



BUSHFIRE RISK - FACT SHEET

This fact sheet provides an overview of:

- Bushfire hazards and risks
- Council requirements related to bushfire
- Where to find further information

WHY DOES COUNCIL HAVE BUSHFIRE REQUIREMENTS?

Council has bushfire requirements to mitigate bushfire risks and to ensure an acceptable or tolerable level of risk to persons and property is achieved.

WHAT ARE BUSHFIRE HAZARDS AND BUSHFIRE RISK?

► Bushfire Hazards

A bushfire hazard is a potential bushfire event that may cause loss of life, injury, house and infrastructure damage, and socio-economic and environmental disruption. A bushfire is an unplanned fire burning in forest, woodland, grassland or scrub.

Three major factors affect how great a bushfire hazard is and these are fuel load, slope and fire weather severity.

In general, vegetation communities with a higher quantity

of fuel available to burn (fuel load) will tend to give rise to higher intensity fires. Fire-fronts generally consume fine fuels only (less than the width of a pencil) with the thicker fuels burning slower and longer over the following hours. Different types and arrangements of vegetation burn differently and pose varying levels of hazard.

Fires spread faster and increase in intensity as they travel up slopes. Buildings located above hazardous vegetation on a slope are exposed to a greater risk than buildings located below the hazardous vegetation.

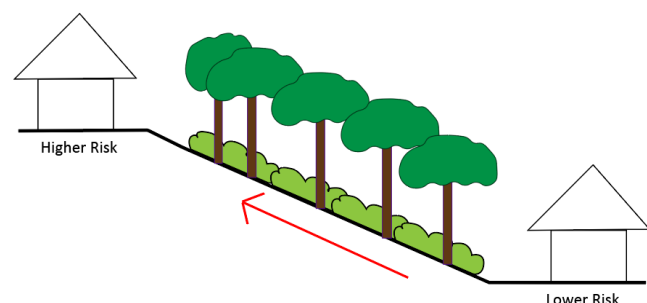
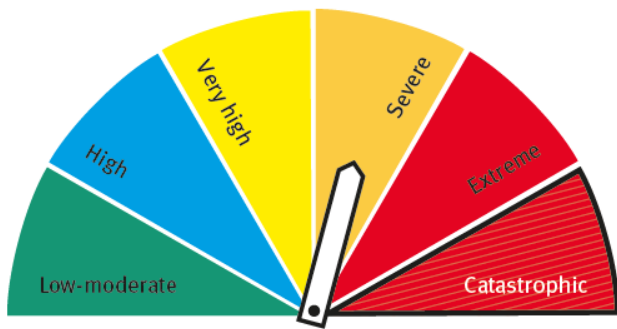


Figure 1 - Fires and slope

Weather plays an important role in determining fire behaviour. Wind fans fires which increases their speed of travel and intensity and can also carry burning embers that can start new fires. Dry and hot weather reduces the moisture content in the fuel and increases the risk of ignition and the intensity of fires.

Fire danger rating today



Prepare. Act. Survive.

Figure 2 - Fire danger rating

Rainfall can cause growth of fuel load that can increase hazards during subsequent dry and hot periods. The typical high risk season for bushfires in the Mackay region is from August until December (during and towards the end of the dry season as temperatures are increasing and before the wet season rains have commenced). These times can vary each year depending on the condition of local bushland, long-term climate conditions, and short-term weather events.

Climate change may increase the likelihood of bushfires occurring with hotter, dryer weather predicted as well as more intense rainfall events which may increase fuel load.

Daily fire danger ratings (FDR) are calculated based on weather and fuel load factors and are available on the QFES website <https://www.qfes.qld.gov.au/prepare/bushfire/fire-danger-rating>

► Bushfire Risk

Risks look at the likelihood and consequences of an event. The factors that contribute to bushfire risk are the hazard, exposure and vulnerability.

Hazards are described in the previous section.

Exposure refers to the location of people and property in hazard-prone areas. It considers proximity and location of elements within hazard areas.

Vulnerability refers to the ability of people and property to respond to a hazard - how well can people avoid or mitigate the risk and damage to property? Are all persons able bodied and able to evacuate safely? How likely are

people and property to be disrupted or damaged by a bushfire?

Some of the factors which determine the level of risk include:

- The proximity of buildings to hazardous vegetation and other fuels in proximity to the building
- The slope of land under the vegetation and the position of the building on the slope
- The cladding and design of the building
- The amount of fine fuels in and around the building (e.g. leaves in gutters, wooden furniture under verandahs, piles of sticks or leaves in yard)
- The landscaping and vegetation around the building - whether landscaping is discontinuous (has gaps), the amount of fuel load and how close flammable plants are to the building
- Access and evacuation routes and whether these pass through bushfire hazard areas
- Whether access roads are constructed to allow a fire fighting vehicle to access the site
- The availability of water for fire-fighting purposes
- The preparedness of residents and the existence of an evacuation plan or a bushfire survival plan

HOW ARE BUSHFIRE RISKS IDENTIFIED?

Bushfire hazard areas are identified on the Bushfire hazard overlay map under the Mackay Region Planning Scheme as areas affected by either:

- Very high bushfire hazard area
- High bushfire hazard area
- Medium bushfire hazard area
- Within 100m of a bushfire hazard area

The Bushfire hazard areas were mapped by the Queensland Government in 2015. The identification of hazard areas takes into account the type of vegetation, the slope, and the local weather conditions.

New development within mapped bushfire hazard areas must comply with certain requirements. Properties that are not in mapped bushfire hazard areas may also be exposed to bushfire hazards and should also undertake measures to prepare for and reduce risks.

WHAT IS DONE TO MANAGE BUSHFIRE RISK FOR NEW DEVELOPMENT?

► Planning scheme requirements

The planning scheme sets requirements for certain forms of development that are proposed to be located in the mapped bushfire hazard areas. The planning scheme does not apply to existing development - only new or changed development. Further details about the planning scheme's requirements can be found in [User Guide #28 - Bushfire](#).

The planning scheme sets requirements about the following matters:

- Siting - locating development to avoid hazard areas and locating in the area of lowest risk if avoidance is not possible
- Setbacks - requiring asset protection zone (APZ) distances to be achieved - see [User Guide #28 - Bushfire](#) section about APZ for detail
- Access - ensuring appropriate access is provided, including to allow a fire fighting vehicle to safely access and manoeuvre on site
- Evacuation - evacuation routes and arrangements are provided
- Water supply - water supply for firefighting purposes is provided
- Landscaping - landscaping is maintained with low flammability vegetation, a low fuel level and a discontinuous form
- Subdivision design - new subdivisions provide setbacks - preferably through perimeter roads, adequate evacuation routes and internal road networks, and minimise the number of properties exposed to bushfire hazard areas.
- Vulnerable uses and essential services - vulnerable uses such as schools or retirement homes and community infrastructure for essential services such as emergency services should not locate in bushfire hazard areas
- Hazardous / flammable materials are not stored on sites in bushfire prone areas.

In most instances a Bushfire Management Plan (BMP)

is required to be prepared by a suitably qualified professional in accordance with the QFES Bushfire Resilient Communities document to demonstrate compliance with the above requirements and to demonstrate that an acceptable or tolerable risk to persons and property is being achieved.

A suitably qualified person is required to calculate the necessary APZs distance in every instance. As discussed below, this calculation can be done at the same time as the Bushfire attack level (BAL) calculation.

► Building requirements

The National Construction Code sets requirements that buildings in identified bushfire hazard areas are to be constructed in accordance with Australian Standard AS3959–Construction of buildings in bushfire prone areas, and where applicable, the National Association of Steel-Framed Housing (2014) Standard: Steel framed construction in bushfire areas.

These requirements are enforced at the building approval stage. Building approvals are required after planning approvals under the planning scheme are obtained.

A licenced building certifier is required to assess building approvals. Building certifiers work for private companies and council does not certify building approvals.

The building approval assigns a bushfire attack level (BAL) that is determined by the radiant heat flux (measured in kW/m²) that the building will be exposed to. This is calculated based on the distance to vegetation, the vegetation class, the slope and the fire weather severity. The higher the radiant heat flux, the higher the BAL level. Higher BAL levels require greater design measures and generally come with a higher cost.

BAL design requirements are generally about cladding buildings with non-combustible materials and ensuring building design minimises risk of combustion.

Although a building approval is required after a planning approval, a suitably qualified consultant may calculate a BAL and APZ at the same time because the same radiant heat flux calculation is used to determine an APZ. Having an appropriate APZ will help to reduce the BAL of a building which may reduce design costs for the building.

By increasing the distance from vegetation further than required for the APZ, a lower BAL can be achieved

however clearing beyond the extent of an APZ is unlikely to be supported and therefore development would need to be located further from vegetation and not require clearing to achieve a lower BAL.

WHAT SHOULD PROPERTY OWNERS DO TO MANAGE BUSHFIRE RISK?

► Resident preparedness and planning

The Queensland Fire and Emergency Services (QFES) provide information for the general public about how to prepare for bushfire season, including (but not limited to):

- Clean up around the house (gutters, leaf litter and branches, keep grass mown, remove long dry grass, dead leaves and branches)
- Keep access paths clear of vegetation
- Have a bushfire survival plan and a contingency plan
 - Head to <https://bushfire-survival-plan.qfes.qld.gov.au/> to prepare your plan
- Have an evacuation plan
- Have first aid equipment handy
- Know your bushfire season

Head to the QFES website for more information about how to prepare for bushfire season: <https://www.qfes.qld.gov.au/prepare/bushfire/prepare-for-bushfire-season>



Figure 3 - Are you ready Mackay? Evacuation plan

► Keep up to date with alerts

QFES provide up to date alerts and information about:

- Current bushfire warnings
- Fire danger ratings
- Fire bans

Find out how to stay alert here: <https://www.qfes.qld.gov.au/prepare/bushfire/tune-in-to-warnings>

► Council Local Laws

Property owners have a responsibility to ensure their property is not overgrown. Overgrown properties may contribute to bushfire risks. Infringement Notices and penalties may apply including Council undertaking the works and billing the cost to the property owner.

BUSHFIRE MITIGATION ACTIVITIES

QFES are the lead agency for all emergency responses and bushfire mitigation activities, combining the Fire and Rescue, Rural Fire and State Emergency Services.

A yearly assessment is undertaken to schedule mitigation activities across public lands such as hazard reduction burns and clearing activities. Local property owners should conduct an annual assessment of their lands, generally coming into winter before temperatures warm up and conditions become dry.

Mackay Regional Council is a member of the Local disaster management group and assists the lead agency, QFES in any available capacity.

FOR MORE INFORMATION

This fact sheet provides an overview of concepts and requirements related to Bushfire only.

- Further information about bushfire is available on the QFES website here: <https://www.qfes.qld.gov.au/>
- Council have an Emergency Management Guide available here https://www.mackay.qld.gov.au/residents/emergency_management
- *QRA's - Bushfire resilient building guidance for Queensland Homes* provides a good overview of bushfire concepts and design responses for houses.
- *QFES's - Bushfire resilient communities* provides technical information about calculating asset protection zones, undertaking bushfire hazard assessments and mapping bushfire hazards.
- Council's [User Guide #28 - Bushfire](#) details planning scheme requirements related to bushfire.

In the event of an emergency or to report a fire always dial 000.