have 1 or more common owners; or

(b) for an area mentioned in paragraph (a) that consists of more than 1 lot—are contiguous, other than for any road or watercourse between any of them.

3. Regrowth (Category C vegetation)

Purpose			Freehold	Leasehold *(See section 7.)*
Lot / Plan details Property details specific to each purpose				
Weeds				
Fodder				
Encroachment				
Public safety				
Environmental clearing				
Necessary infrastructure Roads, tracks, fences, firebreaks, fire management lines, and pipelines				
Purpose	**GPS centroid** *(See section 5.)*	**Area (ha)**		
Thinning				
High-value agriculture (HVA) **(+ irrigated HVA)** ***For exchange areas (See section 6.)***	**Existing cropped area (ha)***		**Note: If an exchange area is required, please complete section 8.**	
	Exchange area? (Yes or No)	**Area (ha)**		
Necessary infrastructure Built infrastructure – house, shed etc.	**Yes/No:**			
	Activity:			
Extractive				

Footnote: * Total amount of cropped area on the **land** as at 2 December 2013.

Land is an area–

(a) consisting of a lot or lots that are owned by the same person or that have 1 or more common owners; or

(b) for an area mentioned in paragraph (a) that consists of more than 1 lot—are contiguous, other than for any road or watercourse between any of them.

4. Regrowth (Category R vegetation)

Purpose			Freehold	Leasehold (See section 7.)
Lot / Plan details Property details specific to each purpose.				
Weeds				
Public safety				
General purpose				
Environmental clearing				
Property infrastructure Roads, tracks, fences, firebreaks, fire management lines, and pipelines				
Purpose	**GPS centroid** *(See section 6.)*	**Area (ha)**		
Thinning				
Property infrastructure Built infrastructure – house, shed etc.	**GPS:** **Activity:**			
Extractive				

5. GPS centroid details

For activities requiring GPS centroid details, please supply or attach either a GPS centroid coordinate, a map showing the boundary of the area to be cleared or provide a layer that can be used in a Geographic Information System.

6. Exchange area details

For activities requiring an exchange area, please provide sufficient information to allow DNRM to identify where on the property the exchange area will be (see section 8). Exchange areas may be a requirement of the code and they are explained in the relevant code.

Note: DNRM will make and provide free of charge a property map of assessable vegetation (PMAV) over the exchange area to ensure that the exchange area is protected from future impacts.

7. State commercial timber interests

Leasehold land

Before clearing vegetation on land that is not freehold, the state may have commercial timber interests.

If you are clearing sandalwood (*Santalum lanceolatum*), you will need to contact the Queensland Department of Agriculture, Fisheries and Forestry (DAFF Forest Products phone: 13 25 23) before clearing and comply with any written conditions or requirements regarding commercial timber.

If you are clearing vegetation in an area outside of the following shires, you will need to contact DAFF Forest Products before clearing and comply with any written conditions or requirements relating to commercial timber:

- Barcoo
- Boulia
- Bulloo
- Burke
- Cloncurry
- Diamantina
- Doomadgee
- Longreach
- McKinlay
- Mount Isa
- Quilpie
- Richmond
- Winton.

8. Exchange area

List the Lot on Plan for the location of each exchange area required to replace the cleared area.

Please supply the information listed in any of the options below to allow DNRM to identify the location and extent of the proposed exchange area/s. Indicate, by ticking one of the boxes below, how you have defined the location and extent of the area to be exchanged for each individual clearing purpose.

☐ **Option 1**—Supply sufficient GPS points using MGA94* coordinates and zone references to define the boundaries of the area and the total clearing area.

☐ **Option 2**—Supply a map showing:

(i) the boundary of the area to be cleared on the image base

(ii) five or more points visible in the image base

(iii) the MGA94* coordinates and zone references for each point

(iv) a description of the features that each point represents.

☐ **Option 3**—Provide a layer that can be used in a Geographic Information System, as described in the relevant code.

8.1 Consent to provide exchange area

The consent of all owners is required for land on which an exchange area is to be located. All owners must provide a signature. *If you require more space, please attach an additional page.*

Lot on Plan	Owners Name	Signature	Date

9. Information privacy statement

This information will be used in accordance with the DNRM *Information Privacy Plan* which can be found on the department's website at www.dnrm.qld.gov.au

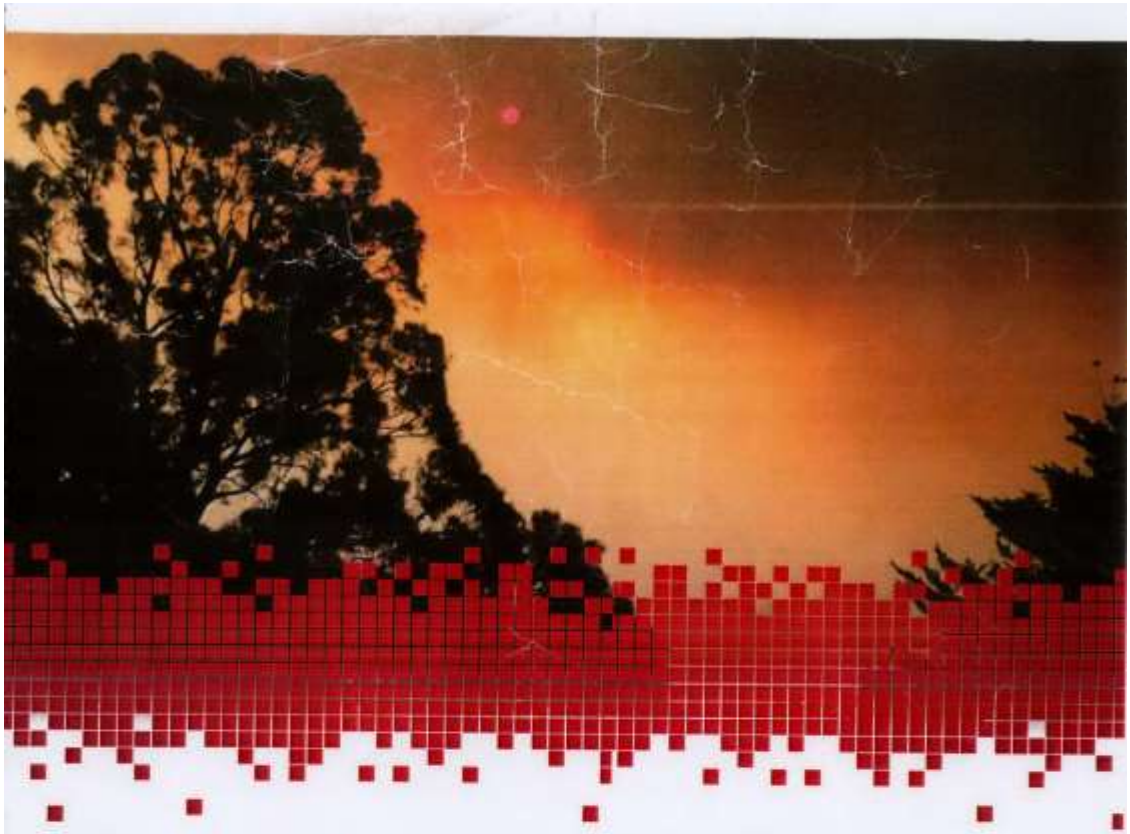
10. Signature

I hereby agree to the required outcomes and practices for all relevant vegetation clearing codes.

Signature _____ **Date** _____

Office use only

Date received	Receiving officer's name	Reference number/s
_____	_____	_____



Bushfire Planning and Design Certification Scheme update

FPA Australia is proud of the Bushfire Planning and Design (BPAD) Certification Scheme that has been of so much interest lately in the Industry. While the BPAD Certification Scheme has existed for many years as part of FPA Australia, it is only in the past 12 months that it has begun to gain momentum.

In November 2010, Planning NSW released a Fact Sheet (www.housingcode.planning.nsw.gov.au) that they entitled *Facilitating councils' assessing low risk and low impact development applications on bushfire prone land – s.79BA of the Environmental Planning and Assessment Act 1979.* In this Fact Sheet they announced that the Department was commencing an amendment to the Environmental Planning and Assessment Act 1979 (EP&A Act) allowing for Councils to have the option of undertaking the assessment of bushfire risk themselves or seeking assistance from a 'suitably recognised consultant'.

The amendment to the EP&A Act was gazetted in December 2010. The changes to the Act came into effect on the 25th February 2011, and provided for a 12 month transition period in which the RFS had time to work with the Councils to assist them to build the capacity to undertake the assessments, or identify recognised consultants.

The RFS have provided their own Fact Sheet (Fast Facts 5/10) (www.rfs.nsw.gov.au/file_system/attachments/State08/Attachment_20111031_642D90EE.pdf) to assist Councils in identifying 'recognised consultants'. The FPA Australia BPAD Certification Scheme is currently the only scheme recognised by the RFS as their preferred accreditation scheme for professionals in bush fire consultancy. Some Council's choose to do their own assessments however the vast majority of the NSW Councils will only use an FPA Australia BPAD Certified Practitioner to undertake the work.

BPAD Certified Practitioners are pre-eminent professionals who have obtained qualifications in designing for Bushfire Protection. They also hold corporate membership with FPA Australia, ensuring that they sign the FPA Australia Code of Practice and hold appropriate levels of insurance. Obtaining certification is not an easy thing to do. All our applicants must produce examples of their work for a range of situations, and be interviewed by a panel of expert peers from FPA Australia, Industry, RFS and the University of Western Sydney. Once certified, all BPAD professionals must undertake Continuing Professional Development to maintain their certification.

This change to the Act provided further recognition and credibility to the BPAD Certification program that was launched in NSW in 2002. It has also further allowed FPA Australia to demonstrate the merit of the certification program to other regulators around Australia. FPA Australia takes this opportunity to thank the professionalism of BPAD accredited practitioners and the contribution of the NSW Rural Fire Service and the University of Western Sydney in supporting the BPAD certification program.

Visit the FPA Australia website (www.fpaa.com.au) for further information on the BPAD Certification Scheme and for further information about becoming BPAD Certified email certification@fpaa.com.au or contact the Learning & Development team on 1300 731 922.

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For More Information, Please contact:
Eaves Head Office
13 Bode Court
WITHEREN QLD 4275
+61 433 581140
hello@eaveswatersystem.com.au

6.PROFILES

ELDON BOTTCHER

EDUCATION AND QUALIFICATIONS

Graduate Diploma in Design in Bushfire Prone Areas
University of Western Sydney

Diploma in Architecture
Queensland Institute of Technology

Certificate of Rural Fire Management
University of Southern Queensland

Registered Architect
Queensland

A+ Architect
Australian Institute of Architects

FPAA Certified Practitioner (BPAD-A-16935)
Bushfire Planning and Design (BPAD-A), Alternate Solutions & DTS

PROFESSIONAL MEMBERSHIPS

Fellow
Australian Institute of Architects

Member
Australian Institute of Emergency Services

Member
Australian Institute of Engineers Society of Fire Safety

Corporate Member
Fire Protection Association of Australia

Member
Urban Development Institute of Australia

Associate Member
Institution of Fire Engineers

PROFESSIONAL EXPERIENCE

Director
Eldon Bottcher Architect Pty Ltd since 1978

Bushfire Assessment and Planning Consultant since 1998

Group Officer
Albert Rural Fire Brigades Group
Queensland Fire and Rescue Service

Group Officer
Gold Coast Rural Fire Brigades Group
Queensland Fire and Rescue Service

Group Officer
South East Regional Support Group
Queensland Fire and Rescue Service

Planning Officer
Gold Coast Rural Fire Brigades Group
Queensland Fire and Rescue Service

Member Practice Committee AIA Qld Chapter

OTHER BUSHFIRE RELATED COURSES AND TRAINING

I.C.S./AIIMS (40 hr. course) in Incident Command Systems

Certificate 4 (Workplace Training and Assessment)

RFSQ Level 1

RFSQ Level 2 (Officer)

RFSQ Fire Management 1

RFSQ Crew Leader

BUSHFIRE RELATED AWARDS

National Planning Award
State Planning Award
Planning Institute of Australia
Gold Coast Bushfire Management Strategy
(Co-Initiator and Member of Preparation Committee)

Australian Government
National Medal
Long and Distinguished Service to Fire fighting

Queensland Fire and Recue Service
Diligent and Ethical Service Medal + Clasp
Service to Fire fighting

Queensland Government
Australia Day Medallion
Services to Rural Fire Fighting

Queensland Government
Year of the Volunteer Medallion
Services to Fire fighting

UDIA
Best Consultancy Team Award in 2007.

SERVICES OFFERED

Bushfire management Reports

Bushfire Safety Engineering

Bushfire Planning and Design

Bushfire Hazard Assessment

Alternative Solutions

Expert Witnessing
(See Planning and Environment Court of Queensland Determination
File No. BD 624 of 2005 sections 28 to 35)

Continuing Professional Development Lectures

Tertiary Education Lectures and Tutorials

Town Planning Bushfire Codes for Local Authorities

Bushfire Burn Planning

General consultancy relating to all aspects of Bushfire