

Bushfire Hazard Management Plan and Evacuation Procedures

St Mary MacKillop College - Lot 5320 & 197
College Ave, West Busselton

24 January 2019
Prepared for:
St Mary MacKillop
College



Limitations Statement

This report has been solely prepared for St Mary Mackillop College. No express or implied warranties are made by Ecosystem Solutions Pty Ltd regarding the findings and data contained in this report. No new research or field studies were conducted other than those specifically outlined in this report. All of the information details included in this report are based upon the research provided and obtained at the time Ecosystem Solutions Pty Ltd conducted its analysis.

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STATEMENT OF CONFORMITY - PLANNING AND DEVELOPMENT ACT 2005



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The signatory declares that this Bushfire Management Plan meets the requirements of State Planning Policy 3.7.

Disclaimer

Notwithstanding the precautions adopted within this report, it should always be remembered that bushfire behaviour varies under a wide range of conditions. The measures outlined in this plan will reduce the risk of bushfire to people and property, however it cannot remove all risk. An element of risk, no matter how small, always remains. Although the procedures and standards used in this report are designed to improve the performance of buildings and structures in bushfire conditions, there can be no guarantee, due to the variable nature of bushfires, that any buildings will withstand a bushfire attack on every occasion.

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1 Introduction

St Mary Mackillop College is a Catholic co-educational school for Years Kindergarten to 12 located in Busselton in the South West of Western Australia. Busselton is 220 km south of Perth and has a population of approximately 37,500. St Mary Mackillop College was established in 2014 with the merger of two existing schools, St Joseph's School (est. 1922) and MacKillop Catholic College (est. 1994). The College has 1480 students (850 Secondary and 630 Primary) from Kindergarten to Year 12. There are approximately 185 staff within the College.

The College is within a Bushfire Prone Area (Figure 1), and as such is considered a vulnerable land use within an extreme bushfire risk area.



Figure 1 Map of Bushfire Prone Areas with St Mary Mackillop College, College Ave, West Busselton, within the blue polygon

This plan is designed specifically for St Mary MacKillop College and is designed to inform the staff and parents of the potential risk of bushfire within the school, outline measures to minimise that risk and to assist the principal and the staff for procedures and practices should a bushfire event occur within the vicinity of the school.

This document is prepared under the emergency management principles of PPRR:

- Prevention of;
- Preparedness for;
- Response to;
- Recovery from;

The PPRR approach is adopted by the Department of Education *Emergency and Critical Incident Management Policy* and is reinforced in the Departments' *Principal's Guide to Bushfire (2016)*.

1.1 Emergency Planning / Incident Management Team

An Emergency Planning Committee (EPC) is made up of representatives of the school community who are responsible for the planning and development of this plan and the implementation of this plan and procedures during a bushfire emergency.

The EPC is made up of the following members:

<i>Role</i>	<i>Name</i>
Principal	Frank Norton
Head of Senior School	Tony Papasergio
Head of Primary	Jo Paini
Head Groundsman	TBA
Business Manager	Rachel de Mamiel
Occupational Health and Safety Officer	TBA

Members will be added or substituted as deemed appropriate.

These members represent those in the school and neighbouring community with the skills and authority to develop and implement this plan.

The role of the planning committee is to:

- Establish emergency plans and procedures;
- Identify duties and responsibilities of positions;
- Formulate emergency procedures;
- Education and train staff (or arrange external training);
- Make all aware of the emergency procedures; and
- Conduct annual training of emergency procedures for review and modification (Back, 2011)

During an emergency, not all of the EPC members are likely to be on site. During an emergency, roles and responsibilities will be allocated as follows:

- Chief Warden - (Principal)¹
- Deputy Chief Wardens - (Head of Senior School & Head of Primary School)²
 - These people are responsible for coordinating the emergency procedures and management of students and staff pending instructions from the Department of Fire and Emergency Services or the WA Police.
 - Responsibilities include:
 - Managing and overseeing emergency procedures;
 - Accounting for all persons during an emergency;
 - Determining best action (Evacuate or Shelter in Place) in liaison with emergency services.
- Fire Wardens - all Teachers on site during emergency.
 - Wardens take directions from the Chief or Deputy Chief wardens during emergency
 - Responsibilities include;
 - Maintaining a calm atmosphere among students and parents / visitors;
 - Following established procedures;
 - Assisting with moving of students as determined by Chief Warden.

¹ Or an appropriate appointee if absent from the school

² Or an appropriate appointee if absent from the school

2 Bushfire Risk Management Plan

This Bushfire Risk Management Plan aims to minimise the risk of adverse impacts of bushfires on life, property and the environment, however, given the vulnerability of the students, the main focus of this plan is on life and property.

The objectives of this plan are to:

- Highlight the fire risk within the school grounds and the surrounding landscape;
- Outline the fire management methods and actions that will reduce the intensity and spread of bushfires in and around the school; and
- Reduce the school community's vulnerability to bushfire by improving its preparedness and understanding.

The plan also outlines elements of consultation, monitoring and review to ensure awareness is maintained and the efficiency of the risk minimisation is kept current.

2.1 Context and Scope

The Bushfire Risk Management Process used in this plan is based on the Australian Standard / New Zealand Standard ISO 31000 Risk Management and follows the procedures outlined in that standard as shown in Figure 2.

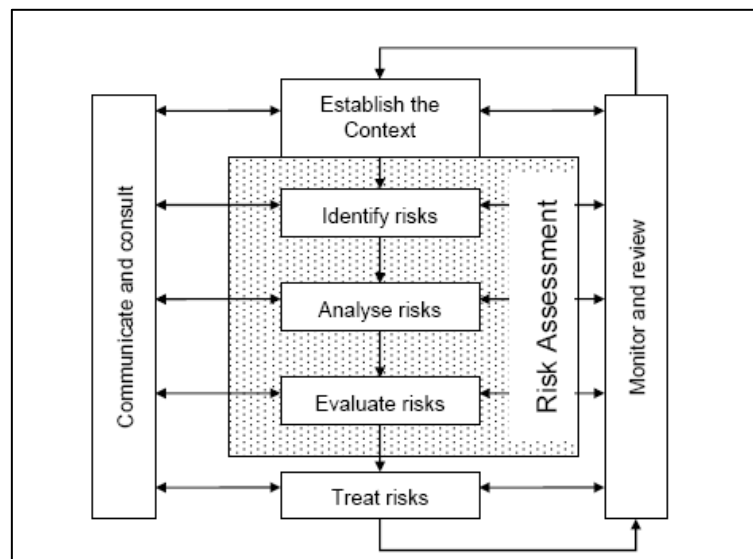


Figure 2 Emergency Risk Management Framework - Overview (ISO 31000)

This section identifies the issues, quantifies the hazard and establishes the scope of the management framework for bushfire hazards within the school grounds and within the overall landscape surrounding the school.

This assessment will address the risks from bushfire to the St Mary MacKillop College community. While the overall landscape contains the bushfire risk, the management actions and responsibilities are bounded by the actual grounds and buildings within the school. This included office buildings, classrooms, gymnasium, open common areas, ovals and sporting grounds, carparks and water tanks. This is shown in Figure 7 & Map 1.

This plan is designed for five years, from 2019 to 2024, however it is to be reviewed annually in August / September every year prior to the bushfire season to reflect and changes that may have taken place in:

- City of Busselton Bushfire Notices;
- State Planning or Emergency Services Legislation;
- Department of Education or other government policy;
- Catholic Education Board policy;
- New buildings or structures within the school; and
- Personnel within the site.

The direct responsibility for the implementation of this plan lies with the School Principal and the St Mary MacKillop College Board as the management authority of the school.

2.2 Bushfire Risks

The school itself sits on two lots, Lots 5320 & 197, which are approximately 4 m above sea level (AHD). The surrounding landscape is historically farming/grazing properties, however much of this area has now been developed into residential lots, which surround the east, south and west of the site. Directly to the north of the school is a Nature Reserve (Crown Reserve 48837). This area is made up of mixed *Melaleuca* and associated wet tolerant plant species. (Figure 3)



Figure 3 Scrub in Reserve 48837 to the north on the school

The patches of bushland to the east, south and west are both within the lot boundaries, and within road reserves. They are predominantly open woodland style vegetation, which includes revegetation areas, with cleared understory devoid of any native mid or ground level species (Figure 4).



Figure 4 Open Woodland vegetation typical of the areas to the east, south and west of the school.

Map 2 shows the dominant vegetation classes surrounding the school landscape.

The Woodland and Scrub areas would be considered a Moderate Fire Hazard under the Guidelines for Planning in Bushfire Prone Areas (WAPC, 2015), and the Grassland considered low. These are shown in Map 3.

The school has not been exposed to a bushfire event in its history.

A significant issue should the school become involved in a bushfire, is that bushland surrounding the school also borders the main access in and out of the school grounds. Any fire event on or near the road will effectively restrict any evacuation of students from the school. Therefore, early evacuation is required rather than a sit and wait process.

Bushfire behaviour is significantly affected by weather conditions. They will burn more aggressively when high temperatures combine with low humidity and strong winds. Generally, the greatest fire risk occurs from summer through to autumn, when the moisture levels in the soil and vegetation are low.

The Site is located within the southern area of South-West Western Australia which experiences hot dry summers and cool wet winters (commonly called a Mediterranean Climate). Data from the Bureau of Meteorology at Busselton Regional Airport (Approximately 11 km south east of the Site) confirms that the area experiences hot dry summers with an average December to February temperature of 28-30°C with 12-15 mm of rain per month over summer. Winters are cooler with a mean maximum temperature through June, July and August of 18°C and an average July rainfall of 130 mm (Figure 5 - BOM, Accessed January 2019)

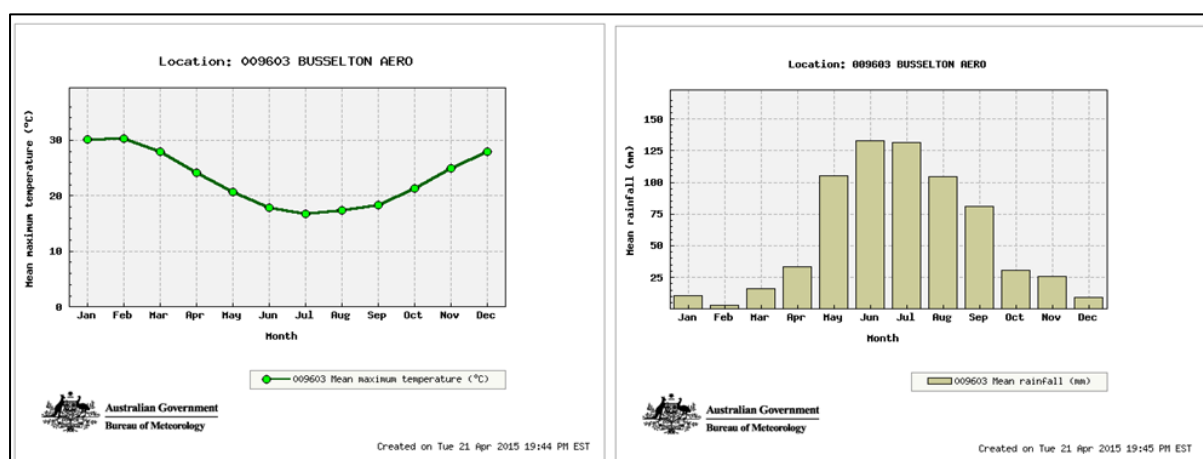


Figure 5 Mean Maximum recorded temperatures and Monthly rainfall for Busselton

The 3pm December and January wind rose for Busselton Airport show that the afternoon sea breeze from the south dominates 30-40% of the time at between 30 and 40 km/h. This decreases in February to just under 30% of the time, though the wind also comes from the NW ~20% of the time at between 20-30 km/h (Figure 6).

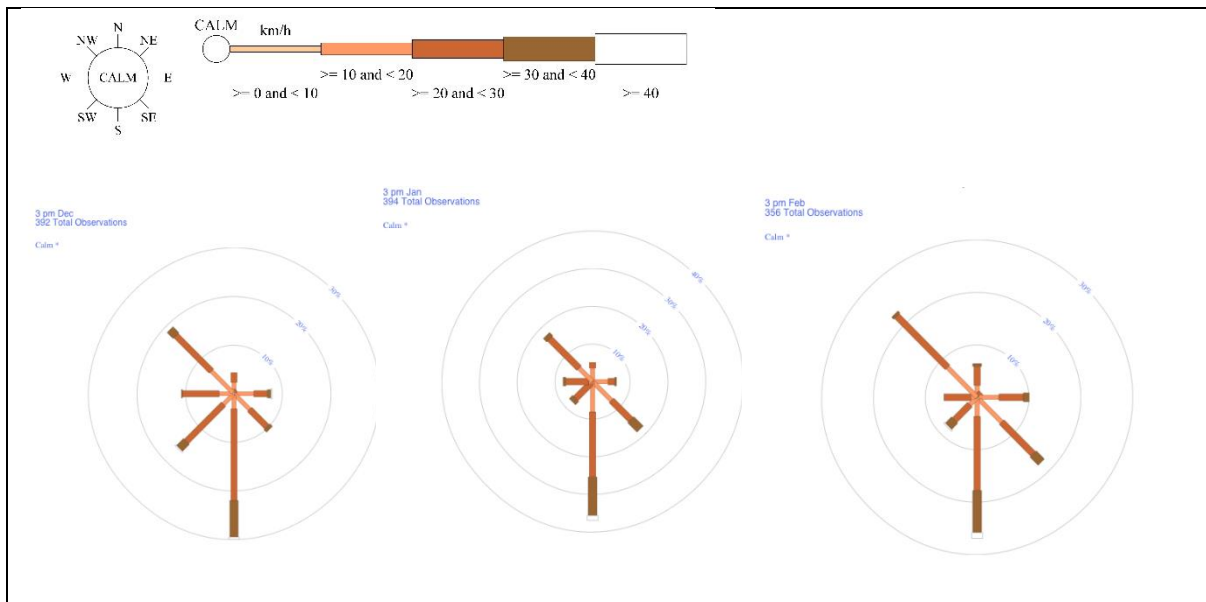


Figure 6 Wind Rose for Busselton in Km/h for December, January and February

While the combination of hot dry summers and prevailing winds poses a fire risk, the presence of a large area of native vegetation to the north and smaller areas to the east, south and west of the site poses some risk of ember attack on the School, particularly those to the south given the predominant southerly wind one summer afternoons. While the grassland area abutting the drain to the south, and the school oval, are considered to be managed grassland if they are kept under 100 mm in height, these will still burn and support spot fires which can impact on the assets in the school.

The amount of heat generated in a bushfire can be approximately modelled. Using the models described in AS 3959-2009 Construction of Buildings in Bushfire Prone Areas (Standards Australia, 2009), the amount of potential radiant heat is based on the type of vegetation, the slope under that vegetation in relation to the 'viewer' or building, and the distance between the fire hazard and the 'viewer'.

The bush to the north of the school at its closest point to the school buildings is 46 m, and with it being considered scrub and upslope/flat, the potential radiant heat based on the models would be approximately 6.5 kW/m². The Woodland to the east is upslope/flat and 10 m from the closest wall in the school, this results in a radiant heat potential of 33 kW/m². The Woodland to the south is considered upslope/flat and 36 m from the closest wall in the school, resulting in a potential radiant heat of 9.5kW/m² and the Woodland to the west of the school is 10 m from the closest school wall, resulting in a potential radiant heat of 40 kW/m². This is presented in Map 4. Appendix A outlines what these exposures mean.

This example has excluded the potential heat generated from the grasslands surrounding the school as they will be maintained in a low fuel state (under 100 mm in length over the fire season) and as such the radiant heat produced is minimal.

Note that this is a prediction based on probability and fire behaviour and is a direct line of heat exposure and does not take into account the sheltering effect that the buildings themselves which would offer shelter should the need occur somewhere within the middle of the school (for example the Gymnasium). This heat exposure would be significantly reduced.

While radiant heat sheltering can occur within the school, the majority of fires in structures will occur due to embers from the fire smouldering and igniting flammable objects. This is addressed in this plan.

2.3 Risk Analysis & Evaluation

Risk is a product of the consequences and likelihood of an event occurring. Predicted consequences and likelihood of risk should be estimated based on the hazard, the vulnerability and the cause of the risk (Douglas, 2016). A qualitative approach can be used to determine likelihood and consequence. These can then be used to provide an overall risk rating for each of the elements of risk.

Douglas (2016) provides tables for this approach, which are used in this analysis. They are shown in Tables 1, 2 & 3 below.

Table 1 *Likelihood Ratings for Risk Analysis (Douglas, 2016)*

Likelihood Rating	
Descriptor	Comment
Almost Certain	<ul style="list-style-type: none"> • Event is expected to occur in most circumstances (every year) • High level of known incidents (records/experience) • Strong likelihood of re-occurring, with high means to occur
Likely	<ul style="list-style-type: none"> • The event will probably occur in most circumstances (2-5 years) • Regular incidents known • Considerable opportunity and means to occur
Possible	<ul style="list-style-type: none"> • The event would occur at some time (5-10 years) • Few, infrequent, random occurrences • Some opportunity and means to occur
Unlikely	<ul style="list-style-type: none"> • The event could occur at some time (>10 years) • No known incidents recorded or experienced • Little opportunity and means or reason to occur
Rare	<ul style="list-style-type: none"> • The event may only occur in exceptional circumstances (>30 years) • Unheard of • Almost no opportunity to occur

Table 2 *Consequence Rating for Risk Analysis (Douglas, 2016)*

Consequence Rating	
Descriptor	Comment
Very Low	<ul style="list-style-type: none"> • No injury or fatalities, little or no personal support required • Inconsequential or no physical damage, short duration • Little or no disruption to the community • Little or no financial loss
Low	<ul style="list-style-type: none"> • Minor injuries, no fatalities, first aid treatment required • Some physical damage • Some community disruption for less than 24 hours • Some financial loss
Medium	<ul style="list-style-type: none"> • Medical treatment, no fatalities • Localised physical damage which is rectified routinely • Normal community functioning with some inconvenience 24 to 48 hours • Major financial loss - assistance required • Attracts media attention
High	<ul style="list-style-type: none"> • Extensive injuries, hospitalisation, possible fatalities, long term disabilities • Significant physical damage - requires external assistance • General widespread community impact on functioning • Major financial loss, can only continue with substantial and ongoing financial assistance • Media concern
Catastrophic	<ul style="list-style-type: none"> • Many injuries, fatalities and widespread medical attention required • Extensive physical damage requiring extended external assistance • Community impact severe and lasting, not functioning without support • Huge financial loss • Media outrage

Table 3 Risk Rating Matrix for determining levels

Risk Rating Matrix					
Likelihood	Consequence				
	<i>Catastrophic</i>	<i>High</i>	<i>Medium</i>	<i>Low</i>	<i>Very Low</i>
Almost Certain	Extreme	Extreme	Major	Moderate	Minor
Likely	Extreme	Major	Moderate	Moderate	Minor
Possible	Extreme	Major	Moderate	Minor	Insignificant
Unlikely	Major	Moderate	Moderate	Minor	Insignificant
Rare	Major	Moderate	Minor	Insignificant	Insignificant

In assessing the risk to the school, the vulnerability of the school community needs to be acknowledged as highly vulnerable.

The following table (Table 4) is a register of the potential risk that could occur with a bushfire exposure to the school.

Table 4 Risk Register

Risk Element	Hazard	Consequence	Likelihood	Assessed Risk
Loss of Buildings	High	High	Possible	Major
Loss of Life	High	Catastrophic	Possible	Extreme
Injury (including smoke)	High	Medium	Possible	Moderate
Isolated (road closure by fire)	High	Low	Possible	Minor

Using this process, the assessed risks determines the following elements in decreasing priority:

- Loss of Life
- Loss of buildings
- Injury (Including smoke inhalation)
- Isolation

2.4 Risk Treatment Options

The purpose of treating risks is to reduce their likelihood and harmful consequences, though a process of selecting and implementation risk treatment options that modify the characteristics of the hazard (Douglas, 2016).

Many of the specific strategies to minimise the risks to the school assets overlap and will be considered under specific strategic actions / treatments/ These are outlined in Table 5.

Table 5 Risk Treatment Options

Strategy	Task	Actions	Responsibility
Ignition Management	Limit, restrict or manage access to potential areas of ignition	• Install fence around school grounds and keep locked out of hours	School Board
		• Restrict access to bushland areas within school on high fire danger days	Principal & Teachers
		• No use of machinery on oval on harvest ban periods or extreme fire danger days	Principal
Hazard Reduction	Ensure Fuel Loads are maintained to low levels over summer fire period	• Maintain oval grasses under 100 mm from Nov - March	Groundskeeper
		• Clear out fallen leaves and branches in bushland within the site over fire season	Groundskeeper
		• Implement hazard reduction program every 5 years in school bushland	Principal & Groundskeeper
Education	Conduct School Education programme for bushfire awareness	• Develop bushfire education programme as part of the curriculum	Principal & Teachers
		• Arrange visit from local Fire Brigades	Principal

	Conduct drills for bushfire emergencies	<ul style="list-style-type: none"> Conduct annual drills for bushfire evacuation processes Conduct regular training for fire wardens on hose reels and extinguisher use 	Principal
Preparedness	Ensure processes and procedures are documented and known by all staff, including any relief teachers.	Annually review Bushfire Management Plan and update as needed	Principal & Assistant Principal
		Update contacts list for key personnel (Fire Brigades, Control Offices etc.)	Principal & Assistant Principal
		Ensure Evacuation alerts and plan is known by all staff and students	Principal
		Ensure access and egress ways are maintained during summer	Principal & Groundskeeper
	Ensure suppression equipment is working and staff are skilled in their use	Ensure hydrants, hose reels and extinguishers are working by annual inspection and testing	Principal & External Contractor
		Conduct regular training on hose reels and extinguishers	Principal & Fire and Rescue or External Contractor

2.5 Monitoring and Review

For the Bushfire Risk Management Plan to maintain its relevance, this document should be reviewed annually. This will ensure that the plan remains current in the protection of the school community and its assets.

A register of actions based on Table 5 about should be maintained by the school and information noted as each action is completed or conducted.

This will form the basis of the review to be conducted in Term 3 (August or September) every year prior to the fire season.

Elements that need to be considered in the review include:

- What has changed in the overall context of the Plan?
 - New Legislation
 - New policy
 - New responsibilities
 - New economic circumstances (grants? Loans?)
 - New Building/Staff
- What has changed in the hazard assessment?
 - Has land use changed nearby?
 - Have fuel reduction burns been conducted recently?
 - Has there been any clearing nearby or intensification due to revegetation?
- Emergency Management
 - Who are the key contacts for the brigades and local government fire officers?
 - Have the resources of the stations or locality changed (permanent fire station officers for example?)
 - Is there sufficient extinguishers and hose reels?
 - What was the outcome of the previous training exercises, what are the deficiencies, where should the priorities focus this year?
- Experience from any events
 - What were the lessons learnt from any incidents or comparable issues that occurred in the year? Were the estimates of risk, consequence and likelihood correct?

2.6 Consultation and Communication

Consultation and communication are key elements within the plan. The risk, likelihood and consequences need to be understood by the school community and those key stakeholders involved in assisting to minimise the risks.

Constant communication should continue with the emergency services officers throughout the year.

Two workshops should be facilitated, in Term 3, prior to the fire season to review the elements of the plan and to obtain endorsement (buy in) from the school community.

The first workshop should be targeted at the school board and teachers within the school, ideally at a designated Professional Development Day. This audience has a direct management responsibility to the students and overall implementation of the management plan. This review should be conducted for all the elements of the plan as mentioned in section 5 above.

The second workshop is more of an information session, providing the school community (students and parents) with the outcomes of the initial workshop and provide input from them into the new iteration plan.

The plan itself should be made available though the school website during Term 3, the school newsletter should highlight key elements of the plan on a weekly basis to keep the risk of bushfire in the forefront of the staff, students and parents minds. This will also reassure them that the school is up to date and has measures in place should a bushfire eventuate.

Each variation to the plan should be versioned, dated and signed off by the Principal and the School Board.

3 Emergency Evacuation Plan

This Bushfire Emergency Evacuation Plan outlines the potential issues that will arise in a bushfire event and specify the most appropriate emergency actions to take to minimise the potential risk to both students and staff and the built assets of the school.

3.1 Bushfire Emergency Situation

This school is open from 8.30 am to 3.30 pm weekdays, though some community and sporting events occur in the school grounds out of these hours. The students from in age from 4 to 18 and there are currently 1480 students enrolled. There are approximately 185 teachers and staff within the school, which equates to a staff to student ratio of 8 students per staff member. The layout of the school is shown in Figure 7.

Some students will have allergy or asthma issues and the school also has students with physical and mental disabilities.

The school grounds are well managed in a low fuel state, especially over the summer period. The Asset Protection Zone around the school is well maintained, however, the proximity of the woodland to the east, south and west means that these components could be potentially exposed to radiant heat of 40kW/m². The school buildings are constructed of brick walls and colour bond roof over steel trusses, which will provide some shielding from the radiant heat.

The gymnasium in the centre of the school (Figure 7) has been designated as the Emergency Assembly Point. This area would be shielded from radiant heat from any fire and would have minimal impact from any low-level grass fire on the oval. Note that smoke and embers would still impact on the school depending on wind and other variables.

The school has a number of hydrants in ready access from fire appliances as well as fire hose reels in numerous locations (Figure 7).

The school is 4km south west of the Busselton Fire Station, which houses the Busselton Fire and Rescue Brigade which maintains a light tanker/fast attacked vehicle and two fire appliances (a Country Pump and a 3.4 Urban tanker).

It would be anticipated that fire fighters would be on the site within 15 minutes of any emergency call. This, however, cannot be guaranteed as these are volunteer units and may be engaged on other events prior to the school being involved, although a fire near the school would be prioritised if possible.

3.2 Decision / Primary Actions

Given the vulnerable nature of the school and the age of the students, the primary action, should a bushfire event occur within the direct vicinity of the school, would be to **Evacuate** (i.e moving the students and staff away from the possible effects of a bushfire). This would require prior knowledge of the fire event and considerable logistics to arrange. This is discussed in more detail below.

Should a bushfire emergency occur where evacuation was not possible due to the proximity of the fire event or road blockages, a secondary / back up plan for **Shelter in Place** will be enacted. This is the process of moving students and teachers into a place at the site which is away from the most serious effects of the bushfire.

3.3 Emergency Procedures

There are a number of triggers that will initiate the enactment of the stages in the Emergency Plan (Flowchart 1)

1. Given that the site is vulnerable, with children from 4 years old, with potential disabilities, within a moderate to extreme bushfire risk area and with limited access/egress routes, the school should be closed on days of Catastrophic Fire Danger Index. This information can be obtained from the Emergency WA website (www.emergency.wa.gov.au) in the Warnings and Incidents tab. In most situations, this will be known at approximately 4.30 pm the day before. This allows time for the Principal to implement the closure. If this occurs, the Principal is to follow the Communication Plan to advise parents and staff (through the SEQTA system) and is to cancel bus services. The Principal, Head of Secondary and Head of Primary (minimum of two people) will remain in the car park until 9.00 am of that day and advise and parents and students that could not be contacted that the school is closed. A Closure Alert Notice (Appendix B) should be placed at all entries to the school when the Principal leaves.
2. If advised by DFES that a bushfire is within 5 kms or 5 hours away on an Extreme or Catastrophic (unplanned) Fire Danger Index day, then the evacuation procedures should be enacted. The Catholic Education Western Australia (CEWA) will also be advised by the principal.
3. If the school is advised that a bushfire is in the area but not threatening life or property (An ADVICE Warning), smoke may be an issue and all evaporative air conditioners should be turned off and liaison with the Area Officer of DFES (refer to contact sheet) maintained to keep informed on the status of the bushfire.

4. If the warning is increased to WATCH AND ACT, the principal should instigate evacuation procedures as this indicated the fire conditions are changing and there is a possible threat to lives or the school. In this case, it is prudent to evacuate if possible, under advisement from emergency services.
5. If an EMERGENCY WARNING message is given, the Principal will liaise with DFES to ensure that evacuation is possible, if so, then proceed with evacuation actions. If advised that evacuation is not possible then the Shelter In Place actions should be implemented.
6. If a bushfire is directly threatening the school, the Principal will notify emergency services through 000 if an emergency or through DFES if not and take directions based on their advice.

These procedures are shown in Flowchart 1.

The following procedures outline the steps in the event of a bushfire emergency and are also shown in Flowchart 2.

1. If advised of a bushfire event that triggers an evacuation event, this plan is invoked.
2. The Principal / Chief Warden will advise classes through PA or through individual notification of the class directly.
3. The Chief Warden will maintain contact with DFES or emergency services (including calling 000 if required).
4. Teachers are to account for each child, visitor or education assistant present and identify any with known respiratory conditions.
5. All windows and doors are to be closed in each classroom and all air conditioners turned off.
6. Teachers are to keep class group together, bring water bottles if readily accessible, collect the day's attendance record and calmly evacuate the classroom to the gymnasium as indicated in Figure 7 through the shortest possible route.
7. The Principal will instigate the communication plan if evacuation is possible which will include the use of SEQTA to notify parents that the school will be closed and for them to come and collect their child/children.
8. The Head of Secondary, Head of Primary and the office support staff are to liaise directly with parents where possible.
9. The Head of Secondary will notify bus contractors to immediately come to pick up students where possible.
10. All rooms are to be checked by Principal, Head of Secondary and Head of Primary prior to meeting in the gymnasium.

11. The Principal will be in the assembly area and will explain to the teachers / wardens of the situation.
12. The Chief Warden will remain in direct contact with DFES of the situation.
13. Teachers will keep records of each student as parents collect them. Staff may be required to man the carparks to direct traffic smoothly and keep parents calm.
14. If any students remain and it is advised by DFES that the window for safe evacuation is limited, those with respiratory conditions or disabilities should be transported into town by the school bus or private vehicle, depending upon numbers.

If Shelter in Place needs to be enacted (Flowchart 3):

1. If advised of a bushfire event that triggers a Shelter in Place, this plan is invoked
2. The Principal / Chief Warden will advise classes through PA or through individual notification of the class directly.
3. The Chief Warden will maintain contact with DFES or emergency services (including calling 000 if required).
4. Teachers are to account for each child, visitor or education assistant present and identify any with known respiratory conditions.
5. All windows and doors are to be closed in each classroom and all air conditioners turned off.
6. Teachers are to keep class group together, bring water bottles if readily accessible, collect the day's attendance record and calmly evacuate the classroom to the gymnasium as indicated in Figure 7 through the shortest possible route.
7. The Principal will instigate the communication plan for Shelter in Place which will include the use of SEQTA to notify parents that there is a Bushfire Emergency and that they are unable to evacuate, and that parents should NOT try to collect their child/children.
8. The Deputy Wardens should conduct a final check of the school for any staff or students and ensure that windows and doors are shut, and air conditioners are switched off.
9. All doors and windows to the gymnasium should be closed.
10. The hose reels within the gymnasium should be rolled out and charged (i.e filled with water ready to be used).
11. Students and Staff should sit on the ground and remain calm.
12. The Chief Warden will take directions from DFES.

These procedures are shown in Flowcharts 2 & 3.

College Map

St Mary MacKillop College
College Avenue, West Busseton, WA 6280



Figure 7 Location of the fire reels, fire hoses, and the emergency assembly point

3.4 Training / Communication / Engagement

All teachers and staff involved as wardens will be trained on the procedures within this plan. This includes annual training on:

- Evacuation and Shelter In Place Procedures;
- Use of fire extinguishers; and
- Use of fire hose reels.

This will be conducted in conjunction with the Busselton Fire and Rescue Services or through a private training provider.

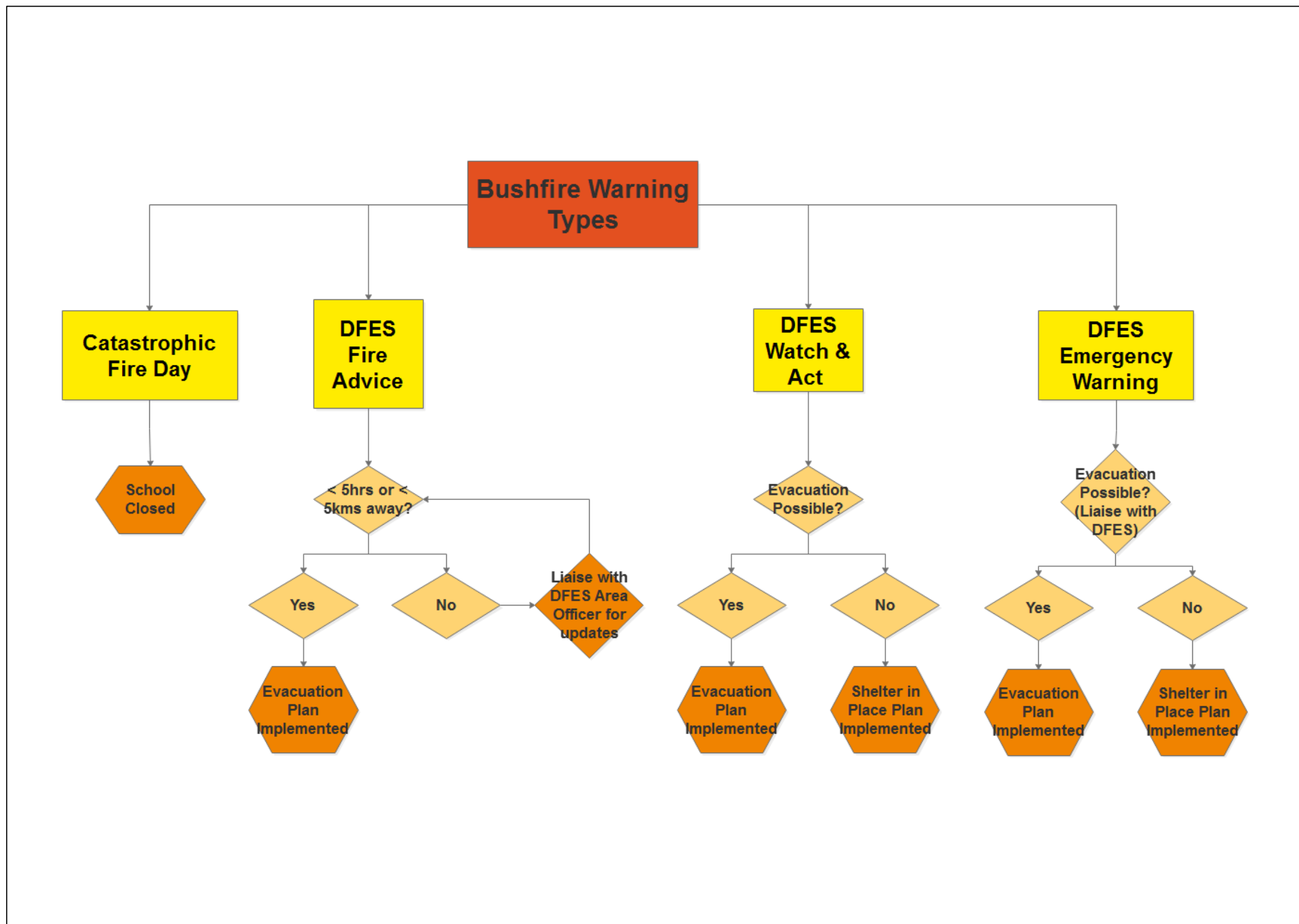
A drill of these procedures will be conducted, at least annually, prior to the fire season (November) each year.

A communication plan will be prepared outlining the pathway of communications for a bushfire emergency, this will highlight the procedures required for the Principal / Chief Warden to advise the parents/carers, bus contractors, emergency services, the Education Department, the Catholic Education Office and adjoining schools. A list on contacts is included in Appendix A.

Each winter, the contents of this plan will be reviewed by the EMC and any amendments discussed and implemented. Any events during the year where the plan was invoked, will be analysed and discussed. Shortcomings will be addressed, and the plan updated as required.

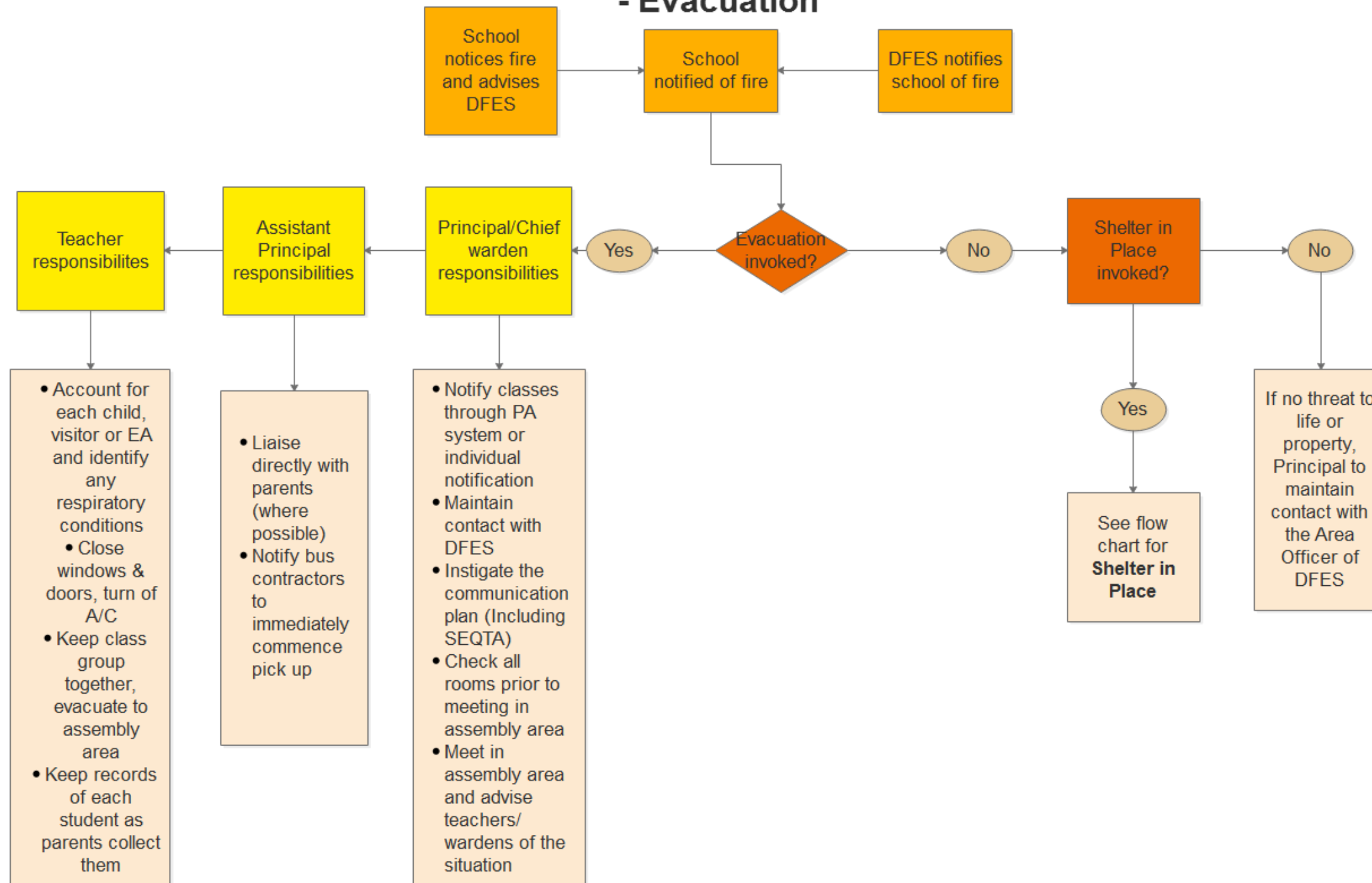
All parents of the school will be advised of the contents of this emergency plan. A briefing session will be conducted each year in Term 3, for the school community to review and discuss the actions outlined in this plan. This provides an opportunity for the school community to understand and learn both the risks and actions to minimise the impact on the school and its students.

4 Flowcharts



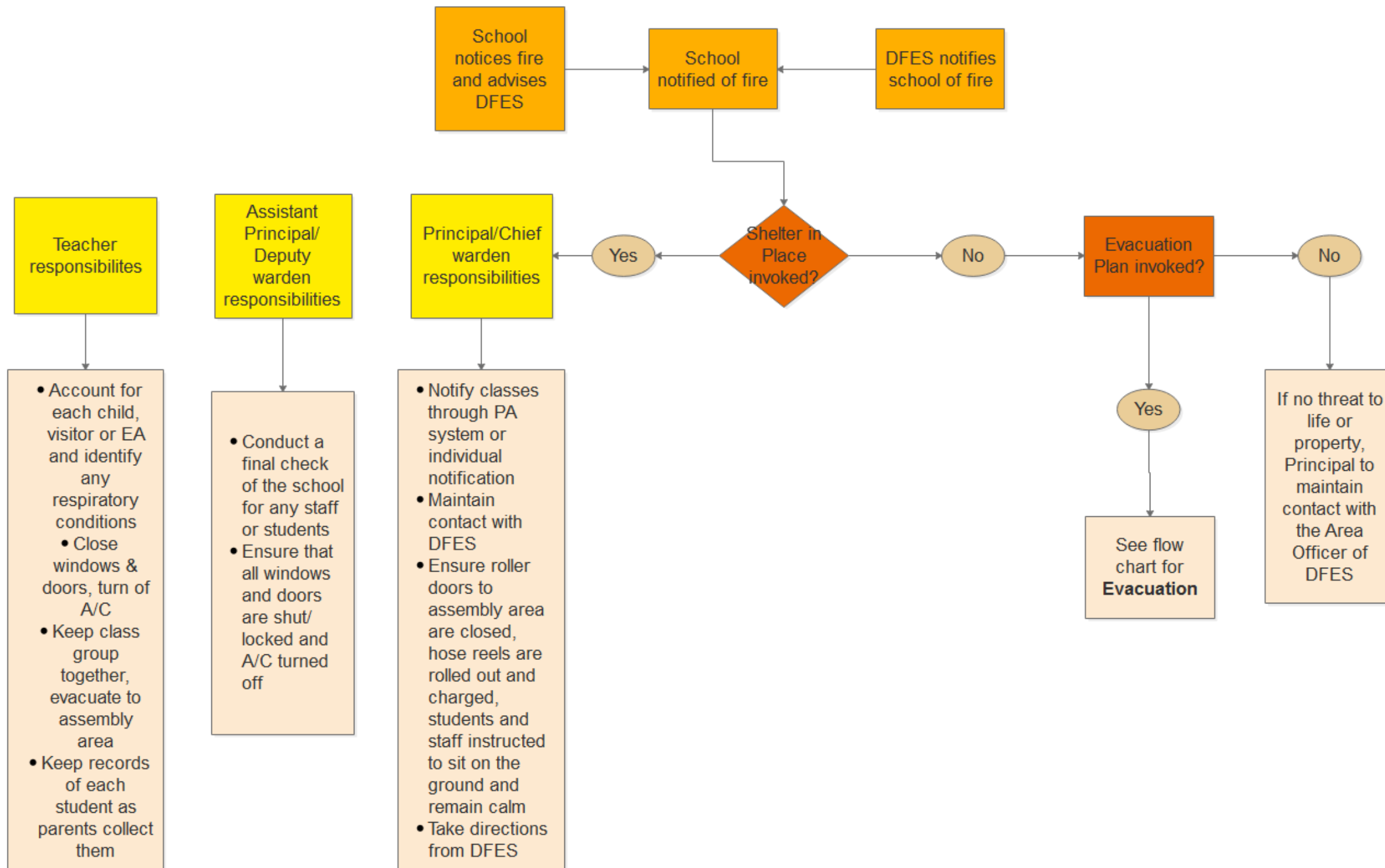
Flowchart 1 Emergency Procedure Triggers

PRINCIPAL'S RESPONSE TO Bushfire Notice when School Open - Evacuation



Flowchart 2 Evacuation

PRINCIPAL'S RESPONSE TO Bushfire Notice when School Open - Shelter in Place



Flowchart 3 Shelter In Place

5 Maps



Map 1 Site Location

Location details: St Mary MacKillop College

Project: 18633

Date aerial photo: August 2018

The details on this map have not been surveyed.
This map is for planning / discussion purposes only

Legend

- School Boundary
- Elevation m (AHD)

0 37.5 75 150 225 Meters



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Map 2 Vegetation

Location details: St Mary MacKillop College

Project: 18633

Date aerial photo: August 2018

The details on this map have not been surveyed.
This map is for planning / discussion purposes only

Legend

 	School Boundary	Vegetation
—	Elevation m (AHD)	 Grassland
		 Scrub
		 Woodland



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Location details: St Mary MacKillop College
 Project: 18633
 Date aerial photo: August 2018
 The details on this map have not been surveyed.
 This map is for planning / discussion purposes only

Bushfire Risk Map



Legend

- | | |
|-----------------|---------------|
| School Boundary | Hazard |
| Elevation | Low |
| | Moderate |
| | Extreme |



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6 References

Department of Education (2011) *Emergency and Critical Incident Management Policy*. Government of WA.

Department of Education (2016). *Principal's Guide to Bushfire*. Government of WA.

Douglas, G (2016) Emergency Management for Bushfire Prone Areas. Course Notes - Module 4: Identify the Risk. University of Western Sydney.

Ellis, S, Kanowski, P & Whelan, R (2004). *National Inquiry on Bushfire Mitigation and Management*. 31 March 2004. Council of Australian Governments.

National Emergency Management Committee (2010) *National Emergency Risk Assessment Guidelines*. Tasmanian State Emergency Guidelines.

Appendix D Bushfire Emergency Evacuation Plan

BUSHFIRE EMERGENCY EVACUATION PLAN

To be reviewed by the School Board on an annual basis.

FACILITY DETAILS

Location	St Mary MacKillop College Lot 5320 & 197 College Ave, West Busselton
Contact Person	Frank Norton
Position	Principal
Phone	TBA
Occupants	Max 1665 (entire school)
Refuge capacity	TBA

Table 1 Emergency Contact Details

Name of Organisation	Service Provided	Phone Number/Website
Fire Brigade	Report a fire/receive assistance	000
Department of Fire & Emergency Services (DFES)	Alerts and Warnings	13 3337
	Fire Danger Ratings	www.dfes.wa.gov.au
	Total Fire Bans	twitter.com/dfes.wa
Bureau of Meteorology	Fire Danger Ratings Weather	bom.gov.au/weather/wa
ABC Local Radio South West WA	News and Updates	Radio frequency 684 AM http://www.abc.net.au/southwestwa/

PREPARATION

Equipment

Install the following firefighting equipment (School Board):

1. A 4kg dry chemical Fire Extinguisher within each classroom, with instructions of use displayed.
2. Hard wired smoke detectors are installed in each classroom.
3. External water (standard garden hoses), capable of applying water to each part of the building.

4. Emergency Evacuation Diagram on the internal face of all external doors.

Seasonal preparation

Prior to each bushfire season, approximately December to March each year, it is important to become ready for an evacuation in the event of a bushfire and understand the potential bushfire climate. The Bureau of Meteorology produces a quarterly climate outlook video which includes an assessment on the potential for a bushfire. It is recommended to watch this video prior to each bushfire season: <http://www.bom.gov.au/climate/outlooks/#/overview/video>

Conduct seasonal works, to be undertaken at the commencement of the Bushfire Season (School Board):

1. Ensure all access ways have the appropriate vertical and horizontal clearances in good traversable condition.
2. Ensure all roof and building junctions are clear of litter.
3. Ensure all buildings are free of flammable materials, none located within 5m.
4. Ensure all objects attached to the buildings are non-combustible or easily removable, and the removing mechanism is in working order.
5. Ensure all gas cylinders are positioned with pressure relief valve facing away from the building and not within 6m of a flammable material.
6. Ensure fire hoses and firefighting equipment is in working order. Check the charge level on all fire extinguishers is adequate.
7. Ensure the plan and evacuation details are clearly displayed and conveniently located in all buildings.
8. Verify contacts.

Daily preparation during the fire season

Conduct daily preparation during the fire season, in the morning (Landowner):

1. Check the DFES website for any alerts.
2. Ensure staff and students are bushfire aware and familiar with the evacuation procedures.
3. Inspect grounds to:
 - Ensure flammable materials are not stored adjacent to buildings.
 - Ensure firefighting equipment and access-ways are clear of any obstructions.

CARING FOR VULNERABLE PEOPLE

The Bushfire Attack Level that will be experienced at the peak of the fire high (BAL-29). This is well above the level of human tolerance (BAL-3).

Fire typically has a progressive build up to a peak followed by a progressive decay; the peak (fire front) lasting between two to five minutes. Staff and students should evacuate the Site prior to any bushfire event.

Conditions during a fire can be hazardous and frightening. Ignited embers and heavy smoke can be expected, visibility can be significantly reduced, and it can be extremely windy and noisy. Unless prepared, and as may be expected of vulnerable people - people can become frightened and make dangerous choices. For this reason, evacuation is the preferred option, but sometimes, if the warning time is short, shelter in a building is the only option.

Construction to BAL Standards is no guarantee that a building will not be lost to a bushfire. Importantly through, the construction measures improve resistance, to provide an important delay between the fire front passing and the internal conditions becoming untenable, that can enable a safe evacuation. Assembly at a quick exit point whilst the fire front passes is therefore essential.

Many buildings are lost after the fire front has passed, due to a small fire starting in poorly prepared grounds and material accumulated against the buildings. After the fire front has passed the grounds and observable areas (this excludes the roof in all practicality) should be inspected and small fires and smouldering materials extinguished. The buildings should be inspected after the fire has passed and continue to be monitored for up to 24 hours for and delayed fire from smouldering materials not initially seen.

It is important to note that there is no obligation upon any staff to take action to defend the building from bushfire attack.

METHOD OF WARNING

The Department of Fire and Emergency Services provides community and emergency advice about predicted and current conditions that advise about the level of bushfire threat.

The Fire Danger Rating (FDR) is based on the forecast weather conditions, the higher the rating the higher the threat.

‘Catastrophic’ rating is the highest level and represents unsafe conditions. On the days where this FDR level is achieved (or if known the day prior) the School will be closed. In most situations, this will be known at approximately 4.30 pm the day before. This allows time for the Principal to implement the closure. If this occurs, the Principal is to contact and advise parents and staff of the

closure. The Principal and Deputy Principal (minimum for two people) will remain in the carpark until 9.00 am of that day and advise any parents that could not be contacted that the School is closed.

If a 'Catastrophic' rating is achieved on the day (unplanned) the controlled evacuation procedure should be enacted.

It is assumed that the Staff and Students are able bodies, can smell smoke and see fire, and understand the English language.

It is recommended that the Principal use a range of sources to stay up to date about a bushfire. This includes using the sources listed in Table 1, being alert and aware of your surroundings.

CONTROLLED EVACUATION

Alert Triggers

A controlled evacuation is defined as an evacuation of all Staff and Students where there is adequate time to allow staff to account for all students and personnel.

The triggers for a controlled evacuation are:

- Direct advice or Watch and Act warning from Emergency Services (DFES, Police)
- Signs of smoke arising from nearby area;
- Fire within 5 km or 5 hours of the Site; or
- A Catastrophic Fire Index Day (unplanned)

Actions

Upon direct instruction from Emergency Personnel aware of the circumstances, follow their evacuation instructions.

Evacuation to Busselton:

1. Notify all Staff;
2. Account for all Students and Staff;
3. All windows and doors are to be closed in each room, and all air conditioners turned off.
4. Staff are to keep the classroom groups together, within their allocated classroom and have the day's attendance record onsite.
5. If evacuation is possible, the Principal will advise parents via a group text that the School will be closed and for them to come and collect their child/children.

6. The Deputy Principal, and Office Support Staff are to liaise directly with the parents where possible.
7. The Principal will remain in direct contact with DFES during the full course of the evacuation.
8. Teachers will keep record of each child as parents collect them. Staff may be required to man the carpark to direct traffic and keep parents calm.
9. If it is advised by DFES that the window for safe evacuation is limited, those with respiratory conditions or disabilities should be transported into town by a school bus, or private vehicle, depending on numbers. If a school bus, or private vehicles are not available, Shelter within Building needs to be enacted.

SHELTER WITHIN BUILDING - LAST RESORT

Alert Triggers

Uncontrolled fire observed, in or adjoined to the Site, or a DFES Emergency Warning to Stay in Place has been issued.

Actions

1. The Principal will notify all teachers
2. The Principal will maintain contact with DFES or emergency services (including calling 000 if required)
3. Teachers and Staff are to account for each child, visitor or education assistant present.
4. All windows and doors are to be closed in each room, and all air conditioners turned off.
5. Teachers are to keep their class group together, bring water bottles if readily accessible, collect the day's attendance record and calmly evacuate the classroom to the gymnasium through the shortest possible route.
6. The Deputy Principal should conduct a final check of the school for any staff or students and ensure that all windows and doors are shut with air conditioners turned off.
7. Students and Staff should sit on the ground and remain calm.
8. The Principal will remain in direct contact with DFES and take directions according to their advice.

EVACUATION DIAGRAM

If you see smoke, fire is within 5 km or 5 hours

EVACUATE

1. Call 000 Fire
2. Close all windows & doors
3. Head to Busselton via College Ave, as directed by emergency services.

If Evacuation is not Possible

SHELTER IN PLACE

1. Call 000 Fire
2. Close all windows & Doors
3. Stay within the building and account for all students
4. Move to the Shelter in Place when advised by the Chief Warden.
5. Follow the advice of Emergency Services and Chief Fire Warden

