

## 8.2.4 Flood Hazard Overlay Code

Table 8.2.4.1 - Flood hazard overlay code

Performance Outcomes	Acceptable Outcomes	Proposed Solution Explanation of how the development addresses the Acceptable Outcome and/or Performance Outcome.
<b>For accepted, accepted subject to requirements and assessable development (code, code (fast tracked) and impact)</b>		
<b>All flood hazard areas</b>		
<p><b>PO1</b> Development prevents the carriage or dispersal of contaminants or pollutants into the receiving environment.</p>	<p><b>AO1</b> The processing or storage of <i>dangerous goods</i> or <i>hazardous materials</i> is: (a) not undertaken in a flood hazard area on <b>Flood hazard overlay maps (OM-004)</b>; or (b) is located above the <i>defined flood level</i> plus 300mm freeboard.</p>	
<p><b>PO2</b> Community infrastructure is able to function effectively during and immediately after flood events.</p>	<p><b>AO2</b> Design levels for <i>buildings</i> must comply with the flood immunity standards specified in <b>Table 8.2.4.2</b> and <b>Table 8.2.4.3</b> where within a flood hazard area identified on <b>Flood hazard overlay maps (OM-004)</b>.</p> <p>Note- Refer to <b>SC6.2 – Planning Scheme Policy 1 – Design and Construction Standards</b> for definition of development type categories identified in <b>Table 8.2.4.3</b>.</p>	
<b>Extreme flood hazard area</b>		

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Performance Outcomes	Acceptable Outcomes	Proposed Solution Explanation of how the development addresses the Acceptable Outcome and/or Performance Outcome.
<p><b>PO3</b> Development within an Extreme flood hazard area on <b>Flood hazard overlay maps (OM-004)</b> is appropriate to the flood hazard risk having regard to the:</p> <ul style="list-style-type: none"> <li>(a) likelihood and frequency of flooding;</li> <li>(b) the flood risk acceptability of development;</li> <li>(c) the vulnerability of and safety risk to persons associated with the use; and</li> <li>(d) associated consequences of flooding in regard to impacts on proposed buildings, structures and supporting infrastructure.</li> </ul>	<p><b>Where for Material Change of Use</b> <b>AO3.1</b> Uses within the following <i>Activity groups</i> are not located within an Extreme flood hazard area identified on <b>Flood hazard overlay maps (OM-004)</b>:</p> <ul style="list-style-type: none"> <li>(a) <i>Accommodation activities</i>;</li> <li>(b) <i>Business activities</i>;</li> <li>(c) <i>Centre activities, Community activities or Entertainment activities</i>, except where for a <i>Club</i> with a maximum gross floor area of 100m<sup>2</sup>;</li> <li>(d) <i>Industry activities</i>;</li> <li>(e) <i>Rural activities</i>, except where for <i>animal husbandry, cropping, and permanent plantation</i>.</li> </ul>	
	<p><b>AO3.2</b> <i>Recreation activities</i> are not located within an Extreme flood hazard area identified on <b>Flood hazard overlay maps (OM-004)</b> except where for:</p> <ul style="list-style-type: none"> <li>(a) <i>Environment facility</i>;</li> <li>(b) <i>Park</i>; and</li> <li>(c) <i>Outdoor Sport and Recreation</i> (excluding the provision of ancillary facilities or amenities conducted within a <i>building</i>).</li> </ul>	

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Performance Outcomes	Acceptable Outcomes	Proposed Solution Explanation of how the development addresses the Acceptable Outcome and/or Performance Outcome.
<p><b>PO4</b> Development is located and designed to:</p> <ul style="list-style-type: none"> <li>(a) maintain and enhance the flood conveyance capacity of the premises;</li> <li>(b) not increase the number of people calculated to be at risk from flooding;</li> <li>(c) not increase the flood impact on adjoining premises;</li> <li>(d) ensure the safety of all persons by ensuring that development levels are set above the <i>defined flood level</i>;</li> <li>(e) reduce property damage; and</li> <li>(f) provide flood safe access to <i>buildings</i>.</li> </ul> <p>Note- <i>buildings</i> may be constructed from flood resistant, waterproof materials below the <i>defined flood level</i> where certified by a qualified structural engineer to be flood proof (including the ability to withstand damage from floodwater and debris) and where a performance solution to PO3 is also demonstrated.</p> <p>Note- in the event that a lawful <i>building</i> or <i>structure</i> is destroyed by flood or other event the building <b>may</b> be replaced where a building work approval is obtained and where not constituting a material change of use i.e. there is no increase in:</p> <ul style="list-style-type: none"> <li>i. <i>gross floor area</i>; or</li> <li>ii. the number of <i>dwellings</i> or bedrooms on the premises</li> </ul>	<p><b>Where for Material Change of Use or Building Work</b> <b>AO4.1</b> <i>Buildings</i>, including extensions to existing <i>buildings</i> are:</p> <ul style="list-style-type: none"> <li>(a) not located within an Extreme flood hazard area on <b>Flood hazard overlay maps (OM-004)</b>; or</li> <li>(b) elevated above the <i>defined flood level</i>; and</li> <li>(c) elevated above the <i>defined flood level</i> plus 300mm freeboard where for <i>habitable rooms</i> within a <i>dwelling</i>.</li> </ul>	
	<p><b>AO4.2</b> All <i>building work</i> must be high set (comprising pier and beam construction) and retains the flood storage and conveyance capacity of the premises.</p> <p>Note- <i>Building work</i> must be certified by a qualified structural engineer to be flood proof including the ability to withstand damage from floodwater and debris.</p>	
	<p><b>Where for Material Change of Use</b> <b>AO4.3</b> New <i>buildings</i> are provided with flood free pedestrian and vehicle evacuation access between the <i>building</i> and a flood safe accessible road.</p> <p>Note- a flood safe accessible road includes a road where identified as no flood hazard, Low flood hazard, Potential flood hazard or Medium flood hazard on <b>Flood hazard overlay maps (OM-004)</b>.</p>	

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Performance Outcomes	Acceptable Outcomes	Proposed Solution Explanation of how the development addresses the Acceptable Outcome and/or Performance Outcome.
	<p><b>Where for Reconfiguring a Lot AO4.4</b> Development does not increase the number of lots in areas of Extreme flood hazard area as identified on <b>Flood hazard overlay maps (OM-004)</b> except where for the purposes of public open space.</p>	
<p><b>PO5</b> Flood risk management minimises the impact on property and appropriately protects the health and safety of persons at risk of Extreme flood hazard, and:</p> <ul style="list-style-type: none"> <li>(a) indicates the position and path of all safe evacuation routes off the site; and</li> <li>(b) if the site contains or is within 100 metres of a flood hazard area, hazard warning signage and depth indicators are provided at key hazard points, such as at floodway crossings.</li> </ul> <p>Note- A material change of use or reconfiguring a lot that involves new <i>gross floor area</i> or increases the number of persons living, working or residing in areas of Extreme flood hazard area as identified on <b>Flood hazard overlay maps (OM-004)</b> is supported by a Flood Emergency Evacuation Plan prepared by suitably qualified persons having regard to <i>Floodplain Management in Australia: Best Practice Principles and Guidelines</i> (2000), prepared by Standing Committee on Agriculture and Resource Management (SCARM), CSIRO.</p>	<p><b>Where for Material Change of Use or Reconfiguring a Lot that involves new gross floor area or increases the number of persons living, working or residing in areas of High flood hazard area other than a Dwelling house AO5</b> No acceptable outcome.</p>	

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Performance Outcomes	Acceptable Outcomes	Proposed Solution Explanation of how the development addresses the Acceptable Outcome and/or Performance Outcome.
<p><b>Where for Material Change of Use or Building Work or Operational Works</b> <b>PO6</b> Development involving earthworks in a flood hazard area below the <i>defined flood level</i> must protect life and property on premises and off premises through maintaining:</p> <ul style="list-style-type: none"> <li>(a) flood storage capacity of land;</li> <li>(b) flood conveyance function of land;</li> <li>(c) flood and drainage channels;</li> <li>(d) overland flow paths; and</li> <li>(e) flood warning times.</li> </ul>	<p><b>Where for Material Change of Use or Building Work or Operational Works</b> <b>AO6</b> Filling above <i>ground level</i> is not undertaken in areas of Extreme flood hazard area as identified on <b>Flood hazard overlay maps (OM-004)</b>.</p>	
<b>High flood hazard area</b>		
<p><b>PO7</b> Development within a High flood hazard area on <b>Flood hazard overlay maps (OM-004)</b> is appropriate to the flood hazard risk having regard to the:</p> <ul style="list-style-type: none"> <li>(a) likelihood and frequency of flooding;</li> <li>(b) the flood risk acceptability of development;</li> <li>(c) the vulnerability of and safety risk to persons associated with the use; and</li> <li>(d) associated consequences of flooding in regard to impacts on proposed buildings, structures and supporting infrastructure.</li> </ul>	<p><b>Where for Material Change of Use</b> <b>AO7.1</b> Uses within the following <i>Activity groups</i> are not located within a High flood hazard area identified on <b>Flood hazard overlay maps (OM-004)</b>:</p> <ul style="list-style-type: none"> <li>(a) <i>Accommodation activities</i>, except where for <i>dwelling house</i> and only where the lot existed or had a lawful reconfiguring a lot approval at the commencement of the planning scheme;</li> <li>(b) <i>Centre activities</i>, except where for <i>business activities</i>;</li> <li>(c) <i>Community activities</i> or <i>Entertainment activities</i>, except where for a <i>Club</i> with a maximum gross floor area of 100m<sup>2</sup>;</li> <li>(d) <i>Rural activities</i>, except where for <i>animal husbandry, cropping, and permanent plantation</i>.</li> </ul>	

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Performance Outcomes	Acceptable Outcomes	Proposed Solution Explanation of how the development addresses the Acceptable Outcome and/or Performance Outcome.
	<p><b>A07.2</b>  <b>Recreation activities</b> are not located within a High flood hazard area identified on <b>Flood hazard overlay maps (OM-004)</b> except where for:</p> <ul style="list-style-type: none"> <li>(a) <i>Environment facility;</i></li> <li>(b) <i>Park; and</i></li> <li>(c) <i>Outdoor Sport and Recreation (excluding the provision of ancillary facilities or amenities conducted within a building).</i></li> </ul>	
<p><b>PO8</b>            Development is located and designed to:</p> <ul style="list-style-type: none"> <li>(a) maintain the flood conveyance capacity of the premises;</li> <li>(b) minimise the number of people calculated to be at risk from flooding;</li> <li>(c) minimise the flood impact on adjoining premises;</li> <li>(d) ensure the safety of all persons by ensuring that an appropriate proportion of <i>buildings</i> are set above the <i>defined flood level</i>;</li> <li>(e) reduce the carriage of debris in flood waters;</li> <li>(f) reduce property damage; and</li> <li>(g) provide flood safe access.</li> </ul> <p>Note- <i>buildings</i> may be constructed from flood</p>	<p><b>Where for Material Change of Use or Building Work</b></p> <p><b>AO8.1</b>  <i>Buildings</i>, including extensions to existing <i>buildings</i> are:</p> <ul style="list-style-type: none"> <li>(a) not located within a High flood hazard area on <b>Flood hazard overlay maps (OM-004)</b>; or</li> <li>(b) elevated above the <i>defined flood level</i>; and</li> <li>(c) elevated above the <i>defined flood level</i> plus 300mm freeboard where for <i>habitable rooms</i> within a <i>dwelling</i>.</li> <li>(d) comply with the Queensland Development Code MP 3.5 - Construction of buildings in flood hazard areas.</li> </ul> <p><b>OR</b></p>	

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<p>resistant, waterproof materials below the <i>defined flood level</i> where certified by a qualified structural engineer to be flood proof (including the ability to withstand damage from floodwater and debris) and where a performance solution to PO8 is also demonstrated.</p> <p>Note- in some circumstances a flood safe access may be provided in the form of an emergency evacuation route.</p>	<p><b>A08.2</b> <i>Where for business activities or industry activities buildings</i> the minimum floor level supporting the following elements of the development must be located above the <i>defined flood level</i> plus 300mm freeboard:</p> <ul style="list-style-type: none"> <li>(a) administrative areas;</li> <li>(b) utilities, plant and equipment associated with the <i>building</i>.</li> </ul> <p>Note- in complying with A08.2 the proponent accepts that the cost of flood impact is an operational cost of the <i>business activity or industry activity</i>.</p>	
	<p><b>A08.3</b> <i>All building work below the defined flood level</i> must be high set (comprising pier and beam construction) and retains the flood storage and conveyance capacity of the premises.</p> <p>Note- <i>Building work</i> must be certified by a qualified structural engineer to be flood proof including the ability to withstand damage from floodwater and debris.</p>	
	<p><b>A08.4</b> <i>New temporary, relocatable or impermanent buildings and structures</i> are to be anchored with the ability to withstand transportation by floodwater.</p> <p>Note- <i>Building work</i> must be certified by a qualified structural engineer.</p>	

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Performance Outcomes	Acceptable Outcomes	Proposed Solution Explanation of how the development addresses the Acceptable Outcome and/or Performance Outcome.
	<p><b>Where for Material Change of Use</b> <b>AO8.5</b> New <i>buildings</i> are provided with flood safe pedestrian and vehicle evacuation access between the <i>building</i> and a flood safe accessible road.</p> <p>Note- a flood safe accessible road includes a road where identified as no flood hazard, Low flood hazard, Potential flood hazard or Medium flood hazard on <b>Flood hazard overlay maps (OM-004)</b>.</p>	
	<p><b>Where for Accommodation activities</b> <b>AO8.6</b> <i>Dwellings</i> do not exceed four bedrooms.</p>	
	<p><b>Where for Reconfiguring a Lot</b> <b>AO8.7</b> Development does not increase the number of lots in areas of High flood hazard area as identified on <b>Flood hazard overlay maps (OM-004)</b> except where for the purposes of public open space.</p>	



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Performance Outcomes	Acceptable Outcomes	Proposed Solution Explanation of how the development addresses the Acceptable Outcome and/or Performance Outcome.
<p><b>PO9</b> Flood risk management minimises the impact on property and appropriately protects the health and safety of persons at risk of High flood hazard, and:</p> <ul style="list-style-type: none"> <li>(a) indicates the position and path of all safe evacuation routes off the site; and</li> <li>(b) if the site contains or is within 100 metres of a flood hazard area, hazard warning signage and depth indicators are provided at key hazard points, such as at floodway crossings.</li> </ul> <p>Note- A material change of use or reconfiguring a lot that involves new <i>gross floor area</i> or increases the number of persons living, working or residing in areas of High flood hazard area as identified on <b>Flood hazard overlay maps (OM-004)</b> is supported by a Flood Emergency Evacuation Plan prepared by suitably qualified persons having regard to <i>Floodplain Management in Australia: Best Practice Principles and Guidelines</i> (2000), prepared by Standing Committee on Agriculture and Resource Management (SCARM), CSIRO.</p>	<p><b>Where for Material Change of Use or Reconfiguring a Lot that involves new <i>gross floor area</i> or increases the number of persons living, working or residing in areas of High flood hazard area other than a <i>Dwelling house</i> AO9</b> No acceptable outcome.</p>	

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Performance Outcomes	Acceptable Outcomes	Proposed Solution Explanation of how the development addresses the Acceptable Outcome and/or Performance Outcome.
<p><b>Where for Material Change of Use or Building Work or Operational Works</b> <b>PO10</b> Development involving earthworks in a flood hazard area below the <i>defined flood level</i> must protect life and property on premises and off premises through maintaining:</p> <ul style="list-style-type: none"> <li>(a) flood storage capacity of land;</li> <li>(b) flood conveyance function of land;</li> <li>(c) flood and drainage channels;</li> <li>(d) overland flow paths; and</li> <li>(e) flood warning times.</li> </ul>	<p><b>Where for Material Change of Use or Building Work or Operational Works</b> <b>AO10</b> Filling above <i>ground level</i> is not undertaken in areas of High flood hazard area as identified on <b>Flood hazard overlay maps (OM-004)</b>.</p>	
<b>Medium flood hazard area</b>		
<p><b>PO11</b> Development within a Medium flood hazard area on <b>Flood hazard overlay maps (OM-004)</b> is appropriate to the flood hazard risk having regard to the:</p> <ul style="list-style-type: none"> <li>(a) likelihood and frequency of flooding;</li> <li>(b) the flood risk acceptability of development;</li> <li>(c) the vulnerability of and safety risk to persons associated with the use; and</li> <li>(d) associated consequences of flooding in regard to impacts on proposed buildings, structures and supporting infrastructure.</li> </ul>	<p><b>Where for Material Change of Use</b> <b>AO11</b> The following uses are not located within a Medium flood hazard area identified on <b>Flood hazard overlay maps (OM-004)</b>:</p> <ul style="list-style-type: none"> <li>(a) <i>residential care facility</i>;</li> <li>(b) <i>retirement facility</i>;</li> <li>(c) <i>child care centre</i>;</li> <li>(d) <i>hospital</i>; or</li> <li>(e) <i>community use</i>.</li> </ul>	
<p><b>PO12</b> Flood risk management minimises the impact on property and appropriately protects the health and safety of persons at risk of Medium flood hazard, and:</p> <ul style="list-style-type: none"> <li>(a) indicates the position and path of all safe</li> </ul>	<p><b>Where for Material Change of Use that involves three or more dwellings, or accommodation activities, business activities, centres activities, entertainment activities or community activities with a staff or resident or non-resident worker or guest occupancy of</b></p>	

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Performance Outcomes	Acceptable Outcomes	Proposed Solution Explanation of how the development addresses the Acceptable Outcome and/or Performance Outcome.
<p>evacuation routes off the site; and (b) if the site contains or is within 100 metres of a flood hazard area, hazard warning signage and depth indicators are provided at key hazard points, such as at floodway crossings.</p> <p>Note- A material change of use that involves new <i>gross floor area</i> or increases the number of persons living, working or residing in areas of Extreme flood hazard area as identified on <b>Flood hazard overlay maps (OM-004)</b> is supported by a Flood Emergency Evacuation Plan prepared by suitably qualified persons having regard to <i>Floodplain Management in Australia: Best Practice Principles and Guidelines</i> (2000), prepared by Standing Committee on Agriculture and Resource Management (SCARM), CSIRO.</p>	<p><b>more than 10 persons on premises at any one time</b> <b>AO12</b> No acceptable outcome.</p>	

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Performance Outcomes	Acceptable Outcomes	Proposed Solution Explanation of how the development addresses the Acceptable Outcome and/or Performance Outcome.
<b>Medium flood hazard area, Low flood hazard area or Potential flood hazard area</b>		
<p><b>PO13</b> Development is located and designed to:</p> <ul style="list-style-type: none"> <li>(a) maintain hydrological function of the premises;</li> <li>(b) not increase the number of people calculated to be at risk from flooding;</li> <li>(c) minimises the flood impact on adjoining premises;</li> <li>(d) ensure the safety of all persons by ensuring that a proportion of <i>buildings</i> are set above the <i>defined flood level</i>;</li> <li>(e) reduce the carriage of debris in flood waters;</li> <li>(f) reduce property damage; and</li> <li>(g) provide flood immune access to <i>buildings</i>.</li> </ul>	<p><b>Where for Material Change of Use or Building Work</b> <b>AO13.1</b> <i>Buildings</i>, including extensions to existing <i>buildings</i> are:</p> <ul style="list-style-type: none"> <li>(a) elevated above the <i>defined flood level</i>; and</li> <li>(b) and the defined flood event does not exceed a depth of 600mm; and</li> <li>(c) elevated above the <i>defined flood level</i> plus 300mm freeboard where for <i>habitable rooms</i> within a <i>dwelling</i>.</li> <li>(d) To comply with the Queensland Development Code MP 3.5 - Construction of buildings in flood hazard areas.</li> </ul> <p><b>OR</b></p>	
<p>Note- where the development is located in a Potential flood hazard area and there is no <i>defined flood level</i> as identified on <b>Flood hazard overlay maps (OM-004)</b> a hydraulic (flood hazard assessment) report prepared by a RPEQ is required in substantiation of a Performance Solution is required or the <i>defined flood level</i> from the adjacent representative hazard zone is used.</p>	<p><b>AO13.2</b> <i>Where for business activities or industry activities buildings</i> the minimum floor level supporting the following elements of the development must be located above the <i>defined flood level</i> plus 300mm freeboard:</p> <ul style="list-style-type: none"> <li>(a) administrative areas;</li> <li>(b) utilities, plant and equipment associated with the <i>building</i>.</li> </ul> <p>Note- in complying with A013.2 the proponent accepts that the cost of flood impact is an operational cost of the <i>business activity or industry activity</i>.</p>	

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Performance Outcomes	Acceptable Outcomes	Proposed Solution Explanation of how the development addresses the Acceptable Outcome and/or Performance Outcome.
	<p><b>AO13.3</b> All <i>building work</i> below the <i>defined flood level</i> must be high set (comprising pier and beam construction) and retains the flood storage and conveyance capacity of the premises.</p> <p>Note- <i>Building work</i> must be certified by a qualified structural engineer to be flood proof including the ability to withstand damage from floodwater and debris.</p>	
<p><b>Where for Material Change of Use or Building Work or Operational Works</b> <b>PO14</b> Development involving earthworks in a flood hazard area below the <i>defined flood level</i> must protect life and property on premises and off premises through maintaining:</p> <ul style="list-style-type: none"> <li>(a) flood storage capacity of land;</li> <li>(b) flood conveyance function of land;</li> <li>(c) flood and drainage channels;</li> <li>(d) overland flow paths; and</li> <li>(e) flood warning times.</li> </ul>	<p><b>Where for Material Change of Use or Building Work or Operational Works</b> <b>AO13.4</b> No acceptable outcome.</p>	

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**Table 8.2.4.2 Flood immunity levels**

Development Type	Minimum design floor or pavement levels (mAHD)
Category A	100y ARI + 0.5 metres
Category B	100y ARI + 0.3 metres
Category C	100y ARI
Category D	100y ARI
Category E	50y ARI

**Table 8.2.4.3 Community infrastructure immunity levels**

Development Type	Minimum design floor or pavement levels (mAHD)
<i>Emergency services</i> , where for: <ul style="list-style-type: none"> <li>Emergency Shelters</li> <li>Police facilities</li> <li>Other <i>Emergency services</i></li> </ul>	500y ARI 200y ARI 500y ARI + 0.5m
<i>Hospital</i>	500y ARI + 0.5m
<i>Community use</i> (where for the storage of valuable records or items of historic or cultural significance including libraries and museums)	200y ARI
<i>Special industry</i> (where for power station)	200y ARI
<i>Substations</i>	200y ARI
<i>Utility installation</i> (where for a sewage treatment plant)	200y ARI
<i>Utility installation</i> (where for a water treatment plant)	200y ARI
<i>Utility installation</i> (other)	200y ARI
Air services	200y ARI