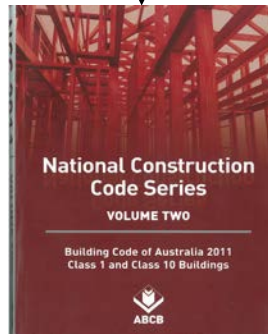
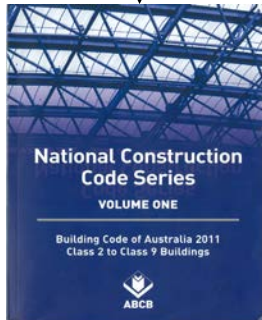
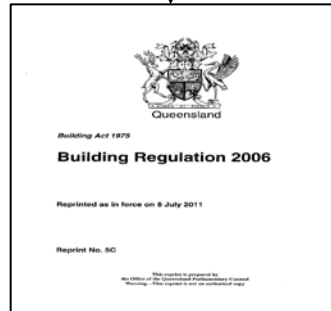
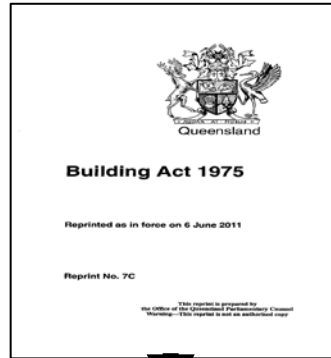




Draft national Standard for construction of buildings in a flood hazard area





Building Act 1975
Schedule 1

Schedule 1 The QDC on 15 April 2010

section 13

Part	Description	Formal Part Reference
Building and citing standards—detached housing		
MP 1.1	Design and citing standard for single detached housing on lots under 400sqm, but only— (a) the building application and “uncommenced” and the work under those buildings; and (b) performance criteria 1, 2, 3 and 6, and (c) alternate and (d) alternative solutions to the provisions mentioned in paragraph (a) to (c).	11
MP 1.2	Design and citing standard for single attached housing on lots under 400sqm and lots, but only— (a) the building application and “uncommenced” and the work under those buildings; and (b) performance criteria 1, 2, 3 and 6, and (c) the relevant acceptable solutions for the performance criteria; and (d) alternative solutions to the provisions mentioned in paragraph (a) to (c).	12
MP 1.3	Design and citing standards for duplex housing	—
Fire safety		
MP 2.1	Fire safety in budget accommodation buildings	14
MP 2.2	Fire safety in residential care buildings	14.1
MP 2.4	Buildings to health-care units	—



Current building controls in designated flood hazard areas

Building Regulation 2006

- Local Government may, under a local planning instrument or by resolution, designate a natural hazard management area (flood); and
- declare a minimum height to which habitable rooms must be constructed.
- Enforced through the building development application process.

Building Code of Australia (BCA)

- Minimum standards for all buildings, including structural requirements.
- BCA - performance requirements and prescriptive (DTS) solutions
- Buildings are to withstand loads and actions it might reasonably be exposed to.



ABCB draft Standard for the construction of new buildings in a flood hazard area

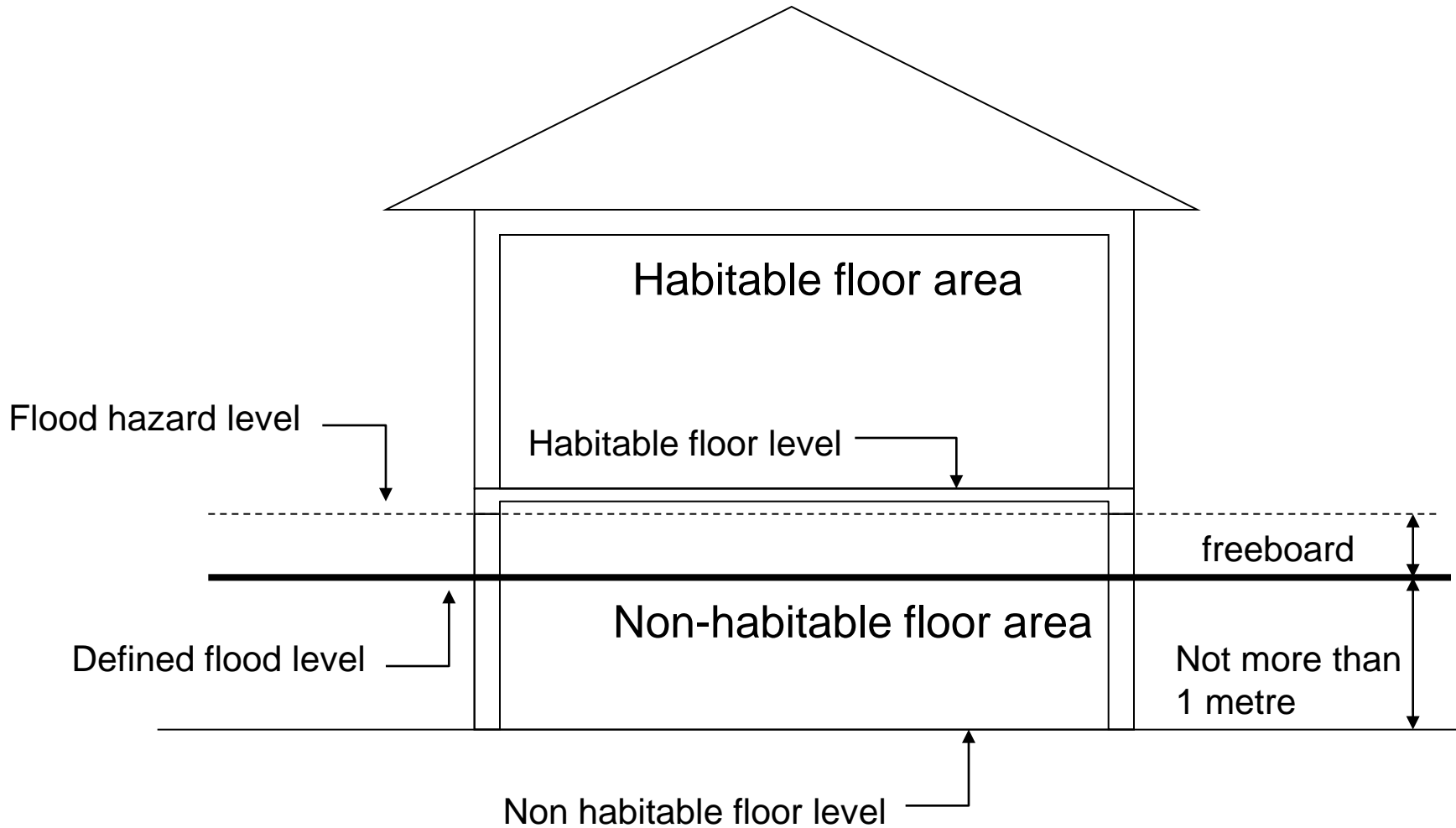
- Draft Standard is scheduled to undergo a national regulatory impact statement in late 2011, to be finalised by early 2012.
- Expected to be included in BCA 2013, subject to Board approval



ABCB draft Standard for the construction on new buildings in a flood hazard area

Some key definitions of the draft Standard:

- **Defined flood level (DFL):** the flood level associated with a *defined flood event (DFE)* relative to a specified datum (e.g. BCC Peak height at City Gauge 4.46m AHD).
- **Defined flood event (DFE):** the flood event selected for the management of flood hazard (e.g. 1:100 AEP)
- **Flood hazard area:** the area (whether or not mapped) under the *flood hazard level*. The area relates to that part of the allotment on which a building stands or is to be erected.
- **Flood hazard level (FHL):** the flood level used to determine the height of floors in a building and represents the *defined flood level (DFL)* plus the *freeboard* (e.g. 1 metre above AHD).





ABCB draft Standard for the construction of new buildings in a flood hazard area

Key aspects of the draft Standard:

- Applies to class 1, class 2, class 3, class 4, class 9a and class 9c buildings in designated flood hazard areas.
- BCA applies to new work including alterations and additions.
- Does not apply to *flood hazard areas* that are subject to significant mudslide or significant landslide during periods of rainfall and runoff.



ABCB draft Standard for the construction of new buildings in a flood hazard area

Key aspects of the draft Standard continued:

- Specific performance requirements and DTS for new building work.
- The Performance Requirements provide that buildings must be:

“to the degree necessary, designed, constructed, connected, and anchored to resist flotation, collapse or significant permanent movement resulting from the action of hydrostatic, hydrodynamic, erosion and scour, wind and other actions during the defined flood event or lesser event in accordance with the requirements of this Standard.”



ABCB draft Standard for the construction of new buildings in a flood hazard area

Key aspects of the draft Standard continued:

- DTS only apply to sites where flow rates expected to be up to 1.5 metres per second.
- Where flow rates exceed this, an engineer will need to design the building using first principles to meet the performance requirements.
- Covers safety matters such as egress and debris actions
- Handbook and guidance material on materials and debris actions.



ABCB draft Standard for the construction on new buildings in a flood hazard area

Key aspects of the draft Standard continued:

- DTS require the elevation of the finished floor level of habitable rooms above the height of the DFL plus a freeboard as set by the relevant Local Government.
- Non-habitable areas must either be raised above the flood hazard level, or must receive no more than 1 metre inundation during the flood event **if enclosed**.
- Services such as electrical and plumbing are required to be either located above the flood hazard level or constructed in a water proof manner.



ABCB draft Standard for the construction on new buildings in a flood hazard area

- ABCB also developed a draft non-mandatory handbook to assist with the application of the draft Standard.
- Copy of draft standards and handbook at DLGP web site

www.dlgp.qld.gov.au/newsletters-and-brochures/building-and-plumbing-newsflashes.html



Early adoption through the QDC

- BCA is amended annually (usually 1 May each year)
- Proposed to adopt the draft national Standard early as a new mandatory part of the QDC.
- QDC will also consist of performance requirements and DTS solutions
- Subject to the relevant approvals, the new QDC is expected to take effect in late 2011.



Early adoption through the QDC

- It is proposed the new QDC will apply to new buildings, additions to existing buildings, and raising and relocating of existing houses.
- QDC won't generally apply to other building alterations (for example, internal alterations to a building such as a new bathroom or the removal of a wall).
- Considering option for local governments to approve an exemption from some or all of the requirements for additions where it is impractical or undesirable to comply with the proposed QDC



Early adoption through the QDC

Proposed Queensland specific parts of the new QDC

- Draft ABCB Standard does not set a minimum height for a freeboard.
- It is proposed to set a minimum freeboard of 300mm that will apply unless a higher freeboard is set by a Local Government.



Early adoption through the QDC

Queensland specific parts of the new QDC

- The QDC will require all new buildings to be fitted with a reflux valve as part of the sewerage system for a lot (excluding class 10 buildings).
- QDC also sets standards for critical building services for all new buildings (excluding class 1 and 10 buildings). For example: electrical switchboards, hot water systems, fire indicator panels, sprinkler valve rooms and emergency back-up power supplies.
- Critical building services requirements will not apply to a new commercial building if the certificate of classification specifies the building is not intended to be occupied during, or in the aftermath of, a flood event.



Early adoption through the QDC

Consultation results on the early adoption of the draft Standard

- Initial one month public consultation ended 25 August 2011:
 - General industry support for detailed building standards in flood prone areas.
 - Cost impacts of introducing proposed QDC early.
 - Guideline to inform the design/building sector with practical aspects of the QDC.
- National draft Standard and draft QDC amended as a result of feedback and research:
 - combination of loads (wind and flood)
 - minor drafting errors, edits to some formulae and definitions and minor inconsistency in terminology with Australian Standards.



Early adoption through the QDC

Consultation results

- Ongoing consultation on draft QDC:
 - public consultation on QDC extended to 9 November 2011
 - draft QDC discussed at Queensland Building Services Authority's information sessions at 14 locations across Queensland (October and November 2011)
 - Queensland Reconstruction Authority
 - Building Industry Consultative Group
 - individual meetings with key building/design groups
 - Local Governments across Queensland



Early adoption through the QDC

Proposed changes to section 13, *Building Regulation 2006*

It is proposed to allow a Local Government to:

- set a flood level for an area the Local Government has designated as a natural hazard management area (flood) (NHMA)
- declare a flow rate for a NHMA
- declare part of a NHMA as a backwater or inactive flow area (where the water is not expected to flow at more than 1.5 meter per second)
- allow a designation of a NHMA to comply with the Temporary State Planning Policy 2/11 (use QRA mapping)



Early adoption through the QDC

- A Local Government can use various data sets to declare flow rates or backwater or inactive flow areas i.e. historical flood data, previous flood damage to an area, other local knowledge (e.g. pictorial record, surviving structures?).





Early adoption through the QDC

Proposed additional non-mandatory QDC outside the scope of the draft Standard

- Local Governments may decide to adopt the proposed non-mandatory parts on a voluntary basis.
- Proposed non-mandatory parts to cover:
 - Flood resilient materials of a non-structural nature below the defined flood hazard level
- If a Local Government adopts the provisions through a local planning instrument, or by resolution, they will become mandatory.



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