

Shaping Brisbane's Built Form to Increase Resilience to Flooding

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Overview

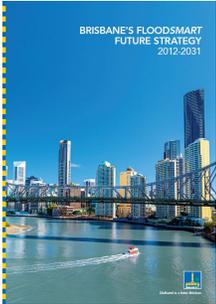
- Introduction: A FloodSmart Future
- Our flood history: Benefit of lessons over time
- A Flood Risk Management Approach
- Hazards-based approach to land use planning
- Concluding comments / key messages



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Introduction

- Brisbane's FloodSmart Future Strategy is part of Council's long standing commitment and plan to manage the risks of flooding.
- It focuses on Brisbane as a city that is **safe, confident and ready**.




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A history of flood management

Lord Mayor's Taskforce on Suburban Flooding

In February 2010, the Lord Mayor and Councillors established the Lord Mayor's Taskforce on Suburban Flooding to look at possible ways of reducing the number of suburban flooding incidents and the impact on the community. The taskforce has since held numerous public consultations and has produced a report which has been used to inform the development of the Brisbane FloodSmart Future Strategy.

Flood Flag Map

The Flood Flag Map, incorporating water flow and flood risk information, was introduced in 2010. This map indicates flood-prone areas at risk of flooding from river, creek, south sea or coastal inundation. Over 10,000 flood flags were distributed in 2010. The map is free and available on Council's website for 'My Connected' Council clients.

Early Warning Alert Service

CloudWatch Brisbane notifies you via your mobile when the includes river of water. Notifications are sent via your mobile phone. The alert can be used to monitor the water level of the regional river and will only be triggered when the water level is high and you are in a flood-prone area. The alert can be used to monitor the water level of the regional river and will only be triggered when the water level is high and you are in a flood-prone area.

Over the past four years Council has invested \$500 million towards flood management:

- Extensive pipes and drainage works
- Backflow devices
- Flood information online for residents and businesses
- Lord Mayor's Taskforce on Suburban flooding.



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2011 Brisbane River Flood

The 2011 Brisbane River flood showed us how well Council and the community respond when the city is faced with disaster.





Brisbane's FloodSmart Future strategy will help further develop Brisbane's capacity to respond and recover quickly from flood events when they occur.



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Strategy is based on an integrated mix of measures:

- structural flood mitigation
- providing good quality flood information
- world-class emergency management
- a hazard-based approach to land use planning.





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BRISBANE CITY PLAN 2014

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Hazard-based approach to land use planning

Current - City Plan 2000

- Flood provisions found in range of codes and Subdivision and Development Guidelines
- One flood extent only mapped ('one-line' approach to flood planning)
- Applicant to determine development compatibility with flooding

Brisbane City Plan 2014

→

Flood code + overlay map

- Flood planning areas
- Flood planning scheme policy
- Development compatibility • Vulnerable uses • Access

New Brisbane City Plan 2014

- A risk management approach to natural hazards
- Aims to ensure
 - Brisbane's residents, businesses and properties are not exposed to unacceptable flood risks and natural hazards
 - new development is located in the right place, designed and sited to tolerate the full range of flood events and natural hazards

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New draft planning provisions

- Flood susceptibility is mapped into six flood areas
 - Flood Planning Areas (FPA) 1 to 5; covering river and creek flooding, and
 - overland flow flooding
- FPAs take account of flood depth, velocity and frequency



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Land use compatibility with flood hazard

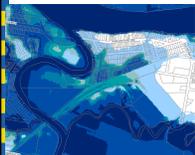
Table 8.2.11.3.C—Land use compatibility with flood hazard

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 (FPS) 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	2B	2A	1	5	4	3	2	1	5	4	3	2
Community residence	C	#	#	#	#	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	#	#	#	#
Nature based tourism	C	C	#	#	#	C	#	#	#	#	C	#	#	#	#
Recreational centre/jub	C	#	#	#	#	C	#	#	#	#	C	#	#	#	#
Residential care facility	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#
Resort complex	C	C	#	#	#	C	#	#	#	#	C	#	#	#	#
Retirement facility	C	#	#	#	#	C	#	#	#	#	C	#	#	#	#
Rooming accommodation, short-term accommodation or hotel	C	C	#	#	#	C	#	#	#	#	C	#	#	#	#
Rooming accommodation, short-term accommodation (1-3 storeys) or hotel where including accommodation	C	C	#	#	#	C	#	#	#	#	C	#	#	#	#
Rooming accommodation, short-term accommodation or hotel where including accommodation (4+ storeys)	C	C	#	#	#	C	#	#	#	#	C	#	#	#	#
Tourist park	C	C	#	#	#	C	#	#	#	#	C	#	#	#	#

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Examples of flood overlay mapping



Brisbane River flood planning area sub-categories



Creek/waterway flood planning area sub-categories



Overland flood planning area sub-category

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Certification requirements

- Registered Professional Engineer of Queensland (RPEQ) sign off may be required for houses
- RPEQ sign off required for other development in certain circumstances including
 - ✓ Certify structural soundness
 - ✓ Certify no material increase of flood hazard
 - ✓ Undertake flood study as necessary
 - ✓ Undertake a flood risk assessment
 - ✓ Undertake a coastal hazard risk assessment



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Summary

- BCC has learnt lessons from a long history of dealing with flooding
- Brisbane Flood*Smart* Future provides a robust strategy toward safe and flood resilient city
- Hazards approach to land use planning important recognition of Flood Risk Management
- Brisbane City Plan 2014 is to be finalised shortly – will represent smart planning, aid in educating the development community and build flood resilience.