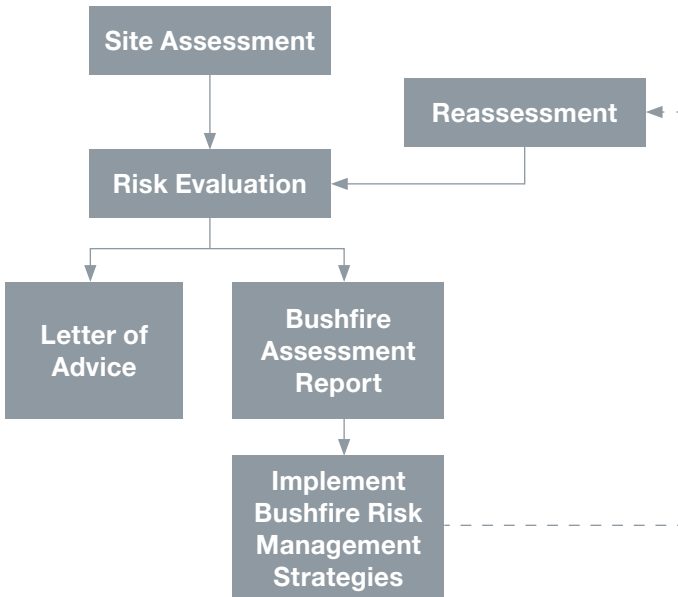






## Bushfire-Ready Schools Process



## Risk Mitigation and Management

A TFS Bushfire Assessment Report is developed for category 1, 2 and 3 sites. An official letter of advice is provided to category low sites. The bushfire assessment report provides details of the bushfire risk to the site and comprehensive recommendations regarding bushfire fuel management, emergency management planning, and building retrofits for bushfire protection (e.g. ember protection).

The degree of bushfire risk at the site, and the vulnerability of buildings to bushfire attack are clearly articulated within the report.

The bushfire assessment report forms the framework for ongoing bushfire risk mitigation activities, and informs emergency preparedness and response at the school site.

## Support

Throughout this process the bushfire assessor engages closely with school principals/management and education department management. The findings and recommendations of the bushfire assessment report are discussed and explained to these parties and ongoing technical advice and support is provided regarding bushfire risk mitigation measures and emergency management planning.

## Re-assessment

Following the implementation of key mitigation works; a site will be re-assessed, resulting in an upgraded Bushfire-Ready Schools category.

## Recognition

Schools that have participated in the Bushfire-Ready Schools initiative have the option of displaying the Bushfire-Ready Schools logo at their sites; thereby demonstrating to students, parents, staff and the community that the school has taken responsibility for bushfire safety at the site.



# PROGRAM OUTCOMES

The Bushfire-Ready Schools program is building community resilience to bushfire by taking a shared-responsibility approach to managing bushfire risk, by supporting schools with emergency management and bushfire preparation.

Key outcomes of the Bushfire-Ready Schools Program include:

- Schools are better informed of their bushfire risk, and better equipped to undertake risk mitigation activities; including building retrofits, landscape management, and emergency planning.
- Schools that are category 2 sites are supported in upgrading to category 1 status, thereby permitting students and staff to safely shelter on site during most bushfire emergencies.
- School children, staff and visitors are safer; and school buildings are more likely to withstand a bushfire.
- The financial, physical and social impact of a bushfire event on the school and wider community is lessened by the implementation of informed pre-planning and protection strategies.

# CATEGORIES

The *Bushfire-Ready Schools* category system is designed to inform both the site management and Tasmania Fire Service of the site's level of bushfire vulnerability and preparedness.

The *Bushfire-Ready Schools* category reflects the level of modelled radiant heat impact on school buildings, and will guide emergency management planning, bushfire protection measures, landscaping design, and hazard management area creation.

The following categories are used to define the level of bushfire preparedness of a school.



## CATEGORY LOW

### Description

**Buildings will be safe to shelter in during the passage of the main fire front.**

**Inherently bushfire safe due to separation distance from nearest bushfire hazard (classified vegetation).**

Bushfire Attack Level is Minimal:

- No measureable radiation impact on school buildings from the main fire front
- No measureable radiation impact on people out in the open within schools grounds
- < 0.1% chance of building ignition by embers

Category Low schools may become receiving stations for students relocated from other schools.

Firefighting resources are unlikely to be required onsite to assist with life and building protection.

Smoke and ash may affect Category Low schools.

### Criteria

Category Low schools have separation distances >400m from the bushfire hazard, as determined by the bushfire assessment officer.

### Recommendations

No dedicated bushfire safety requirements required, other than an emergency plan to respond to bushfire impacting other schools, and to hold students in place if their neighbourhood is threatened by bushfire.

Staff members should patrol the school for potential ignitions, as a precaution.

### Capital Works

No capital works recommended.

## CATEGORY 1

### Description

**Buildings will be safe to shelter in during the passage of the main fire front.**

Bushfire Attack Level is Low:

- Modelled radiation impact on school buildings from the main fire front <10 kW/m<sup>2</sup>
- < 15% chance of building ignition by embers

Fire fighting resources should be provided onsite to assist with life and building protection.

Embers, smoke and ash will impact Category 1 schools.

### Criteria

Category 1 schools have separation distances <400m from the bushfire hazard (classified vegetation), but generally no closer than the relevant distance specified in table one; unless otherwise determined by the bushfire assessment officer.

Table One:

Generalised Hazard Management Area Dimensions (set-back)			
Effective Slope	Classified Vegetation		
	Dense Forest	Light Forest or Scrub	Grass-land
High Slopes (10° - 18°)	139 m	108 m	75 m
Mid Slopes (0° - 10°)	107 m	81 m	43 m
Flat or Upslope (0°)	76 m	57 m	34 m

*measurements address radiant heat flux only.*

### Recommendations

An emergency plan should be developed to respond to bushfire impacting this school, and to hold students in place if the area is threatened by bushfire.

A landscaping and hazard maintenance plan should be developed to reduce potential ignition points on the exterior of buildings.

Retrofitting to ember-proof buildings should be a long term option.

Firefighting resources and school staff members should patrol the school buildings for potential ignitions, before and after the main fire front has passed.

### Capital Works

Buildings should be ember-proofed to reduce risk of ember ignition.

## CATEGORY 2

### Description

**Buildings may not be safe to shelter in during the passage of the main fire front.**

Bushfire Attack Level is Moderate – High:

- Modelled radiation impact on school buildings from the main fire front >10 kW/m<sup>2</sup>
- Radiation impact on people out in the open within school grounds may be untenable
- >15% chance of building ignition by embers

Firefighting resources should be provided onsite to assist with life and building protection.

Building protection may not be feasible, and may be high risk for firefighters.

Radiant heat, embers, smoke and ash will impact Category 2 schools.

### Criteria

Category 2 schools have separation distances <400m from the bushfire hazard (classified vegetation), and closer than the relevant distance specified in table one.

### Recommendations

Category 2 schools should have a landscaping and hazard maintenance plan developed to reduce potential ignition points on the exterior of buildings. Once the hazard management area is established, the school may be reassessed and upgraded to a Category 1 status.

Category 2 schools may be suitable to be retrofitted with ember proofing to improve building survivability.

An emergency plan should be developed to respond to bushfire impacting this school. This plan may include strategies for closing the school, or evacuation of students to other bushfire ready schools, evacuation centres, or nearby safer places.

Firefighting resources and staff members (if on-site) should patrol the school for potential ignitions, before and after the main fire front has passed.

### Capital Works

Buildings should be ember-proofed to reduce risk of ember ignition.

Fuel management works should be undertaken to create and maintain the hazard management area.

## CATEGORY 3

### Description

Inherently bushfire unsafe due to separation distance from nearest bushfire hazard, or other safety factors determined by Tasmania Fire Service.

Buildings may not be safe to shelter in during the passage of the main fire front.

Bushfire Attack Level is Moderate – High:

- Modelled radiation impact on school buildings from the main fire front  $>10 \text{ kW/m}^2$
- Radiation impact on people out in the open within school grounds may be untenable
- $>15\%$  chance of building ignition by embers

Firefighting resources should be provided onsite to assist with life and building protection.

Building protection may not be feasible, and may be high risk for firefighters.

Radiant heat, embers, smoke and ash will impact Category 3 schools.

### Criteria

Category 3 schools have separation distances  $<400\text{m}$  from the bushfire hazard (classified vegetation), and closer than the relevant distance specified in table one.

Category 3 schools will not be suitable for re-classification to Category 1 status due to factors such as:

- Creation and maintenance of a hazard management area, of requisite dimensions, is not feasible or practicable
- The siting, construction, access and/or some other factor is considered by Tasmania Fire Service to significantly and adversely impact on occupant safety, and is unlikely to be suitably ameliorated by prescribed mitigation works.



### Recommendations

Category 3 schools should have a landscaping and hazard maintenance plan developed to reduce potential ignition points on the exterior of buildings.

Category 3 schools may be suitable to be retrofitted with ember proofing to improve building survivability.

An emergency plan should be developed to respond to bushfire impacting this school, and to evacuate students if threatened by bushfire. This plan may include strategies for closing the school, or evacuation of students to other bushfire ready schools, evacuation centres, or nearby safer places.

Firefighting resources should patrol the school for potential ignitions, before and after the main fire front has passed.

### Capital Works

Buildings should be ember-proofed to reduce risk of ember ignition.

Fuel management works should be undertaken to maintain the hazard management area.

# DEFINITIONS

## **Bushfire:**

An unplanned fire burning in vegetation; also referred to as wildfire.

## **Bushfire Attack:**

Attack by burning embers, radiant heat or flame generated by bushfire, which might result in ignition and subsequent damage to or destruction of a building.

## **Bushfire Attack Level (BAL):**

A means of measuring the severity of a buildings potential exposure to ember attack, radiant heat and direct flame contact.

## **Bushfire protection measures**

Measures that may be used to reduce the intensity of bushfire attack and the threat to life and property in the event of bushfire.

## **Bushfire-prone area:**

An area that is subject to, or likely to be subject to, bushfire attack.

## **Bushfire-prone vegetation**

Contiguous vegetation including forest, moorland, grassland, and shrub-land but not including maintained lawns, parks and gardens, nature strips, plant nurseries, golf courses, vineyards, orchards or vegetation on land that is used for horticultural purposes.

## **Bushfire-Ready Schools category**

A means of measuring the severity of a building's potential exposure to radiant heat, expressed in kilowatts per metre squared, and is the basis for establishing the requirements of a hazard management area to improve building and occupant survivability.

## **Classified vegetation**

Vegetation that has been classified in accordance with Clause 2.2.3 of AS3959-2009, *Construction of Buildings in Bushfire Prone Areas*.

## **Effective slope**

The slope under the classified vegetation which most influences bushfire attack. Measured over a minimum of 100 metres.

## **Ember attack:**

Attack by smouldering or flaming windbourne debris that is capable of entering or accumulating around a building, and that may ignite the building or other combustible materials and debris.

## **Fire Danger Index (FDI)**

The chance of a fire starting, its rate of spread, its intensity and the difficulty of its suppression, according to various combinations of air temperature, relative humidity, wind speed and both the long- and short-term dryness conditions.

## **Hazard Management Area:**

An area of land around a building where vegetation is modified and managed to reduce the effects of flame contact and radiant heat associated with bushfire.

## **Separation distance:**

The straight line distance measured between the building envelope and the bushfire hazard.

For more information or to organise a bushfire assessment of your school please contact the Tasmania Fire Service.

**Free Call**

**1800 000 699**

**Email**

**[planning@fire.tas.gov.au](mailto:planning@fire.tas.gov.au)**



Tasmania Fire Service

**To report a fire, call triple zero '000'**