

## Background and History

Council commenced a major exercise to improve flood information for the region in late 2019, to help inform current day requirements for disaster management, improve building resilience, and guide new planning scheme preparations and future infrastructure planning. This ongoing project has delivered updated and more accurate flood modelling for the highest priority catchments in the Gympie Region.

## What has been updated since the previous study in 2012?

There have been substantial improvements to flood modelling software and techniques since the previous study was undertaken in 2012. Aided by more advanced computing, flood modellers can now perform more extensive analysis of rainfall probabilities and include more terrain detail, effects of sub-catchments, and provide greater understanding of the impact of underground drainage networks and flow obstructions such as culverts and bridges. Flood modelling has also been completed for some areas which had no previous detailed flood information. This has resulted in significant updates to Council's flood modelling dataset, with information now available over the following waterways within the region:

- Mary River
- Amamoor Creek
- Widgee Creek
- Nangur Creek (at Goomeri only)
- Yabba Creek
- Eel Creek
- Wide Bay Creek
- Cooloola Cove
- Kandanga Creek
- Tinana Creek
- Curra Creek
- Tin Can Bay

New studies are currently underway for the Deep Creek, Six Mile, and Boonara Creek catchments and will be available in late 2024.

It has not been possible to model all rivers and creeks in the Gympie region. Where new modelling is not available, it will be necessary to continue to use existing information, either from studies previously adopted by Council or the State Government's "Queensland Floodplain Assessment Overlay". Over time, Council may choose to carry out additional flood modelling in these additional areas.

## Adoption of new Flood Hazard Area (FHA) and Defined Flood Level (DFL)

On 27 September 2023, Gympie Regional Council resolved to adopt the new flood model information to designate Flood Hazard Areas (FHA) with a Defined Flood Level (DFL), for the purposes of administering the provisions of the *Building Regulation 2021*. This guides minimum habitable floor levels for future residential buildings. The resolution endorsed the new FHA and DFL to take effect from 01 January 2024.

## Why has council adopted a FHA outside of the planning scheme, specifically for building regulation purposes?

The *Building Act 1975* and the *Building Regulation 2021* requires Council to declare a flood hazard area (FHA) for building assessment purposes. Historically, the planning scheme flood hazard overlay map was used for this purpose. Adopting the new map outside of the planning scheme enables the mapping to be regularly updated as more information becomes available.

## How has the defined flood event changed?

The defined flood event (DFE) has been updated from the existing 1% AEP (or 1-in-100 year) flood event to include an allowance for the impacts of predicted climate change in line with the State Planning Policy (SPP). The adopted DFE is referred to as the Future Climate 1% AEP flood event.

## What does Future Climate 1% AEP mean?

Annual Exceedance Probability (AEP) refers to the probability of a flood event occurring in any one year. The probability is expressed as a percentage and is determined by undertaking flood modelling in accordance with industry standards and best practice. A flood event with a 1% AEP is a flood that is calculated to have a 1% chance of occurring in any one year. It is also known as the 1-in-100-year Average Recurrence Interval (ARI) or Q100 event. It should be noted that a 1% AEP flood could occur more than once in a 100 year period, or may not occur at all.

The State Government released an updated State Planning Policy (SPP) in 2017, making sure the state's interests in planning are protected and delivered as part of local government planning across Queensland. The updated SPP has an increased focus on Queensland's resilience to natural hazards and the effects of climate change. An anticipated impact of climate change is increased rainfall intensity, which is likely to result in increased flood levels. The inclusion of the RCP4.5 climate change factor provides a future climate 1% AEP flood, projected to the year 2100. For more information on the Representative Concentration Pathway (RCP) used in the future climate modelling, please refer to:

<https://www.climatechangeinaustralia.gov.au/en/changing-climate/future-climate-scenarios/greenhouse-gas-scenarios/>

## How has the flood hazard area mapping changed?

The flood hazard area mapping has been updated to include any properties impacted by the DFE. The premise for this change is to ensure that new habitable building works being undertaken near the extents of the future climate 1% AEP flood event are done so with full awareness of the relevant flood hazard. The absence of flood mapping does not imply that a property is not subject to localised stormwater flooding or drainage issues. The requirements of the *National Construction Code* for the management of surface water remain applicable outside of the flood hazard area for building regulation purposes.

## Is the updated information relating to the adopted flood levels available to the public?

Yes. The information is published on council's website, via the online mapping portal, found at:

<https://maps.gympie.qld.gov.au/>

## Is the information provided on council's online mapping going to nominate the finished floor level for new habitable buildings?

Minimum finished floor levels (FFL) have been adopted for Tin Can Bay, Cooloola Cove, and Rainbow Beach based on existing storm tide data.

However, for the rest of our region, the information provided on council's online mapping will state the defined flood level (DFL) for that property. The finished floor level (FFL) can be determined by adding a freeboard of 300mm to the DFL.

The online mapping will use the following acronyms to clearly define the data being presented:

- **FFL** = Finished Floor Level, as defined by the *Building Regulation 2021*.
- **DFL** = Defined Flood Level, as defined by the *Building Regulation 2021*.

These levels will apply to building work for new habitable buildings (and in some cases major renovation work to existing habitable buildings) and limited commercial applications in accordance with *Queensland Development Code MP3.5* requirements.

## **Will council have the flood data required to inform building design within extents of the Future Climate 1% AEP flood event?**

Yes, council will be able to provide the depth and velocity of the flood waters at discrete locations within the flood extents.

For more complex scenarios, the flood model can be purchased from council for use by a Flood Engineer / Modeller (refer to Council's Fees and Charges for the cost of this service).

## **Are the changes relevant to residential or commercial building work?**

The updated DFE will primarily apply to building work for new habitable buildings (and in some cases major renovation work to existing habitable buildings) and limited commercial applications in accordance with *Queensland Development Code MP3.5* requirements. Any other works will be regulated by the current Planning Scheme.

## **How does the change to the flood level affect my existing dwelling?**

Existing habitable buildings will not be affected by the update to the DFE. The updated DFE will apply to building work for new habitable buildings (and in some cases major renovation work to existing habitable buildings) in accordance with *Queensland Development Code MP3.5* requirements. The resolution by Council ensures new habitable building works are undertaken with consideration for the impacts of flooding in a future climate, increasing the regions resilience to future flood events.

## **If I have an existing building permit/approval for a new dwelling, but construction has not yet commenced, do I need to comply with the new requirements?**

Where a building permit has already been issued, the building work is required to comply with the conditions of the Permit. Where a Permit has not yet been issued, please discuss with your relevant Building Certifier. In certain circumstances, Section 37 of the *Building Act 1975* provides transitional arrangements when building assessment provisions change.

## **If I have purchased vacant property within an approved subdivision that complied with the flood requirements at the time of development, will my new dwelling need to comply with the Flood Requirements?**

The updated DFE will apply to building work for new habitable buildings in accordance with *Queensland Development Code MP3.5* requirements. Where a Building Permit has not yet been issued, please discuss with your relevant Building Certifier. In certain circumstances, Section 37 of the *Building Act 1975* provides transitional arrangements when building assessment provisions change.

## **Could the changes place my property in a flood location?**

The updated DFL will impact more properties in comparison to the existing 2012 flood data due to both an increase in available flood modelling across catchments that were previously unstudied and the requirement to consider the likely impacts of the future climate scenario. Existing habitable buildings will not be affected by the update to the DFE. The updated DFE will primarily apply to building work for new habitable buildings (and in some cases major renovation work to existing habitable buildings) and limited commercial applications in accordance with *Queensland Development Code MP3.5* requirements. The resolution by Council ensures new habitable building works are undertaken with consideration for the possible impacts of flooding in a future climate, increasing the region's resilience to future flood events.

# New Defined Flood Event and Levels and how it applies to new Building Work – Fact Sheet



Frequently Asked Questions

Version 3.2

## Are there circumstances where council might permit a new dwelling to be built below the adopted DFL?

The DFL has been adopted for each individual lot using the highest future climate 1% AEP flood level calculated within that lot. For larger lots (especially in the Rural zone), there may be legitimate differences in flood levels across the lot. Where a proposed dwelling site is located below the nominated DFL, customers are encouraged to contact council's Building Section in the first instance – [building@gympie.qld.gov.au](mailto:building@gympie.qld.gov.au)

Under the provisions of the *Queensland Development Code MP3.5*, an application for a building permit may be referred to local government where the DFL stated in the building application is lower than the declared DFL. The local government must, as a concurrence agency, decide whether the lower DFL stated in the building application is appropriate.

In most instances, Council will be able to provide the estimated depth and velocity of flood waters at specific locations within the flood extent, helping to determine whether it may be appropriate for council to permit a lower DFL for the dwelling using the process outlined in the *Queensland Development Code MP3.5*.

## Is building insurance for my dwelling affected by the changes?

Many Insurance companies rely on the National Flood Information Database. The database is made up of local and state government information as well as external data that determines each individual property's flood risk based on building type, location, claims history and the characteristics of flooding (frequency and how severe the flooding may be). As individual insurance companies address this risk differently, it is best to speak directly with your relevant insurance provider.

## Does flood mapping affect my property values?

Flooding is one of many factors which can affect the value of a property, however council is unable to advise how flood mapping may directly impact individual property values.

Updated public flood mapping and information is provided so residents, professionals and local government can prepare for and manage the possible impacts of flooding in a future climate, increasing the region's resilience to future flood events.

## Where can I access more information in relation to the changes?

Please contact council's Customer Contact Centre on 1300 307 800 for further information. You may also visit council's website at [www.gympie.qld.gov.au](http://www.gympie.qld.gov.au)

## Useful Links

Council's online mapping	<a href="https://maps.gympie.qld.gov.au/">https://maps.gympie.qld.gov.au/</a>
Council's website –Flood Information for building	<a href="https://www.gympie.qld.gov.au/flood-information-new-building-work">https://www.gympie.qld.gov.au/flood-information-new-building-work</a>
Climate change in Australia (RCPS)	<a href="https://www.climatechangeinaustralia.gov.au/en/changing-climate/future-climate-scenarios/greenhouse-gas-scenarios/">https://www.climatechangeinaustralia.gov.au/en/changing-climate/future-climate-scenarios/greenhouse-gas-scenarios/</a>
Queensland State Planning Policy (SPP)	<a href="https://planning.statedevelopment.qld.gov.au/planning-framework/plan-making/state-planning/state-planning-policy">https://planning.statedevelopment.qld.gov.au/planning-framework/plan-making/state-planning/state-planning-policy</a>
<i>Queensland Development Code MP3.5</i> (QDC)	<a href="https://www.business.qld.gov.au/industries/building-property-development/building-construction/laws-codes-standards/queensland-development-code#mandatory-parts">https://www.business.qld.gov.au/industries/building-property-development/building-construction/laws-codes-standards/queensland-development-code#mandatory-parts</a>