

## **FACT SHEET**

### **Natural Hazards – Flooding**

#### **Flooding**

A natural hazard is a naturally occurring event that may cause harm to people and our social wellbeing, damage to property and/or infrastructure, and impact our economy and the environment. Flooding is an example of a natural hazard. The negative impacts of flooding can be reduced through land use planning and development decisions.

All levels of the planning system seek to ensure that community resilience to natural hazards is increased. The purpose of this fact sheet is to explain some of the strategies used in the proposed planning scheme to help mitigate the impacts of flooding.

#### **The Region's flood hazards**

The towns within the Barcaldine Region are prone to both inundation and isolation during flood events. This is largely due to the fact our townships, like many settlements, historically established and evolved near or adjacent to watercourses. Barcaldine is located to the east of Lagoon Creek, Muttaborra is located to the west of the Thomson River, Alpha is located to the west of Alpha Creek, Jericho is located to the west of Jordan Creek and Aramac is located to the north-east of Aramac Creek.

#### **What flood levels are being adopted?**

The Barcaldine Region has a history of being impacted by flood events. The impacts from flood events have been varied and depend upon the severity and nature of the event. These events have historically caused localised disruptions and property damage.

For the townships of Barcaldine, Aramac and Muttaborra, the 1% AEP design event for flooding has been used as the basis for identifying the flood hazard areas. This is a commonly used design event adopted in the management of flood hazards and is considered acceptable to the level of risk that flooding represents in these towns.

For the townships of Alpha and Jericho, the State Planning Policy Interactive Mapping System Flood Hazard Area – Level 1 – Queensland Floodplain Assessment Overlay has been used. For Jericho, this data layer has been used as it represents the 'best available' information. For Alpha, the Queensland Floodplain Assessment Overlay has been used, however is supplemented by a report and mapping prepared by Connell Wagner for Barcaldine Regional Council titled "Alpha Town Flood Mitigation Study" and dated 2 July 2008.

The scope of the study included the development of a two-dimensional hydraulic model of Alpha Creek and its floodplain to the confluence with Native Companion Creek. A hazard review of a 1990 Flood Event is represented in a preliminary flood hazard map for the town area of Alpha, which shows the majority of the town centre within the extreme flood hazard area. This data has informed the development of the Alpha High and Extreme Flood Hazard Area categories on the Flood Hazard Overlay Map for Alpha in the proposed planning scheme.

To account for potential impacts from climate change on flood depths, Council is planning to adopt an increase of the minimum freeboard requirements for buildings and structures, from 300mm to 600mm above the defined flood level.

### **What is a 1% AEP design event?**

AEP is an acronym for Annual Exceedance Probability, which is a measure of the frequency of a flood event. AEP is used to estimate the probability of a flood of a given size (or larger) occurring in any one year, usually expressed as a percentage.

The 1% AEP design event is a flood event that has a 1% chance of being equalled or exceeded in any given year. This means that such a flood event could occur at any time but is only a 1% chance of occurring in any given year.

### **How does the proposed Barcaldine Region Planning Scheme address flooding?**

To ensure that opportunities for investment and economic growth across the region are not diminished by known risks to property and livelihoods from recurrent flood events, development within the towns in the region is to be reasonably regulated to achieve an acceptable level of resilience to these flood events, where appropriate. Development outcomes on flood-affected land, including development siting, layout, design, access and evacuation options, will be carefully managed so that risks to personal safety, property and the environment during future flood events is minimised.

The proposed planning scheme includes a Flood Hazard Overlay Map for each town and for the region broadly, which shows the following:

- Flood prone land;
- 1% annual exceedance probability flood event; and
- Alpha high and extreme flood hazard area (specifically for Alpha).

The Flood Hazard Overlay Map identifies properties in the flood hazard area. In order to consider and mitigate risks associated with flooding, some additional provisions may be applied to the assessment of development on land in the flood hazard area.

The Flood Hazard Overlay Map are supplemented by the Natural Hazards Overlay Code which includes provisions to ensure new development avoids flood hazard areas or alternatively, requires a development-specific flood risk assessment to be undertaken.

Provisions to address flood hazard risks will be applied to proposals to subdivide or build on land that is in a flood hazard area. You may need to show that the development proposal has considered the flooding risk and is able to maintain personal safety in terms of the siting and layout. This may be achieved by showing that your development will achieve flood immunity and have sufficient access to roads that can be safely used for evacuation in an emergency. New buildings should have a finished floor level 600mm higher than the defined flood level for the area.

Additional criteria for the Alpha high and extreme flood hazard area apply, in particular that the creation of new lots and siting of new building are avoided.

The proposed planning scheme includes categories of development and assessment that regulate development proposed in an identified natural hazard area on the overlay maps. Outside the Alpha high and extreme flood hazard overlay area, development is generally categorised as Assessable Development that is subject to Code Assessment, which is the lowest level of assessment. In the Alpha high and extreme flood hazard overlay area development is generally categorised as Assessable Development that is subject to Impact Assessment, which is the highest level of assessment.

### **Want to find out more?**

You can access the flood mapping for the proposed planning scheme in Schedule 2 of the proposed planning scheme as PDF maps the proposed planning scheme website at [www.barcaldinerc.qld.gov.au/proposed-planning-scheme](http://www.barcaldinerc.qld.gov.au/proposed-planning-scheme) or in hardcopy by request.

We have produced further fact sheets which are accessible on the proposed planning scheme website at [www.barcaldinerc.qld.gov.au/proposed-planning-scheme](http://www.barcaldinerc.qld.gov.au/proposed-planning-scheme) or in hardcopy by request.

Alternatively, email your enquiry to our dedicated planning services email address [planning@barc.qld.gov.au](mailto:planning@barc.qld.gov.au) or call 07 4651 5600 to speak with us.

*The content of this information sheet is a summary and provided as guidance only. It has been prepared to assist the reader to understand and navigate the proposed Barcaldine Region Planning Scheme. Please refer to the complete version of the proposed Barcaldine Region Planning Scheme document available on Council's website for further detail.*