

# Code Response 13

## Overlay code

## Flood overlay code

Responses are in the highlighted sections of:

**Table 8.2.11.3.A—Self-assessable and assessable development**

## 8.2.11 Flood overlay code

### 8.2.11.1 Application

- (1) This code applies to assessing development in the Flood overlay, if:
  - (a) accepted development subject to compliance with identified requirements, where acceptable outcomes of this code are identified requirements in a table of assessment for an overlay (section 5.10); or
  - (b) assessable development where this code is an applicable code identified in the assessment benchmarks column of a table of assessment for an overlay (section 5.10); or
  - (c) impact assessable development.
- (2) Land in the Flood overlay is identified on the Flood overlay map and is included in the following sub-categories:
  - (a) Brisbane River flood planning area 1 sub-category;
  - (b) Brisbane River flood planning area 2a sub-category;
  - (c) Brisbane River flood planning area 2b sub-category;
  - (d) Brisbane River flood planning area 3 sub-category;
  - (e) Brisbane River flood planning area 4 sub-category;
  - (f) Brisbane River flood planning area 5 sub-category;
  - (g) Creek/waterway flood planning area 1 sub-category;
  - (h) Creek/waterway flood planning area 2 sub-category;
  - (i) Creek/waterway flood planning area 3 sub-category;
  - (j) Creek/waterway flood planning area 4 sub-category;
  - (k) Creek/waterway flood planning area 5 sub-category;
  - (l) Overland flow flood planning area sub-category.

Editor's note—For the purposes of the overlay, the Pine and South Pine rivers are treated as Creek/waterway flood planning area sub-categories.

Note—The Flood overlay is a 'natural hazard area' for the purpose of the State Planning Policy. Within this area, susceptibility to flooding has been identified. The natural hazard area identified on the Flood overlay map may not reflect the full extent of the flood affected area.

- (3) When using this code, reference should be made to section 1.5 and section 5.3.3.

Note—The following purpose, overall outcomes, performance outcomes and acceptable outcomes comprise the assessment benchmarks of this code.

Note—Where this code includes performance outcomes or acceptable outcomes that relate to:

- management of flood hazard or hydraulic hazard, guidance is provided in the Flood planning scheme policy;
- filling or excavation within the Creek/waterway flood planning area sub-categories, guidance is provided in the Compensatory earthworks planning scheme policy;
- handling or storage of hazardous materials, guidance is provided in the Management of hazardous chemicals in flood affected areas planning scheme policy;
- standards and specifications for public assets in a park, guidance is provided in the Infrastructure design planning scheme policy;
- standards and specifications for stormwater drainage assets, guidance is provided in the Infrastructure design planning scheme policy.

Editor's note—For a proposal to be accepted development subject to compliance with identified requirements, it must meet all the identified acceptable outcomes of this code that relate to the applicable sub-category and any other applicable code. Where it does not meet all identified acceptable outcomes, the proposal becomes assessable development and a development application is required. Where a development application is required, only the specific acceptable outcomes that the proposal fails to meet need to be assessed against the corresponding assessable acceptable outcomes or performance outcomes and relevant overall outcomes. Other identified acceptable outcomes that are met are not assessed as part of the development application.

### 8.2.11.2 Purpose

- (1) The purpose of the Flood overlay code is to:
  - (a) Implement the policy direction in the Strategic framework, in particular:
    - (i) Theme 2: Brisbane's outstanding lifestyle, and Element 2.3 – Brisbane's healthy and safe communities;
    - (ii) Theme 4: Brisbane's highly effective transport and infrastructure networks, and Element 4.3 – Brisbane's coordinated infrastructure planning and delivery.
  - (b) Provide for the assessment of the suitability of development in the Flood overlay.
- (2) The purpose of the Flood overlay code will be achieved through the following overall outcomes:
  - (a) Development minimises exposure of people and property to unacceptable risk from flood hazard in all flood events.
  - (b) Development and infrastructure mitigates the flood risk through its location, siting, design, construction and operation whilst maintaining amenity.
  - (c) Development does not unduly burden the city's counter-disaster response capacity, including emergency services access during a flood emergency.
  - (d) Development provides for efficient evacuation and access for evacuation resources including emergency services during flood events, or otherwise plans for the prospect and impact of isolation or hindered evacuation during flooding.
  - (e) Development involving essential community infrastructure remains functional during and immediately after flood events.
  - (f) Development ensures that emergency management plans respond to the number and capacity of future users of the development to safely participate in emergency measures such as evacuation.
  - (g) Development ensures that essential building services or services essential for the development are designed, located and operated to minimise the flood risk to people, minimise damage to property, disruption to building function, and re-establishment time after a flood event.
  - (h) Development involving hazardous materials manufactured, handled or stored in bulk does not adversely impact on public safety and the environment as a result of the impacts of floodwater.
  - (i) Development does not, directly or cumulatively, cause or increase adverse impacts on other properties or land within the floodplain from flooding.
  - (j) Development and infrastructure mitigates the impacts of hydraulic hazard due to predictable future increases in rainfall intensity on flooding.
  - (k) Development prioritises, in order, the safety of people, protection of public infrastructure and protection of private property, in the management of the economic, social and environmental impacts of flooding.

### 8.2.11.3 Performance outcomes and acceptable outcomes

**Table 8.2.11.3.A—Performance outcomes and acceptable outcomes**

Performance outcomes	Acceptable outcomes	Responses
Section A—If for accepted development subject to compliance with identified requirements (acceptable outcomes only) or assessable development for a dwelling house including any secondary dwelling  Note—Development for a dwelling house does not require assessment against any other sections of this code.		
PO1 Development involving any habitable or non-habitable part of a dwelling house, including any secondary dwelling, is located and designed to:	AO1.1 Development for a dwelling house including any secondary dwelling: (a) is not located in the Brisbane River flood planning area 1, 2a or 2b	Not applicable

<p>(a) minimise the risk to people from flood hazard;</p> <p>(b) achieve acceptable flood immunity;</p> <p>(c) minimise property impacts from a flood event up to and including the defined flood event;</p> <p>(d) minimise disruption to residents, recovery time and rebuilding or restoration costs after a flood event up to and including the defined flood event.</p>	<p>sub-categories or the Creek/waterway flood planning area 1 or 2 sub-categories; or</p> <p>(b) is only located in these sub-categories, if a Registered Professional Engineer Queensland certifies that the dwelling house and any secondary dwelling are structurally designed to be able to resist hydrostatic and hydrodynamic loads associated with flooding up to and including the defined flood event.</p>	
	<p>AO1.2 Development for a dwelling house and any secondary dwelling complies with the minimum flood planning levels in Table 8.2.11.3.B.</p> <p>Note—If located in an area that has no flood level information available from the Council such as an overland flow path, a Registered Professional Engineer of Queensland with expertise in undertaking flood studies is to certify that the flood level and development levels for the dwelling house and any secondary dwelling achieve the required flood planning levels in Table 8.2.11.3.B.</p>	Not applicable
	<p>AO1.3 Development involving a building undercroft complies with the minimum clearance requirements in Table 8.2.11.3.E.</p> <p>Editor's note—For creek/waterway, storm-tide and river flooding, applicable flood planning information is available from Council's FloodWise Property Report.</p> <p>Note—The Flood planning scheme policy provides guidance on undercroft design.</p>	Not applicable
<p>PO2 Development within the Creek/waterway flood planning area sub-categories or Overland flow flood planning area sub-category:</p> <p>(a) maintains the conveyance of flood waters to allow flow and debris to pass</p>	<p>AO2 Development:</p> <p>(a) is not located within the Creek/waterway flood planning area 1, 2 or 3 sub-categories or the Overland flow flood planning area sub-category; or</p> <p>(b) provides an open undercroft area from</p>	Not applicable

<p>predominantly unimpeded through the site;</p> <p>(b) does not concentrate, intensify or divert floodwater onto upstream, downstream or adjacent properties;</p> <p>(c) will not result in a material increase in flood levels or flood hazard on upstream, downstream or adjacent properties.</p>	<p>natural ground level to habitable floor level for any area inundated by the defined flood event; or</p> <p>Note—This undercroft area is not suitable for providing non-habitable rooms, secure storage of valuables, or future enclosing for storage or car parking. The clear area may include structural elements such as columns and floor substructure. The Flood planning scheme policy provides guidance on undercroft design.</p> <p>Editor's note—An open undercroft design may be achieved through a 'valance' treatment around the perimeter of an otherwise internally clear undercroft.</p> <p>Editor's note—For Creek/waterway, storm-tide and river flooding, applicable flood planning information is available from Council's FloodWise Property Report.</p> <p>(c) a report from a Registered Professional Engineer Queensland certifies that the development in the Creek/waterway flood planning area or Overland flow flood planning area sub-categories will not result in a material increase in flood level or flood hazard on upstream, downstream or adjacent properties.</p> <p>Note—Flood studies demonstrate that the development and engineering design methods conform to the principles within the Flood planning scheme policy and the Infrastructure design planning scheme policy.</p>	
<p>Section B—If accepted development subject to compliance with identified requirements (acceptable outcomes only) or assessable development other than for a dwelling house or reconfiguring a lot</p> <p>Note—If development that is accepted development subject to compliance with identified requirements complies with the acceptable outcomes of this part, no further assessment against this code is required.</p>		
<p>PO3 Development:</p> <p>(a) is compatible with flood hazard in a defined flood event;</p> <p>(b) minimises the risk to people from flood hazard;</p> <p>(c) does not reduce the</p>	<p>AO3 Development for a material change of use is identified in Table 8.2.11.3.C as compatible with the flood hazard in the relevant flood planning area.</p>	<p>Refer to Flood Impact Assessment Report prepared by MRG Water.</p>

<p>ability of evacuation resources including emergency services to access and evacuate the site in a flood emergency, with consideration to the scale of the development;</p> <p>(d) minimises impacts on property from flooding;</p> <p>(e) minimises disruption to residents, business or site operations and recovery time due to flooding;</p> <p>(f) minimises the need to rebuild structures after a flood event greater than the defined flood event.</p> <p>Note—Where Table 8.2.11.3.C identifies that a flood risk assessment is required, compliance with this performance outcome can be achieved by submitting a flood risk assessment, which may be included within a flood study, addressing the criteria within this performance solution. Preparing flood risk assessments and flood studies is required to be in accordance with the Flood planning scheme policy.</p> <p>Note—An emergency management plan prepared in accordance with the Flood planning scheme policy, which sets out procedures for evacuation due to flooding may be used to demonstrate compliance with this performance outcome.</p>		
<p>PO4 Development for a park ensures that the design of a park and location of structures and facilities responds to the flood hazard and balances the safety of intended users with:</p> <p>(a) maintaining continuity of operations;</p> <p>(b) impacts of flooding on asset life and ongoing maintenance costs;</p> <p>(c) efficient recovery after flood events;</p> <p>(d) recreational benefits to</p>	<p>AO4.1 Development involving a building or structure in a park complies with the flood planning levels specified in Table 8.2.11.3.D.</p> <p>AO4.2 Development involving a building or structure in a park where Table 8.2.11.3.D does not apply:</p> <p>(a) is not located within the 20% AEP flood extent of any creek/waterway or overland flow path; or</p> <p>(b) is located above the 20% AEP flood level of any creek/waterway or</p>	<p>Refer to Flood Impact Assessment Report prepared by MRG Water.</p> <p>Refer to Flood Impact Assessment Report prepared by MRG Water.</p>

the city; (e) availability of suitable land within the park.	overland flow path.	
Section C—If for assessable development other than for a dwelling house		
<p>PO5 Development is located and designed to:</p> <p>(a) minimise the risk to people from flood hazard on the site;</p> <p>(b) minimise flood damage to the development and contents of buildings up to the defined flood event;</p> <p>(c) provide suitable amenity;</p> <p>(d) minimise disruption to residents, recovery time and the need to rebuild structures after a flood event up to and including the defined flood event.</p>	<p>AO5.1 Development complies with the flood planning levels specified in Table 8.2.11.3.D.</p> <p>Note—If located in an area with no Council-derived flood levels such as an overland flow path, a Registered Professional Engineer Queensland with expertise in undertaking flood studies is to derive the applicable flood level and certify that the development meets the required flood planning levels in Table 8.2.11.3.D. The study is to demonstrate that the development and engineering design methods conform to the principles within the Flood planning scheme policy and the Infrastructure design planning scheme policy.</p>	Refer to Flood Impact Assessment Report prepared by MRG Water.
	<p>AO5.2 Development is:</p> <p>(a) not located in the:</p> <p>(i) Brisbane River flood planning area 1, 2a, or 2b sub-categories;</p> <p>(ii) Creek/waterway flood planning area 1 or 2 sub-categories;</p> <p>(iii) Overland flow flood planning area sub-category; or</p> <p>(b) only located in these sub-categories if a Registered Professional Engineer Queensland with expertise in undertaking flood studies certifies that:</p> <p>(i) the development design, siting and any mitigation measures will ensure the development is structurally adequate to resist hydrostatic, hydrodynamic and debris impact loads associated with</p>	Refer to Flood Impact Assessment Report prepared by MRG Water.

	<p>flooding up to the defined flood event; and</p> <p>(ii) the risk to people is managed to an acceptable level.</p>	
<p>PO6 Development involving essential electrical services or a basement storage area is suitably located and designed to ensure public safety and minimise flood recovery and economic consequences of damage during a flood.</p>	<p>AO6.1 Development ensures that:</p> <p>(a) all areas containing essential electrical services comply with the flood planning levels in Table 8.2.11.3.D; or</p> <p>(b) if a basement contains essential electrical services or a private basement storage area, the basement is a waterproof structure with walls and floors impermeable to the passage of water with all entry points and services located at or above the relevant flood planning level in Table 8.2.11.3.D.</p> <p>Note—A basement storage area does not include a bike storage room, change room, building maintenance storage and non-critical electrical services.</p>	Development complies.
	<p>AO6.2 Development involving a basement that relies on a pumping solution to manage floodwater ingress or for dewatering after a flood provides a secondary pump system with a backup power source for the pump.</p>	Not applicable
<p>PO7 Development does not directly or indirectly create a material adverse impact on flood behaviour or drainage on properties that are upstream, downstream or adjacent to the development.</p>	<p>AO7.1 Development:</p> <p>(a) does not block, or divert floodwaters for any area affected by creek/waterway or overland flow flooding, excluding storm-tide flooding and Brisbane River flooding sources; or</p> <p>(b) does not result in a material increase in flood level or hydraulic hazard on upstream, downstream or adjacent properties.</p> <p>Note—Compliance with this acceptable solution can be demonstrated by the submission of a</p>	Refer to Flood Impact Assessment Report prepared by MRG Water.



	flood study by a Registered Professional Engineer of Queensland with expertise in undertaking flood studies demonstrating that the development and engineering design methods conform to the principles within the Flood planning scheme policy and the Infrastructure design planning scheme policy.	
	<p>AO7.2 Development retains existing overland flow paths and does not rely wholly on piped solutions to manage major flows.</p>	Development complies.
	<p>AO7.3 Development which creates a new overland flow path or significantly modifies an existing overland flow path via earthworks does not materially worsen hydraulic hazard on the site from existing conditions.</p> <p>Note—Compliance with this acceptable solution can be demonstrated by the submission of a flood study by a Registered Professional Engineer of Queensland with expertise in undertaking flood studies demonstrating that the development and engineering design methods conform to the principles within the Flood planning scheme policy and the Infrastructure design planning scheme policy.</p>	Not applicable
<p>PO8 Development for filling or excavation in an area affected by creek/waterway flooding does not directly, indirectly or cumulatively cause any material increase in flooding or hydraulic hazard or involve significant redistribution of flood storage from high to lower areas in the floodplain.</p> <p>Note—This can be demonstrated by undertaking earthworks in compliance with the Compensatory earthworks planning scheme policy.</p> <p>Note—This part of the code applies to all development other than a dwelling house and any secondary dwelling which involves filling or excavation, whether or not the development application comprises a separate development application for operational work involving filling or excavation.</p>	<p>AO8 Development ensures that no filling or excavation greater than 100mm is located in the Creek/waterway flood planning area 1, 2 or 3 sub-categories if contained in the 5% AEP flood extent of any Creek/waterway flood planning area sub-category for which no waterway corridor has been mapped in the Waterway corridors overlay.</p>	Refer to Flood Impact Assessment Report prepared by MRG Water.

<p><b>PO9</b> Development ensures that the building and site design:</p> <ul style="list-style-type: none"> <li>(a) maintains the conveyance capacity of existing overland flow paths and creek/waterways;</li> <li>(b) ensures floodwaters and flood debris can pass predominantly unimpeded under a structure or building to minimise property or building damage, including for a flood larger than the defined flood event;</li> <li>(c) mitigates flood impacts by ensuring that filling, excavation and location of services are designed to allow for the conveyance of floodwater across the site.</li> </ul> <p>Note—The Flood planning scheme policy provides guidance on relevant considerations in determining minimum undercroft clearances and treatment of ground level in undercroft areas where floodwater conveyance is required underneath development.</p>	<p><b>AO9.1</b> Development involving a building undercroft in the Creek/waterway flood planning area sub-categories or the Overland flow flood planning area sub-category:</p> <ul style="list-style-type: none"> <li>(a) complies with the minimum building undercroft clearance requirements in Table 8.2.11.3.E;</li> <li>(b) not located directly above any part of a waterway corridor as mapped in the Waterway corridors overlay.</li> </ul>	Refer to Flood Impact Assessment Report prepared by MRG Water.
	<p><b>AO9.2</b> Development involving a building undercroft in the Creek/waterway flood planning area sub-categories or the Overland flow flood planning area sub category:</p> <ul style="list-style-type: none"> <li>(a) has a ground level within the undercroft area that is free draining;</li> <li>(b) does not involve excavation below ground level of more than 300mm within the undercroft area.</li> </ul>	Refer to Flood Impact Assessment Report prepared by MRG Water.
<p><b>PO10</b> Development for vulnerable uses, difficult to evacuate uses or assembly uses optimises vehicular access and efficient evacuation from the development to parts of the road network unaffected by flood hazard, in order to:</p> <ul style="list-style-type: none"> <li>(a) protect safety of users and emergency services personnel;</li> <li>(b) support efficient emergency services access and site evacuation with consideration to the scale of development.</li> </ul> <p>Note—A flood risk assessment may be required to address the performance outcomes or acceptable solutions which deal</p>	<p><b>AO10</b> Development for vulnerable uses, difficult to evacuate uses or assembly uses:</p> <ul style="list-style-type: none"> <li>(a) is not isolated in any event up to the relevant flood planning level specified in Table 8.2.11.3.L; or</li> <li>(b) has direct vehicle access to a critical route or interim critical route in the Critical infrastructure and movement network overlay for evacuation in a flood; or</li> <li>(c) can achieve vehicular evacuation to a suitable flood-free location.</li> </ul> <p>Note—A suitable flood-free location is of a size and nature sufficient to provide for the size and characteristics of the population likely to need evacuation to that area.</p>	Development complies.

with evacuation and isolation arrangements, and the ability to take refuge. The Flood planning scheme policy provides information for undertaking flood risk assessments.		
<p><b>PO11</b> Development has access which, having regard to hydraulic hazard, provides for safe vehicular and pedestrian movement and emergency services access to adjoining roads.</p>	<p><b>AO11.1</b> Development provides an access or driveway into the site which is:</p> <ul style="list-style-type: none"> <li>(a) trafficable during the defined flood event;</li> <li>(b) not located in the Creek/waterway flood planning area 1 sub-category;</li> <li>(c) not located in the Overland flow flood planning area sub-category if the hydraulic hazard is unsafe in the defined flood event;</li> <li>(d) the access or driveway is not inundated by a 10% AEP flood.</li> </ul>	Development complies.
	<p><b>AO11.2</b> Development located in the Creek/waterway flood planning area 1, 2, 3 or 4 sub-categories locates any disabled access in the highest part of the site.</p> <p>Note—explanation of hydraulic hazard provided in the Flood planning scheme policy.</p>	Development complies
<p><b>PO12</b> Development involving a new road, a bridge or culvert is designed to minimise impacts to flood behaviour, minimise disruption to traffic during a flood and allow for emergency access.</p>	<p><b>AO12</b> Development involving a new road complies with the flood planning levels in Table 8.2.11.3.F.</p>	Not applicable
<p><b>PO13</b> Development for pedestrian and cyclist paths:</p> <ul style="list-style-type: none"> <li>(a) provides a suitable level of trafficability;</li> <li>(b) manages the impacts of flooding on asset life and ongoing maintenance costs;</li> <li>(c) balances route availability with recreational and transport connectivity</li> </ul>	<p><b>AO13.1</b> Development for cyclist and pedestrian facilities other than on public roads, including those traversing through a park and adjacent to a watercourse and overland flow path, are located above the 39% AEP (2 year ARI) flood immunity from all flooding sources.</p> <p>Note—If the site is subject to more than one type of flooding, the requirement that affords the greatest level of protection will apply.</p>	Development complies

benefits to the city.	AO13.2 All new on-road cyclist and pedestrian facilities comply with the flood planning levels and trafficability standards for the applicable category of road in Table 8.2.11.3.F or Table 8.2.11.3.K.	Development complies
PO14 Development which increases the residential population within the Brisbane River flood planning area sub-categories minimises the risk to people in all flood events with consideration to flood hazard, including warning time.	AO14 Development in the Brisbane River flood planning area sub-categories in areas where the residential flood level is greater than 12.8m AHD involving: (a) an increase in the number of residential dwellings; or (b) additional residential lots is not subject to an unsafe hydraulic hazard in the 0.2% AEP flood event.  Note—Explanation of a hydraulic hazard is provided in the Flood planning scheme policy.	Not applicable
Additional performance outcomes and acceptable outcomes for essential community infrastructure		
PO15 Development involving essential community infrastructure: (a) remains functional to serve community need during and immediately after a flood event, or is part of a network that is able to maintain the function of the essential community infrastructure when parts of the development are unable to function during or after a flood; (b) is designed, sited and operated to avoid adverse impacts on the community or the environment due to the impacts of flooding on infrastructure, facilities or access and egress routes; (c) is able to remain functional or is part of a network which is able to remain functional even when other infrastructure or services (such as	AO15 Development involving essential community infrastructure: (a) is ancillary to and not relied upon for the provision of the essential service during a flood; or (b) is located above the flood planning levels in Table 8.2.11.3.G; (c) has access to or provides the necessary back-up emergency electricity and communications supply in times of flood; (d) is designed and constructed to resist hydrostatic and hydrodynamic forces as a result of inundation by the flood event listed for the development type in Table 8.2.11.3.G; (e) that services a local area: (i) is able to be accessed in times of flood to service local community needs up to the event listed for that development type in Table 8.2.11.3.G; or	Not applicable

<p>electricity supply) may be compromised in a flood event;</p> <p>(d) contains mitigation measures which are not entirely dependent on human activation to respond to a flood event.</p> <p>Note—Protection of function is required up to and including the flood event in Table 8.2.11.3.G.</p>	<p>(ii) has a service continuity plan that demonstrates the continued provision of service during the relevant flood event.</p>	
<p>Additional performance outcomes and acceptable outcomes if development involves the processes in Table 8.2.11.3.H</p>		
<p>PO16</p> <p>Development involving the storage and handling of hazardous materials avoids or minimises risks to public health and safety and the environment, by:</p> <p>(a) protecting underground tanks for hazardous materials against the forces of buoyancy, velocity flow and debris impacts;</p> <p>(b) securing above-ground tanks for hazardous materials against flotation and lateral movement;</p> <p>(c) preventing damage to hazardous materials pipework or entry of floodwater into hazardous materials pipework;</p> <p>(d) preventing damage to or off-site release of packages, drums or containers storing hazardous materials.</p> <p>Note—A chemical hazards flood risk report prepared in accordance with the Management of hazardous chemicals in flood prone areas planning scheme policy can assist in demonstrating achievement of this performance outcome.</p> <p>Note—A pump drainage system is not an acceptable measure to meet the performance outcome.</p>	<p>AO16</p> <p>(a) Development does not include the storage or handling of hazardous chemicals that exceed the hazardous chemicals flood hazard threshold quantities in Table 8.2.11.3.M.</p> <p>(b) Development involving the processes listed in Table 8.2.11.3.H:</p> <p>(i) where located in the Flood overlay area, occurs only in the Creek/waterway flood planning area 5 sub-category or the Brisbane River flood planning area 5 sub-category; or</p> <p>(ii) is consistent with the standards contained in the Management of hazardous chemicals in flood prone areas planning scheme policy and can operate without risk of environmental harm during a flood event.</p> <p>Note—The Management of hazardous chemicals in flood prone areas planning scheme policy sets out further information and processes including risk assessment for the management of hazardous chemicals in flood planning areas.</p>	<p>Not applicable</p>
<p>Additional performance outcomes and acceptable outcomes for reconfiguring a lot</p>		

<p><b>PO17</b> Development locates and designs all lots resulting from reconfiguring a lot to:</p> <p>(a) minimise the risk to people from flood hazard;</p> <p>(b) minimise damage to property from flood hazard;</p> <p>(c) facilitate safe and efficient evacuation.</p> <p>Note—</p> <ul style="list-style-type: none"> <li>Consideration of all floods up to the probable maximum flood is relevant to minimising the risk to people.</li> <li>Flood warning time is not considered sufficient in the Creek/waterway planning area sub-categories or the Overland flow flood planning area sub-category.</li> <li>Filling above the flood planning level for a flood event greater than the defined flood event cannot be assumed to mitigate the flood hazard.</li> </ul>	<p><b>AO17.1</b> Development creating new lots is identified in Table 8.2.11.3.I as suitable within the relevant flood planning area.</p>	Not applicable
	<p><b>AO17.2</b> Development provides for reconfiguring a lot design that achieves a road and lot layout which:</p> <p>(a) provides trafficable vehicular egress for evacuation during a defined flood event;</p> <p>(b) optimises hazard-free movement away from sources of flood hazard within the development.</p> <p>Note—Further advice on road and lot layout is contained in the Flood planning scheme policy.</p>	Not applicable
	<p><b>AO17.3</b> Development which creates a new residential lot in an area subject to Brisbane River flooding, if the residential flood level is greater than 12.8m AHD is not subject to a hydraulic hazard greater than 0.6m<sup>2</sup>/s DV or 0.6m deep in a 0.2% AEP flood.</p> <p>Note—Refer to the Flood planning scheme policy for further explanation on the 0.2% AEP flood.</p>	Not applicable
<p><b>PO18</b> Development involving reconfiguring a lot:</p> <p>(a) minimises the risk to people from flood hazard;</p> <p>(b) creates safe evacuation routes or avoids isolation of the development during a flood greater than the defined flood event;</p> <p>(c) minimises damage to property and services;</p> <p>(d) provides lots and roads that are not frequently flooded or subject to nuisance ponding or seepage;</p> <p>(e) ensures lots created for park or private open space minimise the risk to people from flood</p>	<p><b>AO18.1</b> Development involving reconfiguring a lot ensures:</p> <p>(a) all lots comply with the flood planning levels in Table 8.2.11.3.J;</p> <p>(b) a new road complies with the flood planning levels in Table 8.2.11.3.F.</p>	Not applicable
	<p><b>AO18.2</b> Development involving reconfiguring a lot creating more than 6 residential lots or a lot for industry ensures the flood planning levels of a dedicated road fronting the development or providing primary access within 200m of the development:</p> <p>(a) complies with Table 8.2.11.3.K; or</p> <p>(b) has acceptable trafficability in accordance</p>	Not applicable

hazard and are fit for purpose; (f) provides a lot that is not substantially burdened by flood mitigation infrastructure.	with the requirements in the Flood planning scheme policy and the Queensland Urban Drainage Manual.  Note—The Flood planning scheme policy contains supporting information about trafficability on existing roads and serviceability during floods.	
	AO18.3 Development protects the conveyance of flood hazard area by providing an easement over the: (a) 2% AEP flood extent for overland flow flooding; (b) 1% AEP flood extent for creek/waterway flooding.	Not applicable

**Table 8.2.11.3.B—Flood planning levels for a dwelling house (BCA building classification 1a)**

Flooding source	Minimum habitable floor level	Minimum non-habitable floor level (i.e. utility areas, garage, laundry, storage room and basement entries)
Brisbane River	RFL + 500mm	2% AEP flood level + 300mm
Creek/waterway	1% AEP flood level + 500mm	1% AEP flood level + 300mm
Overland flow	2% AEP flood level + 500mm	2% AEP level + 300mm
Note—Where no detailed flood level information is available from the Council such as an overland flow path, a Registered Professional Engineer Queensland with expertise in flood studies is to derive the relevant flood level and certify that the development level for the dwelling house, including any secondary dwelling, meets the required flood immunity standards.		

Note—

- Where the site is subject to more than one flooding source, the minimum flood planning level is the highest level determined from these flooding sources.
- Flood planning levels for a dwelling house from storm-tide inundation are located in the Coastal hazard overlay code.
- A flood event with an AEP of 1% is the equivalent of a 100 year ARI flood event.
- A flood event with an AEP of 2% is the equivalent of a 50 year ARI flood event.

**Table 8.2.11.3.C—Land use compatibility with flood hazard**

C – Land use is compatible with the flood hazard subject to meeting all other relevant requirements.

# – Flood risk assessment in accordance with requirements of the Flood planning scheme policy is required to demonstrate the use is compatible with the flood hazard.

Accommodation activities	Brisbane River flood planning area sub-category	Creek/waterway flood planning area sub-category	Overland flow flood planning area

												sub-category
	5	4	3	2 B	2 A	1	5	4	3	2	1	
Community residence	C	#	#	#	#	#	C	#	#	#	#	#
Dual occupancy	C	C	#	#	#	#	C	#	#	#	#	C
Dwelling unit	C	C	#	#	#	#	C	#	#	#	#	C
Multiple dwelling (1–3 storeys)	C	C	#	#	#	#	C	#	#	#	#	C
Multiple dwelling (4+ storeys)	C	C	C	#	#	#	C	#	#	#	#	C
Nature-based tourism	C	C	C	#	#	#	C	#	#	#	#	C
Relocatable home park	C	#	#	#	#	#	C	#	#	#	#	C
Residential care facility	#	#	#	#	#	#	#	#	#	#	#	#
Resort complex	C	C	C	#	#	#	C	#	#	#	#	C
Retirement facility	C	#	#	#	#	#	#	#	#	#	#	C
Rooming accommodation, short-term accommodation or hotel where including accommodation (1–3 storeys)	C	C	#	#	#	#	C	#	#	#	#	C
Rooming accommodation, short-term accommodation or hotel where including accommodation (4+ storeys)	C	C	C	#	#	#	C	#	#	#	#	C
Tourist park	C	C	#	#	#	#	C	C	#	#	#	C
Commercial land uses	Brisbane River flood planning area sub-category						Creek/waterway flood planning area sub-category					Overland flow flood planning area sub-category
	5	4	3	2 B	2 A	1	5	4	3	2	1	
Agricultural supplies store	C	C	#	#	#	#	C	#	#	#	#	C
Animal husbandry	C	C	#	#	#	#	C	#	#	#	#	C
Animal keeping	C	C	#	#	#	#	C	#	#	#	#	C
Aquaculture	C	C	#	#	#	#	C	#	#	#	#	C
Bulk landscape supplies	C	C	C	C	C	C	C	C	C	#	#	C
Car park ancillary to another use	C	C	C	C	C	#	C	C	#	#	#	C
Car wash	C	C	C	C	C	#	C	C	#	#	#	C
Food and drink outlet	C	C	#	#	#	#	C	C	#	#	#	C
Function facility	C	C	#	#	#	#	C	#	#	#	#	C
Garden centre	C	C	C	#	#	#	C	C	#	#	#	C
Hardware and trade supplies	C	C	#	#	#	#	C	C	#	#	#	C
Home-based business	C	C	#	#	#	#	C	#	#	#	#	C
Hotel (where not including accommodation)	C	C	#	#	#	#	C	#	#	#	#	C
Market	C	C	C	#	#	#	C	C	#	#	#	C
Nightclub entertainment facility	C	C	#	#	#	#	C	#	#	#	#	C
Office	C	C	#	#	#	#	C	#	#	#	#	C
Outdoor sales	C	C	#	#	#	#	C	C	#	#	#	C
Parking station	C	C	C	C	C	#	C	C	#	#	#	C
Roadside stalls	C	C	C	#	#	#	C	C	#	#	#	C
Sales office	C	C	#	#	#	#	C	C	#	#	#	C
Shop, Adult store	C	C	#	#	#	#	C	#	#	#	#	C
Shopping centre	C	#	#	#	#	#	C	#	#	#	#	C
Showroom	C	C	#	#	#	#	C	C	#	#	#	C
Theatre	C	C	#	#	#	#	C	#	#	#	#	C
Tourist attraction	C	C	C	#	#	#	C	C	#	#	#	C



Veterinary service	C	C	#	#	#	#	C	#	#	#	#	C
Wholesale nursery	C	C	C	C	C	C	C	C	C	#	#	C
Community land uses	Brisbane River flood planning area sub-category						Creek/waterway flood planning area sub-category					Overland flow flood planning area sub-category
	5	4	3	2 B	2 A	1	5	4	3	2	1	
Childcare centre	C	#	#	#	#	#	C	#	#	#	#	#
Club	C	C	#	#	#	#	C	C	#	#	#	C
Community care centre	C	#	#	#	#	#	C	#	#	#	#	C
Community use	C	#	#	#	#	#	C	C	#	#	#	C
Educational establishment (and outdoor education centre)	C	#	#	#	#	#	C	#	#	#	#	C
Environment facility	C	C	C	C	C	C	C	C	C	C	C	C
Health care service	C	#	#	#	#	#	C	#	#	#	#	C
Hospital	#	#	#	#	#	#	#	#	#	#	#	#
Indoor sport and recreation	C	C	#	#	#	#	C	C	#	#	#	C
Major sport, recreation and entertainment facility	C	#	#	#	#	#	C	C	#	#	#	C
Motor sport facility	C	C	C	#	#	#	C	C	C	#	#	C
Outdoor sport and recreation	C	C	C	#	#	#	C	C	#	#	#	C
Park	C	C	C	C	C	C	C	C	C	C	C	C
Place of worship	C	#	#	#	#	#	C	C	#	#	#	C
Special purpose land uses	Brisbane River flood planning area sub-category						Creek/waterway flood planning area sub-category					Overland flow flood planning area sub-category
	5	4	3	2 B	2 A	1	5	4	3	2	1	
Air service	C	#	#	#	#	#	C	#	#	#	#	C
Cemetery	C	C	C	#	#	#	C	C	#	#	#	C
Crematorium	C	#	#	#	#	#	C	#	#	#	#	C
Detention facility	#	#	#	#	#	#	#	#	#	#	#	C
Emergency services	#	#	#	#	#	#	#	#	#	#	#	#
Funeral parlour	C	#	#	#	#	#	C	#	#	#	#	C
Landing	C	C	C	C	C	C	C	C	C	C	#	C
Major electricity infrastructure	#	#	#	#	#	#	#	#	#	#	#	#
Port service	C	C	C	#	#	#	C	C	C	C	#	C
Substation	C	#	#	#	#	#	C	#	#	#	#	#
Telecommunications facility	C	#	#	#	#	#	C	#	#	#	#	#
Utility installation	C	#	#	#	#	#	#	#	#	#	#	#
Industry land uses	Brisbane River flood planning area sub-category						Creek/waterway flood planning area sub-category					Overland flow flood planning area sub-category
	5	4	3	2 B	2 A	1	5	4	3	2	1	
Extractive industry	C	C	C	#	#	#	C	C	C	#	#	C
High impact industry	C	C	#	#	#	#	C	C	#	#	#	C

Intensive animal industry	C	C	#	#	#	#	C	#	#	#	#	C
Intensive horticulture	C	C	C	#	#	#	C	C	#	#	#	C
Low impact industry	C	C	#	#	#	#	C	C	#	#	#	C
Marine industry	C	C	C	#	#	#	C	C	#	#	#	C
Medium impact industry	C	C	#	#	#	#	C	C	#	#	#	C
Research and technology industry	C	#	#	#	#	#	C	#	#	#	#	C
Rural industry	C	C	C	C	C	C	C	C	C	#	#	C
Service industry	C	C	#	#	#	#	C	C	#	#	#	C
Service station	C	#	#	#	#	#	C	#	#	#	#	C
Special industries	C	#	#	#	#	#	#	#	#	#	#	C
Transport depot	C	#	#	#	#	#	C	#	#	#	#	C
Warehouse	C	C	#	#	#	#	C	#	#	#	#	C

Note—Caretaker's accommodation and home-based business are considered ancillary to the dominant land use.

**Table 8.2.11.3.D—Flood planning categories for development types**

BCA building classification(1)	Development types and design levels, assigned design floor or pavement levels	Category – refer to Table 8.2.11.3.L for flood planning levels
Class 1–4	Habitable room(2)	Category A
	Non-habitable room including patio and courtyard	Category B
	Non-habitable part of a Class 2 or Class 3 building excluding the essential services(2) control room	Category B Risk management approach to Brisbane River flooding is permitted (refer to Flood planning scheme policy)
	Parking located in the building undercroft of a multiple dwelling	Category C
	Carport(4), unroofed car park; vehicular manoeuvring area	Category D
	Essential electrical services(2) of a Class 2 or Class 3 building only	Category A(6)
	Basement parking entry(3)	Category C + 300mm
Class 5, Class 6, or Class 8	Building floor level	Category C Risk management approach to Brisbane River flooding is permitted (refer to Flood planning scheme policy)
	Garage or car park located in the building undercroft(3)	Category C
	Carport(4) or unroofed car park	Category D
	Vehicular access and manoeuvring areas	Category D
	Basement parking entry(3)	Category C
	Essential electrical services(2)	Class 8 – Category C(6) Class 5 & 6 – Category A(6)
Class 7a	Refer to the relevant building class specified in this table	
Class 7b	Building floor level	Category C Risk management approach to Brisbane River flooding is permitted (refer to Flood planning scheme policy)
	Vehicular access and manoeuvring area	Category D
	Essential electrical services(2)	Category C
Class 9	Building floor level	Category A

	Building floor level for habitable rooms in Class 9a or 9c where for a residential care facility	0.2% AEP flood
	Building floor level for habitable rooms in Class 9b where involving children, such as a childcare centre	0.2% AEP flood
	Garage or car park located in the building undercroft(3)	Category C
	Carport(5) or unroofed car park	Category D
	Vehicular access and manoeuvring areas	Category D
	Essential electrical services(2)	Category A
Class 10a	Car parking facility	Refer to the relevant building class specified in this table
	Shed(5) or the like	Category D
Class 10b	Swimming pool	Category E
	Associated mechanical and electrical pool equipment	Category C
	Other structures	Flood planning levels do not apply

Notes—

(1) Refer to the Building Code of Australia for definitions of building classifications.

(2) Essential electrical services include any area or room used for fire control panel, telephone PABX, sensitive substation equipment including transformers, low voltage switch gear, high voltage switch gear, battery chargers, protection control and communication equipment, low voltage cables, high voltage cables, and lift or pump controls.

(3) Basement car parks must be suitably waterproofed and all air vents, air-conditioning ducts, pedestrian access and entry and exit ramps into the basement must comply with the applicable flood planning levels in this table.

(4) A shelter for a motor vehicle, which has a roof and one or more open sides, and which can be built against the side of a building.

(5) A slight or rough structure built for shelter and storage; or a large strongly built structure, often open at the sides or end.

(6) Where essential electrical services are proposed in a basement below the specified flood planning level, the flood immunity of all air vents, air-conditioning ducts, pedestrian access, lift shafts and entry/exit ramps at the basement entrance and any other openings into that basement must conform with the flood planning levels for Category A for Residential development, and the relevant basement entry level of all other uses. To ensure flood immunity, basements require a waterproof basement design to prevent flood waters entering the basement.

- A flood event with an AEP of 2% is the equivalent of a 50 year ARI flood event.
- A flood event with an AEP of 0.2% is the equivalent of a 500 year ARI flood event.
- Where a building has a combination of uses that includes a component of classes 2, 3 or 9, the essential services for that building shall comply with the requirements of the building class with the greatest flood planning level requirement.
- Use classes for residential development also include basement storage.

**Table 8.2.11.3.E— Building undercroft clearances**

Flooding source	Minimum clearance requirement(1)(3)
Overland flow— Hydraulic Hazard (DV <0.6 m <sup>2</sup> /s and depth <600mm in 2% AEP flood event)	Lowest floor level is to be 1.5m(2) above the highest ground elevation in undercroft area
Overland flow— Hydraulic Hazard (DV >0.6 m <sup>2</sup> /s or depth	Lowest floor level is to be 2.5m(2) above the highest ground elevation in undercroft area

>600mm in 2% AEP flood event)	
Creek/waterway (Flood planning area 1, 2 or 3 sub-categories)	Lowest floor level is to be 2.5m <sup>(2)</sup> above the highest ground elevation in undercroft area
Creek/waterway (Flood planning area 4 sub-category)	Lowest floor level is to be 1.5m <sup>(2)</sup> above the highest ground elevation in undercroft area

Notes—

(1) The minimum undercroft only relates to the minimum clearance requirements from ground level to the finished floor level and not minimum flood planning levels. Where the flood planning level requirement with freeboard results in a higher finished floor level that higher level needs to be adopted.

(2) Refer to the Flood planning scheme policy for explanatory material regarding clearances and considerations.

(3) The minimum undercroft clearance only applies to the area of undercroft above the relevant flood extent or flood planning area sub-category.

**Table 8.2.11.3.F—Flood planning levels for a new road**

Flooding source(1)	Minimum design levels at the crown of the road (m AHD)(2)	
	Residential development	Industrial or commercial development
Brisbane River(3)	Defined flood level	5% AEP flood level
Creek/waterway	1% AEP flood level	2% AEP flood level
Overland flow	2% AEP flood level	2% AEP flood level

Notes—

(1) Where the road is subject to more than one flooding source, the minimum flood planning level is the highest level determined from these sources.

(2) Where flood levels are not available from Council's FloodWise Property Report, such as for overland flow flooding, a suitably qualified Registered Professional Engineer Queensland with expertise in undertaking flood studies is required to estimate the relevant flood level.

(3) A risk management approach determining flood planning levels of roads for Brisbane River flooding can be applied as an alternative to Table 8.2.11.3.F. Typically such roads would have a flood immunity no worse than the surrounding roads that support a similar land use, otherwise a Flood Risk Assessment which complies with the relevant requirements of the Flood planning scheme policy is provided.

**Table 8.2.11.3.G—Flood planning levels for essential community infrastructure**

Type of essential community infrastructure	Minimum design levels
Emergency services	0.2% AEP flood
Emergency services, where for an emergency shelter	0.5% AEP flood
Emergency services, where for police facilities	0.5% AEP flood
Hospital and health care service where associated with a hospital	0.2% AEP flood
Community facility where involving storage of valuable records or items of historic or cultural significance (e.g. galleries and libraries)	0.5% AEP flood
State-controlled roads Major or minor electricity infrastructure not otherwise listed in this table	No specific recommended level but development proponents should ensure that the infrastructure is optimally located and designed to achieve suitable levels of service, having regard to the processes and policies of

Utility installation where for rail transport services Air service Telecommunications facility	the administering government agency.
Power stations (as defined in the <i>Electricity Act 1994</i> ) or renewable energy facility.	0.2% AEP flood
Major electricity infrastructure where a major switch yard	0.2% AEP flood
Substations	0.5% AEP flood
Utility installation where for a sewage treatment plant	Defined flood event
Utility installation where for a water treatment plant	0.5% AEP flood

Note—A flood event with an AEP of 0.2% is the equivalent of a 500 year ARI flood event.

Note—A flood event with an AEP of 0.5% is the equivalent of a 200 year ARI flood event.

**Table 8.2.11.3.H—Table of processes requiring additional assessment in a flood planning area**

Process
(1) Oil refining or processing
(2) Producing, refining or processing gas or fuel gas
(3) Power station, including the activity of generating electricity by using fuel
(4) Producing, quenching, cutting, crushing or grading coke
(5) Waste incinerator, including thermal treatment of waste
(6) Pulp or paper manufacturing
(7) Tannery or works for curing animal skins, hides or finishing leather
(8) Textile manufacturing, including carpet manufacturing, wool scouring or carbonising, cotton milling, or textile bleaching, dyeing or finishing
(9) Rendering plant, including meat processing
(10) Manufacturing chemicals, poisons and explosives
(11) Manufacturing fertilisers involving ammonia
(12) Manufacturing polyvinyl chloride plastic
(13) Major hazard facilities for the storage and handling of dangerous goods
(14) Storage of hazardous chemicals in quantities that would exceed the hazardous chemicals flood hazard threshold set out in Table 8.2.11.3.M
(15) Manufacturing medium-density fibreboard, chipboard, particle board, plywood, laminated board or wood veneer products
(16) Manufacturing or processing plaster
(17) Enamelling workshop
(18) Galvanising works
(19) Anodising or electroplating workshop
(20) Powder coating workshop
(21) Treating timber for preservation using chemicals including copper, chromium, arsenic, borax and creosote
(22) Manufacturing soil conditioners by receiving, blending, storing, processing, drying or composting organic material or organic waste, including animal manures, sewage, septic sludges and domestic waste
(23) Manufacturing tyres, asbestos products, asphalt, cement, glass or glass fibre, mineral wool or ceramic fibre
(24) Abattoir, including meat processing
(25) Recycling chemicals, oils or solvents
(26) Waste disposal activity (other than waste incinerator), including waste transfer station operation

(27) Recycling, storing or reprocessing regulated waste, including regulated waste treatment
(28) Manufacturing batteries and battery recycling
(29) Drum and container reconditioning
(30) Water treatment
(31) Sewage treatment

**Table 8.2.11.3.I—Suitability of reconfiguring a lot within a flood planning area**

C – Reconfiguring a lot is suitable within a flood planning area

# – Flood risk assessment in accordance with the requirements of the Flood planning scheme policy is required to demonstrate the mitigation of risk from flood hazard

Flood planning area	Creek/waterway flood planning area sub-categories			Brisbane River flood planning area sub-categories		
	Residential	Industrial	Other	Residential	Industrial	Other
1	#	#	#	#	#	#
2/2a;2b	#	#	#	#	C	#
3	#	#	#	#	C	C
4	C	C	C	C	C	C
5	C	C	C	C	C	C

Notes—

- A flood risk assessment is required for residential reconfiguring a lot development where creating more than two new lots in the overland flow flood planning area sub-category.
- Additional requirements apply for the Brisbane River flood planning area sub-category if the residential flood level is greater than 12.8m AHD.
- Minimum site levels, requirements for no adverse off site impacts and other provisions in the planning scheme still apply.

**Table 8.2.11.3.J—Flood planning levels for reconfiguring a lot**

Flooding source(1)	Minimum lot levels (m AHD)(2)		
	Residential (creating 6 or less lots with no new road)	Residential (creating more than 6 lots), or a new road	Other than residential
Brisbane River	2% AEP flood level + 300mm	RFL + 0.3m	1% AEP flood level
Creek/waterway	Minimum 300m <sup>2</sup> area at the 1% AEP flood level + 300mm(3)	1% AEP flood level + 300mm	2% AEP flood level
Overland flow	Minimum 300m <sup>2</sup> area at the 2% AEP flood level + 300mm(3)	2% AEP flood level + 300mm	2% AEP flood level

Notes—

(1) Where the site is subject to more than one flooding source, the minimum flood planning level is the highest level determined from these sources.

(2) Where flood levels are not available from Council's FloodWise Property Report such as for overland flow flooding, a suitably qualified Registered Professional Engineer Queensland with expertise in undertaking flood studies is required to estimate the relevant flood level.

(3) The 300m<sup>2</sup> area is considered suitable for siting a dwelling house with open space area at or above the nominated flood planning level.

**Table 8.2.11.3.K—Flood planning levels for existing road providing access to or fronting a development**

Flooding source(1)	Minimum design levels at the crown of the road (m AHD)(2)(3)		
	Local road	Neighbourhood road	District road, suburban road, arterial road
Brisbane River	5% AEP flood level	2% AEP flood level	2% AEP flood level
Creek/waterway	5% AEP flood level	2% AEP flood level	2% AEP flood level
Overland flow	5% AEP flood level	5% AEP flood level	5% AEP flood level

Notes—

(1) Where the site is subject to more than one flooding source, the minimum flood planning level is the highest level determined from these sources.

(2) Where flood levels are not available from Council's FloodWise Property Report such as overland flow flooding a suitably qualified Registered Professional Engineer in Queensland with expertise in undertaking flood studies is required to estimate the relevant flood level. The Flood planning scheme policy sets out the requirements for a flood risk assessment process.

(3) The design standard for industry access is the 5% AEP flood level for all flooding sources.

**Table 8.2.11.3.L—Categories of flood planning levels**

Flooding source(1)	Minimum design floor or pavement levels (m AHD)(2) (refer to Table 8.2.11.3.D for assignment of these categories)				
	Category A	Category B	Category C	Category D	Category E
Brisbane River	RFL + 500mm	RFL + 300mm	DFL	5% AEP flood level	5% AEP flood level
Creek/waterway	1% AEP flood level + 500mm	1% AEP flood level + 300mm	1% AEP flood level	1% AEP flood level	5% AEP flood level
Overland flow	2% AEP flood level + 500mm	2% AEP flood level + 300mm	2% AEP flood level	2% AEP flood level	5% AEP flood level

Notes—

(1) Where the site is subject to more than one type of flooding that is overland flow flooding, creek or waterway flooding or river flooding, the minimum flood immunity level is the highest level determined from these sources.

(2) Where flood levels are not available from Council's FloodWise Property Report such as overland flow flooding, the applicant will need to engage a suitably qualified Registered Professional Engineer Queensland with expertise in undertaking flood studies required to estimate the relevant flood level. The Flood planning scheme policy sets out the requirements for a flood risk assessment process.

- A flood event with an AEP of 1% is the equivalent of a 100 year ARI flood event.
- A flood event with an AEP of 2% is the equivalent of a 50 year ARI flood event.
- A flood event with an AEP of 5% is the equivalent of a 20 year ARI flood event.

**Table 8.2.11.3.M—Hazardous chemicals flood hazard threshold**

Hazardous chemicals flood hazard threshold means any of the following:
A hazardous chemical listed in schedule 11 of the Work Health and Safety Regulation 2011

in a quantity that exceeds a threshold quantity stated in column 5 of schedule 11
A chemical classified as hazardous to the aquatic environment under the Australian Dangerous Goods Code in the Acute I or Chronic I category that exceeds 2500 litres or kilograms
A chemical classified as hazardous to the aquatic environment under the Australian Dangerous Goods Code in the Chronic II category that exceeds 10,000 litres or kilograms
A chemical classified as hazardous to the aquatic environment under the Australian Dangerous Goods Code and assigned to Packing Group III that exceeds 10,000 litres or kilograms
A chemical classified as hazardous to the aquatic environment under the Globally Harmonised System of Classification and Labelling of Chemicals that exceeds 10,000 litres or kilograms