



Building in Flood Prone Areas

This fact sheet provides general information about building dual occupancy and dwelling houses in Flood Hazard Areas, Storm Tide Hazard Areas and areas suspected of flooding or stormwater inundation.

Allotments and properties may be affected by river or creek flooding, drainage flows, overland flows, storm tide inundation or a combination of these. When constructing a new building, care must be taken to identify and assess the impact of all potential sources of flooding or inundation. If in doubt, a suitably qualified engineer should be consulted.

In most cases, determination of the minimum habitable floor level for dual occupancy and dwelling houses is self-assessable as part of the building application process.

Determination of a minimum habitable floor level requires knowledge of the relevant provisions of the *Building Regulation 2006, Queensland Development Code Part MP 3.5 Construction of buildings in flood hazard areas (MP 3.5)*, the *Building Code of Australia* and the *Fraser Coast Planning Scheme*.

Flood Hazard Area

Council has adopted a Flood Hazard Area to identify those areas considered to be at risk of flooding. It should be noted that the Flood Hazard Areas have been established only where suitable information is available. The purpose of the Flood Hazard Area is to alert developers, owners and purchasers that a flood hazard has been identified.

Defined Flood Level (DFL)

In some parts of the Fraser Coast, Council has adopted Defined Flood Levels that have been established from suitable flood studies and other reports. Where a DFL has been adopted, *Queensland Development Code part MP 3.5* must be considered in the assessment of building applications for a new dwelling or dual occupancy.

Dwelling House Code and Dual Occupancy Code

The self-assessable criteria of the Dwelling House Code or Dual Occupancy Code are applicable as part of the assessment of any new dwelling or dual occupancy. These self-assessable criteria indicate that the habitable floor level must be a minimum 300mm above the 100 year Annual Recurrence Interval (ARI).



The Dwelling House Code or Dual Occupancy Code must also be considered even where there is a DFL or a Defined Storm Tide Level.

Storm Tide

Storm Tide is a rise in sea level associated with a cyclone or other weather event in conjunction with the normal astronomical tide.

If the site is affected by storm tide, the self-assessable criteria of the Coastal Protection Overlay Code in the *Fraser Coast Planning Scheme* are applicable.

Flood Search

A flood search report will provide details of flood information including Defined Flood Levels, Flood Hazard Areas, Defined Storm Tide Levels and other relevant information where it is available. Forms to apply for a search are available under forms on Council's website

Where available, relevant anecdotal flood information will also be provided in the Flood Hazard Area where there is no adopted DFL. This information will not specify a flood level for the site but may assist in calculating a 100 year ARI flood level.

It is important to note that a flood search will only provide information known to Council and will not cover all potential flood types for a property e.g: overland flows.

Determining Minimum Habitable Floor levels

In determining the floor level of any habitable rooms in a dwelling or dual occupancy, the impact of flooding from rivers, creeks, drainage flows, overland flows and storm tide must be considered as well as other requirements of the *Building Code of Australia*.

The topography, catchment size, proximity to a flow path or water course must be reviewed to determine if a building site may be affected by other sources of stormwater in addition to a DFL or Defined Storm Tide Level.

If there is any doubt, a suitably qualified engineer should be consulted to determine an appropriate 100 year ARI flood level for all potential flood sources.

Freeboard

Freeboard is an additional factor of safety applied to building habitable floor levels in flood areas to provide for unknown factors that could contribute to flood levels greater than those calculated. The minimum freeboard in areas subject to river, creek or local flooding is 300mm in accordance with MP3.5 and the *Fraser Coast Planning Scheme*. Please note however that a freeboard component is not required to accommodate storm tide levels.

What if my building site is affected by more than one type of flooding?

A determination should be made of all types of flooding that may affect a building site. Each flood type should be quantified and an assessment made against the relevant provisions of the *Fraser Coast Planning Scheme* and/or *MP 3.5*.

The highest of the finished floor levels calculated for each flood type will be the minimum habitable floor level.

If my building site is subject to both storm tide and river flooding, do I need to have a freeboard?

Freeboard is not required above the Defined Storm Tide Level, however 300mm freeboard is required for any other flood type. The highest of the finished floor levels calculated for each flood type will be the minimum habitable floor level.

Example - A flood search has indicated a DFL of 3.90m AHD and a Defined Storm Tide Level of 4.10m AHD. 300mm freeboard is required to be added to the DFL resulting in a floor level of 4.20m AHD. Freeboard is not required for the Storm Tide Level hence a floor level of 4.10m AHD. The Minimum Habitable Floor Level is the higher level being 4.20m AHD in this case.

My building site is located in a Flood Hazard Area. How do I determine the 100 year ARI flood level on my site if there is no DFL?

As part of a flood search report Council will provide, where available, relevant anecdotal flood information. This information will not specify a flood level for the site but may

assist in calculating a 100 year ARI flood level. It is recommended that where a DFL is unavailable, a suitably qualified engineer be consulted to calculate an appropriate 100 year ARI flood level for the site.

What do I need to do if I suspect the building site might be in an overland flow path?

If a building site is suspected of being within an overland flow path, the level of flows in a 100 year ARI event should be determined. As well as providing a minimum habitable floor level with freeboard to accommodate these flows, the impact of blocking these flows should also be determined to avoid impacting on surrounding properties. If there is any doubt, a suitably qualified engineer should be consulted to quantify a flood level and determine mitigation works if necessary to avoid impacting on adjoining properties.

What if I want to build to a lower floor level than the DFL or the level specified in the relevant planning scheme codes?

Proposing a floor level lower than the declared DFL will require the Building Works application to be referred to Council as a Concurrence Agency.

A floor level lower than the 100 year ARI flood level specified in the Dwelling house code, Dual occupancy code and/or Coastal protection overlay code will require the Building Works to be assessed against the Fraser Coast Planning Scheme 2014.

In either instance, Council will require that the applicant provide appropriate flood levels including the 100 year ARI flood level determined by a suitably qualified engineer, as well as other supporting information.

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