

## FACTSHEET 2

# PROPOSED CHANGES TO BUSHFIRE REQUIREMENTS

This factsheet outlines the key changes to the planning scheme's Bushfire hazard overlay code provisions and associated level of assessment triggers proposed under major amendment 2.

### WHY IS THIS UPDATE IMPORTANT?

Mackay Regional Council and a consultant reviewed the planning scheme's bushfire provisions in 2020. The proposed amendments to the code update the planning scheme to address matters identified in the review and to comply with the following state guidance materials:

- [State Planning Policy - state interest guidance material - Natural hazards, risk and resilience - Bushfire; and](#)
- [QFES's - Bushfire resilient communities](#)

### WHAT ARE BUSHFIRE HAZARD AREAS?

Bushfire requirements apply to certain forms of development which are located in bushfire hazard areas. These hazard areas are identified in the bushfire hazard overlay map and are identified by the following categories:

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

The mapped bushfire hazard areas were provided by the Queensland Government in 2015.

Major amendment 2 proposes some minor modifications to these mapped hazard areas to remove mapped areas within the urban footprint that no longer contain hazardous vegetation.

### WHAT ARE THE PROPOSED CHANGES?

#### ► Levels of assessment

The levels of assessment for certain land uses and reconfiguring a lot triggered for assessment within

a mapped bushfire hazard area or within 100m of a bushfire hazard area will not change under the proposed major amendment.

#### *New Accepted development trigger for dwelling house*

A new assessment trigger has been introduced that makes a dwelling house accepted development subject to requirements (ADSR) if it is:

- Mapped in a bushfire hazard area or within 100m of a bushfire hazard area; and
- Located in these zones: Community facilities zone, Conservation zone, Open space zone, Rural zone, Rural residential zone, Tourism zone or Township zone.

The proposed assessment requirements for ADSR are located in the Bushfire hazard overlay code.

Non-habitable outbuildings do not trigger assessment against the requirements of the Bushfire hazard overlay code.

#### ► Bushfire hazard overlay code

The Bushfire hazard overlay code contains bushfire related requirements. The code has been substantially re-drafted, however many of the existing requirements remain.

Some of the key changes include:

- Requiring Asset protection zones (APZ) instead of firebreaks
- Requiring water tanks of various sizes for firefighting purposes
- Classifying certain uses as Vulnerable or Community infrastructure for essential services and setting further requirements for these uses.

Further information on these requirements and others are detailed in supplementary material to this factsheet.

### ► ADSR requirements for a dwelling house

The following requirements apply.

- a dwelling is located within 60m of the road frontage;
- driveway width is 4m;
- driveway slope is less than 12.5%;
- a dwelling is sited to avoid bushfire hazard areas and minimise vegetation clearing for firebreaks
- if avoidance of bushfire hazard areas is not possible, then the dwelling is located in the area of the lowest hazard category;
- an APZ is provided that separates the perimeter of the building and the bushfire hazard to achieves a radiant heat flux of 29 kWm<sup>2</sup> or less. *See section on APZs for more information.*
- where there is no reticulated water supply, a water tank is provided for firefighting purposes as per the following volumes:
  - 5,000L if the property is <1,000m<sup>2</sup>; or
  - 10,000L if the property is 1,000m<sup>2</sup> - 10,000m<sup>2</sup>; or
  - 25,000L if the property is >10,000m<sup>2</sup>.

If an application does not comply with one or more of these requirements, then an application is required to assess the non-compliance against the performance outcome of the code.

### ► Requirements for assessable development

#### **Material change of use**

The following are the key requirements for an MCU:

- Development, excluding a vulnerable use or community infrastructure for essential services, must provide an APZ to achieve a radiant heat flux of 29kW/m<sup>2</sup> or less. *See section on APZs for further information.*
- Vulnerable use or community infrastructure for essential services are not to establish or intensify unless:
  - there is an overriding need in the public interest for the service
  - an APZ is provided to achieve a radiant heat flux of 10kW/m<sup>2</sup>; and

- Vulnerable uses demonstrate there are no other suitable alternative locations for the use; and
- Community infrastructure demonstrates it can function effectively during and immediately after a bushfire event.
- Landscaping treatments use only low threat vegetation and maintain:
  - a potential fuel load of less than eight tonnes per hectare; and
  - a discontinuous fuel structure.
- Development establishes evacuation areas, arrangements and procedures, to achieve an acceptable or tolerable risk to people and does not worsen evacuation capability of other premises or result in significant additional burden on emergency services personnel.
- Development sites to avoid bushfire or locate in areas of lowest risk, avoid clearing for APZs to the extent possible and provide access for firefighting vehicles and maintenance works.
- On lots over 2000m<sup>2</sup>, development facilitates evacuation by:
  - Locating habitable areas as close as possible to property entrances; and
  - Ensuring vehicular access is designed to allow safe evacuation and access by emergency services.
- Development outside of a reticulated water supply area provides a water tank for fire fighting purposes that is in accordance with the requirements in the section about water tanks, and the below volumes:
  - 5000L per dwelling for dual occupancies and multiple dwellings; and
  - As per AS2304 for Industrial, commercial and other activities.
- Critical or potentially hazardous infrastructure such as water supply, electricity, gas and telecommunications are located underground.
- Manufacturing and storage of hazardous chemicals is avoided or risks to public safety and the environment are mitigated to an acceptable level.

### Vulnerable uses are:

- Childcare centre, Community care centre, detention facility, Educational establishment, Hospital, Relocatable home park, Rooming accommodation, Residential care facility, Retirement facility.

### Community infrastructure for essential services are:

- Educational establishment, Emergency services, Hospital.

#### ► Code assessable Reconfiguring a Lot requirements

- Development is not located on ridgelines, saddles or crests where slopes exceed 15%
- APZ are provided to achieve a radiant heat flux of 29 kW/m<sup>2</sup>. The APZ is to be measured from:
  - the lot boundary or at the building envelope if identified for lots 2000m<sup>2</sup> or less; and
  - the development footprint for lots over 2000m<sup>2</sup>.
- If lots are > 2000m<sup>2</sup>, a development footprint is provided for each lot that is located within 60m of the road frontage and provides an access route that does not exceed 12.5% in slope.
- Lots are not long and narrow in shape and do not include rear / battleaxe lots.

Where involving more than 5 lots:

- The lot layout is designed to minimise the length of the development perimeter and number of lots exposed to hazardous vegetation.
- The road network is designed to avoid bottle necks, provide sufficient capacity for evacuations, avoid cul-de-sacs and no-through roads; and provide multiple access and egress options.
- Where the ROL results in 10 lots or more, a secondary point of access to the wider road network is provided.
- The reconfigured lot layout ensures evacuation routes direct people away from, not towards or through, areas of greater bushfire hazard and minimise the length of the route through bushfire hazard areas.
- In urban areas or where lots are less than 2000m<sup>2</sup> a perimeter road is provided that is designed to the required standard (see below section on perimeter

road design).

- Where reticulated water is available, the supply pressure complies with Council's engineering requirements and the road network and fire hydrants are designed and installed in accordance with:
  - Fire Hydrant and Vehicle Access Guidelines for residential, commercial and industrial lots (QFES), unless otherwise specified by the relevant water entity; and
  - the DTMR Road Planning and Design Manual.
- Where reticulated water supply is not available the lot layout provides:
  - A fire trail and / or working area; or
  - A perimeter road; and
  - Space for a static water supply and safe and clear access for fire fighting vehicle to manoeuvre.

#### ► Asset Protection Zones (APZ)

One of the main changes is the introduction of Asset protection zones (APZ) which replace the existing requirement for a 20m firebreak APZs are of variable widths depending on factors such as slope and the nature of the vegetation or hazard category (medium, high or very high).

An asset protection zone (APZ) is a low-fuel area that separates the perimeter of the building (or proposed building footprint, or lot boundary for ROLs) and the bushfire hazard by a distance that achieves a certain radiant heat flux. For most uses this is 29 kW/m<sup>2</sup> or less.

A set of standard distances to achieve a radiant flux of 29kW/m<sup>2</sup> are provided in Table 8.2.5.3.C that show acceptable APZ distances based on the slope under the vegetation and whether this is upslope or downslope in relation to the house. Alternatively, appropriate APZ distances must be calculated by a suitably qualified professional using the methodology outlined in [QFES - Bushfire resilient communities](#).

**Table 8.2.5.3.C - default separation distances for development that requires 29 kW/m<sup>2</sup> radiant heat flux**

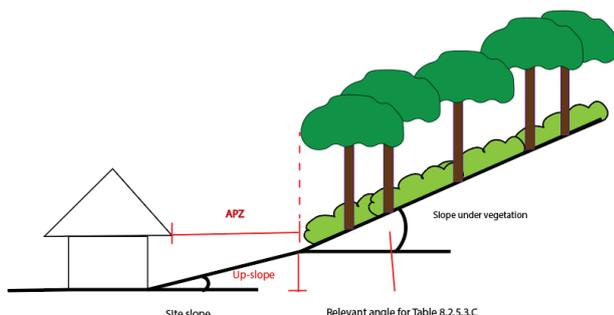
| Mapped hazard category         | Slope under vegetation relative to the building | Acceptable APZ width       |
|--------------------------------|---|----------------------------|
| Very high bushfire hazard area | Upslope   | 28m                        |
|                                | Downslope - Flat                                | 36m                        |
|                                | Downslope - Moderate                            | 45m                        |
|                                | Downslope - Steep                               | as determined by an expert |
| high bushfire hazard area      | Upslope   | 23m                        |
|                                | Downslope - Flat                                | 29m                        |
|                                | Downslope - Moderate                            | 36m                        |
|                                | Downslope - Steep                               | as determined by an expert |
| Medium bushfire hazard area    | Upslope   | 19m                        |
|                                | Downslope - Flat                                | 24m                        |
|                                | Downslope - Moderate                            | 31m                        |
|                                | Downslope - Steep                               | as determined by an expert |

Flat: 0-4.9 deg. Moderate: 5-9.9 deg. Steep: 10+ deg

The acceptable distances listed in Table 8.2.5.3.C have been conservatively estimated and it is likely that a suitably qualified professional would be able to reduce the APZ width.

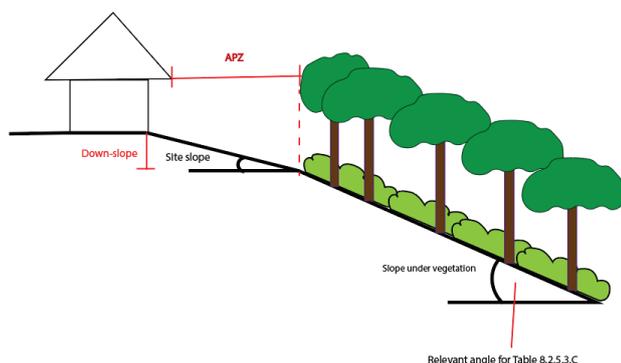
Upslope is where the angle under the vegetation is sloping upward away from the building.

### Upslope vegetation



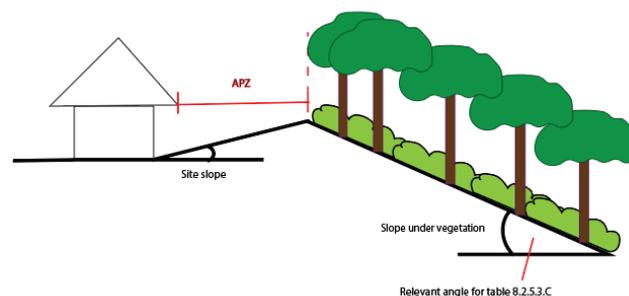
Downslope is where the angle under the vegetation is sloping downward away from the building.

### Downslope vegetation - example 1



Downslope vegetation is more hazardous as fires spread faster going uphill and therefore APZs need to be larger. Where the downslope under the vegetation is 10 degrees or more, an expert is required to calculate the APZ due to the increased risk and distances involved.

### Downslope vegetation - example 2



Despite the site slope being an up-slope in this example, the slope under vegetation is a downslope, so the APZ needs to be an appropriate distance for downslope because a fire would accelerate uphill towards the house.

In more complicated circumstances, for example where there are highly variable slopes, it is recommended that a consultant be engaged to determine an appropriate APZ.

Applicants must comply with all Queensland Government requirements for Vegetation Clearing. **It is highly recommended that, prior to lodging an application for MCU or ROL with Council or addressing ADSR criteria, applicants engage with the Queensland Government to determine if an application for Operational works for the clearing of native vegetation will be required and if the clearing will be supported.**

Further information can be found here: <https://www.qld.gov.au/environment/land/management/vegetation/development>.

#### ► Water tanks for fire-fighting purposes

- are made of non-combustible materials or are located below ground;
- include a tank fitting that allows access by firefighters;
- are located within 20m of the building;
- allow a fire truck access within 6m of the tank.

### ► Perimeter road design

Perimeter roads are:

- two-lane, 20m wide road reserve, max 250m lengths between connections to the wider road network, provides clear access for firefighting and maintenance (no chicanes etc), provides access to firehydrants, incorporates mountable kerbing where kerbing is provided, and has a maximum gradient of 12.5%.

The above are key requirements only and the planning scheme should be used to determine actual requirements.

### ► Building works application

Building works approvals must be lodged to licenced building certifiers who generally work in private businesses, not at Council.

Bushfire Attack Level (BAL) requirements apply to certain building types (including dwelling houses) and determine design features that are required to protect the building from bushfires. Like asset protection zones, BALs are calculated based on radiant heat flux (kW/m<sup>2</sup>). The higher the BAL level, the greater the level of building design required. Having an appropriate APZ will help to reduce the BAL of a building which may reduce design costs for the building.

[QRA's - Bushfire resilient building guidance for Queensland Homes](#) provides a good overview of bushfire concepts and design responses for houses.

## PLANNING SCHEME POLICY - BUSHFIRE

The [Planning scheme policy \(PSP\) - bushfire](#) has also been updated and is being amended concurrently.

The PSP further explains terminology and concepts used in the Bushfire hazard overlay code, including:

- Asset protection zones (APZs)
- Site landscaping
- Discontinuous fuel structures
- Low fuel condition
- Perimeter roads, fire trail and access
- Evacuation routes
- Water supply; and
- Revegetation and rehabilitation.

## FOR MORE INFORMATION

This fact sheet provides an overview of the proposed amendments relating to bushfire under Major amendment 2.

For further information about the proposed amendments refer to:

- the [Full list of amendments for Major amendment 2](#); and
- the proposed amended sections of the planning scheme - [Part 5](#) and [Part 8](#)
  - Table 5.10.5 - levels of assessment under the bushfire hazard overlay, and Section 8.2.5 - Bushfire hazard overlay code are the most relevant sections; and
- The draft [Planning scheme policy - bushfire](#)

Further information about bushfire is available in:

- [QFES's - Bushfire resilient communities](#);
- [QRA's - Bushfire resilient building guidance for Queensland Homes](#)
- [State Planning Policy - state interest guidance material - Natural hazards, risk and resilience - Bushfire; and](#)

These resources are highly recommended and provide a detailed explanation of the state's bushfire requirements.

You can also email any questions you have to strategic.planning@mackay.qld.gov.au.

## INFORMATION SESSION - BUSHFIRE

An information session will be held to provide more information about the proposed amendments to the planning scheme's bushfire requirements, including the Planning scheme policy – bushfire, and answer any questions about the proposed amendments.

Details are as follows:

Time: 12:00pm

Date: Tuesday, 4 May 2021

Location: Reception Room, Council Administration Building, Gordon Street, Mackay

Please RSVP to [strategic.planning@mackay.qld.gov.au](mailto:strategic.planning@mackay.qld.gov.au) if you are interested in attending this session.