

QUEENSLAND FLOODS  
COMMISSION OF INQUIRY

**STATEMENT OF GLEN THOMAS BRUMBY**

I, **GLEN THOMAS BRUMBY**, of c/- 63 George Street Brisbane in the State of Queensland, Executive Director, Building Codes Queensland, Growth Management Queensland, Department of Local Government and Planning, solemnly and sincerely affirm and declare:

1. I make this statement (**Third Statement**) pursuant to the requirement dated 10 November 2011 served on me to provide further information to the Queensland Floods Commission of Inquiry.
2. I make this Third Statement in addition to the statement (**Second Statement**) declared by me and dated 1 November 2011 pursuant to the requirement dated 24 October 2011 to provide information to the Queensland Floods Commission of Inquiry.
3. I also make this Third Statement in addition to the statement (**First Statement**) declared by me and dated 15 September 2011 pursuant to the requirement dated 9 September 2011 to provide information to the Queensland Floods Commission of Inquiry.

**Item 1. The outcome of the Building Industry Consultative Group meeting with interested stakeholders (such as the Queensland Reconstruction Authority) held on 9 November 2011, referred to in paragraph 29 of my Second Statement to the Commission**

4. In relation to item 1, at paragraph 29 of my Second Statement I made reference to a further meeting with the Building Industry Consultative Group (BICG) and other interested stakeholders such as the Queensland Reconstruction Authority (QRA). This meeting was held on 9 November 2011.

5. In relation to this further meeting on 9 November 2011, I provide the following information to assist the Commission:
- a. The meeting was attended by a range of building industry and Local Government stakeholders, including the Housing Industry Association (HIA), the Queensland Master Builders Association (QMBA), Queensland Building Services Authority (QBSA), Brisbane City Council (BCC), the Australian Institute of Building Surveyors (AIBS), the Australian Building Codes Board (ABCB), Redland City Council (RCC) (as a representative of the Local Government Association of Queensland), the Queensland Reconstruction Authority, Cement Concrete and Aggregates Australia, the Australian Institute of Architects (AIA) and the Planning Institute of Australia (PIA).
  - b. The items of discussion focused on the content and application of the proposed Queensland Development Code (QDC) entitled “*MP 3.5 – Construction of Buildings in Flood Hazard Areas*”. Some concerns were raised, for example by BCC, about existing areas where the Local Government would not have any ability to have input into the requirements due to the existence of a prior planning approval. As a result, there was support from the majority of stakeholders for Local Governments to have the ability to provide some sort of exemption from meeting some or all of the QDC requirements in certain cases where compliance may be impractical or undesirable, for example due to planning considerations. Attendees also accepted that there was probably not a strong case for regulating non-structural materials and non-habitable spaces.
  - c. The HIA questioned the need to adopt the proposed QDC prior to the Commission handing down its findings. HIA also raised concerns about the acceptable solutions, or Deemed-to-Satisfy provisions, of the proposed QDC only applying where the flow rate is less than 1.5 metres per second. There was some discussion about the extent of areas where lots with prior approval may not be able to be built on due to current flood levels and planning requirements, e.g. height restrictions in the Brisbane City Council area. Members discussed the identification of inactive flow and backwater areas and the mapping that has been done by Gold Coast City Council. It

was generally accepted by Local Governments attending the meeting that they did not need to identify velocities and that local knowledge from pictorial records and surviving structures could be used to identify inactive flow and backwater areas.

- d. The PIA considered that it was very important for owners to maintain appeal rights against Local Government decisions. Only limited examples of potentially conflicting outcomes were provided and it was discussed that the proposed QDC is a performance based code that would still allow innovative solutions where they could be shown to meet the performance requirements. Building height and flooding depth were discussed as examples of potential problems and it was accepted that if an exemption was going to apply it should be Local Governments that applied the exemptions. However, the Brisbane City Council representative stated that Local Governments were unlikely to use exemption powers because it could mean that the habitable spaces of a home would be built below the flood level. Members also discussed situations where the flood hazard level was very high for a particular lot and an example of a lot with a potential 5m inundation was cited as being problematic. The Australian Building Codes Board office representative pointed out that if building below the flood hazard level was allowed then this would probably be impractical from a cost point of view if flood resilience was still to be achieved. He pointed out that building habitable spaces above 5m was not impractical.
- e. The proposed requirement for sewer reflux valves to be installed at each property boundary was also discussed. There was also a suggestion that the requirement to install an alternative water supply (in particular water tanks) under QDC 4.2 – Water Savings Targets, should be waived in designated flood hazard areas, as these tanks can become a hazard during flood events. BCQ will consider this as part of its ongoing program.
- f. Members generally agreed with the proposed QDC provisions for utilities and the practical exemption where the certificate of classification stated the building should not be occupied during or in the aftermath of a flood.
- g. The outcomes and actions of this meeting included that the proposed QDC should specifically state it does not apply to repairs of existing buildings or

raising buildings. It was also agreed that Local Governments should be given the ability to provide exemptions from meeting some or all of the proposed QDC requirements as part of a concurrence agency referral process. This process is to apply to applications for the construction of new houses, as well as additions to existing houses. This was to allow Local Governments to relax the requirements in areas where a new home would need to be constructed at a much higher level than neighbouring homes. However, BCC did acknowledge that they would find it difficult to allow new homes to be built below the flood hazard level. It was agreed that the proposed QDC should not include requirements for air-conditioning and ventilation systems, as it is likely to be impossible to power these systems with a backup power supply. There was support, from all attendees for sewer reflux valves to be required to be installed as part of the sewerage system for individual properties, and also for requirements for building services to be included in the QDC. After a request by the Master Builders representative, it was agreed that the freeboard should be standardised at 300mm, in the interests of providing clarity and consistency across the State and because the local variation of an increase of 200mm did not make much difference. This was supported by AIBS, RCC, and QBSA. Also, Local Governments will still have the discretion to add an additional factor of safety, if they deem this to be necessary, as part of declaring the flood level for an area.

6. A copy of the minutes for this meeting held on 9 November 2011 are attached and marked **Attachment 1**.

**Item 2. The outcome of the meeting with local governments from the south-east corner of Queensland held 9 November 2011, as referred to in paragraph 29 of my Second Statement to the Commission**

7. In relation to item 1, at paragraph 29 of my Second Statement I made reference to a meeting with the Local Governments from the South-east corner of Queensland, also to be held on 9 November 2011.

8. In relation to the meeting held with Local Governments from the South-east corner of Queensland, I provide the following information to assist the Commission:
- a. The meeting was attended by representatives from Ipswich City Council (ICC), BCC, Logan City Council (LCC), Gold Coast City Council (GCCC) and Moreton Bay Regional Council (MBRC).
  - b. BCC and ICC advised that they did not support adopting the QDC prior to the Commission handing down its findings.
  - c. The items of discussion were the proposal to make Local Governments a referral agency (concurrence) for the purposes of the proposed QDC, flood resilient materials requirements and whether they should be part of the proposed QDC, sewer surcharge and the proposed requirements for reflux valves, and also the proposed requirements for commercial buildings. There was also some discussion about whether requirements for air-conditioning and ventilation systems should be included in the proposed QDC, particularly for facilities such as aged care facilities where there may be difficulty in evacuating building occupants during a flood event. It was suggested the current flood level may be too high in some areas to enable the building to comply with the proposed QDC, and in these cases Local Governments would not be able to influence this situation due to the prior planning approval. ICC and BCC expressed some concerns about not being able to transfer building related requirements currently contained within their TLPIs into their planning schemes if the proposed QDC is adopted in Queensland. However it was indicated by BCQ that this was never the intention as the TLPIs are temporary in nature and that consistency across the State for codes is essential. Instead, the building requirements were to be incorporated into the building codes wherever possible. The introduction of the proposed QDC would not prevent a Local Government from transferring other planning related matters from the TLPI into their planning scheme at a time appropriate to the Local Government.
  - d. The ICC representatives raised the issues of conflict between the planning and building systems, citing heritage and amenity concerns. Attendees discussed these matters with a view to providing examples of conflict. ICC

representatives considered that one key issue was the flood hazard level conflicting with streetscape 'amenity'. The GCCC representative did not agree with this view and he stated that Local Governments would never require homes to be built below the flood hazard level for aesthetic concerns. He stated that Local Governments should consider purchasing lots in these circumstances because of liability concerns. The BCC representative agreed that it would be very unlikely for Local Government to allow habitable spaces of new homes to be built below the flood hazard level.

- e. On heritage matters no examples were able to be raised as the QDC did not apply to alterations to existing buildings and there are automatic exemptions for small additions. Also, the QDC did not conflict with 'aesthetic' planning rules for new homes such as 'timber and tin', as the QDC does not specify cladding materials. The BCC representative accepted there was no conflict between the QDC and planning concerns in this regard.
- f. Attendees discussed the use of local knowledge to designate inactive flow or backwater areas. GCCC stated that it has extensive flood mapping, including water depth and velocity information.
- g. The BCC representative stated that the QDC should not apply to raising homes because it may be impractical to apply the code in some instances and raising a home was always advantageous even if habitable spaces were still below the flood hazard level. The QDC has incorporated exemptions for raising of homes.
- h. The outcomes and actions were that the guideline to accompany the QDC should also refer to suggested checks of chemically impregnated termite management systems after a flood event, and ideally the use of alternative systems in flood hazard areas. It was also agreed that regulatory amendments should occur to make Local Government a referral agency (concurrence) for the purposes of the proposed QDC, but only where an applicant seeks to not comply with some of all of the provisions for new houses or additions to existing houses. The provisions relating to sewer reflux valves and essential services, including for commercial buildings, were supported and it was agreed that these should remain in the QDC.

- i. ICC representatives were unable to provide definitive advice about whether they agreed with these proposals.
  - j. All attendees were invited to attend the BICG meeting later that day to further discuss the QDC's application.
9. A copy of the minutes for this meeting held on 9 November 2011 are attached and marked **Attachment 2**.

**Item 3. The outcome of the teleconferences with other interested local governments about the draft Queensland Development Code, as referred to in paragraph 29 of my Second Statement to the Commission**

10. In relation to item 1, at paragraph 29 of my Second Statement I made reference to an invitation for all other interested Local Governments to participate in teleconferences to discuss the draft QDC. I stated the teleconference would occur prior to 9 November 2011 and in relation to these teleconferences, I provide the following information to assist the Commission:
  - a. An invitation to attend teleconferences was forwarded to all Local Governments in Queensland, other than the South-east Queensland Local Governments attending the meeting discussed at Item 2.
  - b. Teleconference meetings were held on 7 and 8 November 2011 with North Burnett Regional Council, Southern Downs Regional Council, Western Downs Regional Council, Townsville City Council, Balonne Shire Council, Lockyer Valley Regional Council, Barcaldine Regional Council and Bundaberg Regional Council, and a representative from Campbell Higginson Town Planning (as a guest of Barcaldine Regional Council).
  - c. The items of discussion included the content of the application of the draft QDC and how it interacts with planning scheme requirements. The key issues raised by most regional Local Governments related to how they establish flood levels in their areas. The main concerns focused on the potential costs involved in flood studies to establish flood levels as accurately as possible. Another issue that was raised by Local Governments related to the type of referral jurisdiction Local Governments would have under the QDC. All participating Local Governments

indicated they were comfortable with their jurisdiction being a 'concurrence' agency as set out under the planning legislation.

- d. Key outcomes from the teleconferences included unanimous support for the introduction of the proposed QDC and the development of the accompanying draft guidelines (currently being prepared) to help smaller Local Governments establish flood levels. All participating Local Governments agreed the QDC should be adopted into the building legislation as soon as possible and that they be included in any ongoing review that may take place in the future.

11. Copies of the minutes relating to these teleconferences are **Attachments 3 and 4**.

**Item 4. The amendments proposed to the Building Regulation 2006 (Qld) which would adopt the draft Queensland Development Code, as referred to in paragraphs 30, 38 and 39 of my Second Statement to the Commission**

12. In relation to item 4, at paragraph 30 I stated that Building Codes Queensland (BCQ) is in the process of preparing an amendment to the Building Regulation 2006 (BR) which would implement adoption of the draft QDC in Queensland. I also stated that the Queensland would consider adopting the draft QDC through the amendment regulation before the end of 2011.

13. The proposed amendments to the BR include the following:

- a. Adopting the proposed QDC entitled "*MP 3.5 Construction of Buildings in Flood Hazard Areas*"; and
- b. Specifies that Local Government will set a defined flood level which will inform things such as habitable floor levels, essential services and utilities.
- c. Enabling a Local Government to designate a natural hazard management area (flood) in accordance with the Temporary State Planning Policy 2/11, which will allow them to use the QRA flood mapping data as the basis for making this designation; and
- d. Enabling a Local Government to designate areas within a natural hazard management area (flood) as 'inactive flow or backwater areas', i.e. those



where the Local Government does not expect the flow velocity of flood water during a flood event to exceed 1.5 metres per second; and

- e. Enabling a Local Government to declare one or both of the following within a designated natural hazard management area (flood):
  - i. The expected maximum flow velocity of flood water; and
  - ii. The expected flood level for the area.

14. A copy of the draft proposed amendments to the BR are **Attachment 5**.

15. The *Sustainable Planning Regulation 2009* is also intended to be amended to include the Local Government as a referral agency (concurrence agency) for the purposes of the QDC 3.5. This will enable Local Governments to make decisions on applications for a new house or addition to an existing house where the applicant suggests that it would be impractical or undesirable to comply with the draft QDC 3.5.

**Item 5. The Queensland Development Code's attendant guidelines which provides advice on how local governments may appropriately use:**

- a) **local knowledge**
- b) **the QRA mapping; and**
- c) **local gauging stations,**

**to identify areas of inactive flow or backwater areas and to ascertain the highest recorded flood level for the lot, as referred to in paragraph 40 of my Second Statement to the Commission**

16. In relation to paragraph 40 of my Second Statement, the requested information falls largely outside my area of responsibility and I have only limited understanding of the information available from local gauging stations.

17. It is intended that guidelines, as mentioned in paragraph 40 of my Second Statement, will be developed prior to the introduction of the proposed QDC to assist Local Governments in these matters. This will involve seeking the relevant expertise in order to offer the best possible information to Local Governments.

18. However, in order to provide assistance to the Commission in the areas to which I am qualified in relation to Item 5 above, I provide the following:

- a. Local Governments retain local knowledge in a variety of forms, including through their staff and local constituent memories. Local knowledge can be based on a variety of sources, such as pictorial records of previous flooding events, physical markers of highest recorded flood levels, records collected about flood damage to existing buildings and structures, and the number and type of surviving structures in an area. It is expected this local knowledge could form the basis of a designation of an inactive flow or backwater area and/or the declaration of expected flood heights for the purposes of the QDC.
- b. Although it is my understanding that the QRA mapping do not contain specific information in relation to flood levels, I believe it does contain some information in relation to the locations of gauging stations (see page 11 of the QRA's Planning for Stronger, more resilient floodplains), which could potentially be accessed to assist with identifying expected flood levels in a particular catchment area or basin.
- c. As indicated in (b) above, it is expected the network of gauging stations across the State could provide valuable information on expected flood heights, where such gauging stations are located within the same basin.

**Item 6. Any provisions in local planning instruments (including temporary local planning instruments adopted by local governments after the 2010/2011 floods) that area inconsistent or overlap with provisions of the draft Queensland Development Code, including an explanation as to why inconsistencies exist;**

19. The following paragraphs provide details of provisions in local planning instruments (including local planning instruments adopted by local governments after the 2010/2011 floods) that are inconsistent or overlap with the provisions of the proposed QDC.
20. There is considerable overlap, and in some cases inconsistencies, between current TLPs and the proposed QDC. For example, there are certain requirements in both the Brisbane and Ipswich TLPs which relate to the use of certain 'flood resilient', 'flood resistant' or 'corrosion free' building materials. Materials, particularly those for structural purposes, are covered in the proposed QDC. References to requirements for electrical switchboards and other essential

services, openings to allow for automatic entry and exit of flood water, and minimum freeboards will also overlap with the proposed QDC and BR amendments. For example, both the Brisbane and Ipswich TLPI's have minimum freeboard requirements of 500mm above the DFL whether or not set by the Local Government. With regard to difference of 200mm in the minimum freeboard requirement in the proposed QDC, as was previously the case with BR section 13, Local Governments are able to declare a minimum flood level which will inform the levels of habitable rooms and many have done so in their planning schemes.

21. One example of where there is a direct inconsistency is the Ipswich TLPI's requirements in relation to the use of certain safety factors with respect to structural adequacy. The proposed QDC and draft National Standard requires the loads and actions relating to structural aspects to be determined according the site's expected load characteristics from a defined flood event and it also details specific requirements with respect to footing systems. The QDC and draft National Standard are therefore intended to cover the field from a structural and safety point of view. This means there is a direct conflict with the Ipswich TLPI provisions which contains provisions covering safety factors of 1.5 against sliding or overturning and a factor of 1.33 against flotation. The Ipswich TLPI also states that footings must be designed to take account of any reduced bearing capacity as a result of submerged soil, which is covered by the building code.
22. It is my understanding that the TLPIs were introduced as an interim measure due to the immediate need for some more specific building standards in relation to flooding impacts. This was on the understanding that new building code requirements were intended to be introduced as soon as possible and that these would render the TLPI provisions invalid in the event of a conflict between them. As indicated in paragraph 19 of my second statement, at the time the ICC was preparing its TLPI, the ICC advised BCQ that it was aware that the TLPI was intended to be an interim measure until the Building Code of Australia (BCA) or QDC provided further design guidance for the construction of buildings in flood hazard areas. BCC was also made aware that BCQ was proposing the early adoption of building requirements in flood hazard areas during the preparation of its TLPI. Furthermore the proposed Queensland Development Code "*MP 3.5 Construction of Building in Flood Hazard Areas*" (**Attachment 6**) has now been amended to include paragraph 2(h) which gives applicants the ability to refer their

application to Local Government for a concurrence response for QDC requirements that are impractical or undesirable. This paragraph then gives the Local Government the option to override the code to the extent required.

**Item 7. Whether there has been consultation between local and state government agencies to discuss any inconsistencies or overlap between local planning instruments and the draft Queensland Development Code as described in item 6 above;**

23. In relation to consultation between local and state government agencies relating to any inconsistencies or overlap between local planning instruments and the draft Queensland Development Code, I provide the following information to assist the Commission:

- a. Potential conflicts were discussed from the outset during the development of the TLPIs and it was always the intention that the TLPIs would be reviewed if the QDC were to take effect prior to the expiry of the TLPI. The TLPIs were an interim measure until such matters could be incorporated into building codes and planning schemes, as appropriate. BCQ has conducted ongoing consultation with Local Governments and the Local Government Association of Queensland, including those Local Governments with current TLPIs in place (BCC and ICC) during the development of the QDC.
- b. Consultation has also occurred with key State Government stakeholders, including the Department of Community Safety, Department of Premier and Cabinet, Electrical Safety Office, Energex, Ergon Energy, and the Plumbing Industry Council during the development of the draft QDC to ensure there were no inconsistencies with other State Government legislation or requirements.

**Item 8. With respect to any inconsistencies or overlap identified in item 6 above, what is being done by the Queensland Government to address them.**

24. It was always intended that the DLGP would work with Local Governments to seek to remove provisions in TLPIs that will conflict or overlap with the proposed

QDC. This was in the interest of providing clarity for industry and the community and avoiding any unnecessary delays as part of the building approval process.

25. The *Sustainable Planning and Other Legislation Amendment Bill 2011* proposes to make amendments to the *Sustainable Planning Act 2009* to essentially replicate the current section 86 of that Act to clarify that a local planning instrument, local law or Local Government resolution must not include building matters covered by the building assessment provisions, unless permitted by the *Building Act 1975*, and that these instruments will have no effect in the event of a conflict between the instrument and the building assessment provisions. However the proposed Queensland Development Code has now been amended to include paragraph 2(h) which gives applicants the ability to refer their application to Local Government for a concurrence response for QDC requirements that are impractical or undesirable. This paragraph then gives the Local Government the option to override the code to the extent required.
26. The proposed QDC has been revised as far as possible based on feedback received from Local Governments and other stakeholders on how the QDC should apply. For example, it no longer applies to raising of existing houses because this was identified by Local Governments as unnecessary and potentially problematic.
27. Further, as indicated under Items 1-3 of my Statement, it is intended to provide concurrence agency powers to Local Governments where an applicant seeks not to comply with the proposed QDC for new houses or additions to existing houses. This proposal was also refined based on feedback from Local Governments and other stakeholders.

**Stephen Reynolds evidence provided to the Commission on 11 November 2011**

28. With regards to the evidence raised in the transcript of Mr Stephen Robert Reynolds of Reynolds and Perkins Planning consultants (page 4960), I observe as follows:
  29. Generally, Mr Reynolds claims that the application of building standards in the context of flooding is a complex matter. I do not agree that this is a complex matter. Planning schemes regulate what you can build on a certain piece of land and the building codes regulate how the building is to be built. Where the planning system allows building to occur, inconsistent planning considerations are considered and have to be resolved. In the consultation process with Local

Governments, as discussed in paragraph 8 of this statement, only one definite example of potential inconsistency between planning and building objectives has been identified.. The example cited was that setting flood hazard habitable floor levels could conflict with 'amenity' concerns relating to streetscapes. Some Local Governments stated unequivocally that they would not allow habitable spaces of new homes to be built below the flood hazard level. Others claimed the issue was an important one but they generally would not allow exemptions for habitable spaces of new homes to be built below the flood hazard level. Essentially, the conflict is that the planning system may have conflicting local rules for natural hazards, heritage and aesthetic values. These rules are always resolved in a practical way through processes that apply before a building is approved for construction.

30. Mr Reynolds' suggestion that a building certifier will have discretion in terms of what is "reasonable protection" for a building in a flood hazard area is a misconception. The requirements for the protection of buildings against impacts associated with flood events are clearly specified in the proposed QDC and draft National Standard. An suitably qualified person (such as an engineer) will use those codes to determine whether the building design can withstand the loads and actions associated with the inundation characteristics that are expected to be applicable to a particular site.
31. With respect to line 46 on page 4960 of the transcript of Mr Reynolds' evidence, Local Governments are able to set siting requirements for homes in their planning schemes. As far as I am aware, siting is routinely enforced by private building certifiers.
32. With respect to the opinion that Local Governments require more control over building matters that are considered to have planning implications, it is my view that Local Government already has significant control over the process, including at the planning application stage through their planning scheme and role as assessment manager (including what sort of development is suitable for a particular area and any amenity (aesthetic) aspects) and also in the way that the building requirements apply through the QDC. Local Government will have the ability to designate areas, if they choose, within their local area as natural hazard management areas (flood), and also to declare flood characteristics such as flood levels and flow velocities. If the Local Government does not designate these

areas, the proposed QDC will not apply. Further, if an applicant believes it is impractical or undesirable for them to comply with the proposed QDC, the responsible certifier will be able to refer the application to Local Government for a concurrence response. This will enable the Local Government to have a say where the applicant may not be meeting the requirements of the QDC, for example they want to build the habitable areas of their house lower than the flood hazard level.

33. The proposal to have certain applications referred to Local Government for a concurrence response was discussed with Local Governments from across Queensland and there was broad support for the referral only being where an applicant was seeking to not comply with the QDC provisions, rather than an automatic referral for all applications.
34. I would also like to clarify that Chapter 4, Part 6 of the *Building Act 1975* specifies that a private certifier cannot give building approval for something that is inconsistent with planning requirements. This includes, for example a prior approval such as a planning approval, and any requirements of the Local Government's planning scheme. If a Local Government has particular requirements for certain areas, such as aesthetic or heritage rules, they can still address these values through their local planning instruments and the building approval system is designed to complement the local rules.
35. Further, I do not agree that building matters should be able to be varied in every case by the Local Government, or that the applicant should be able to decide the "level of assessment" for their building application. Just as planning considerations can have significant implications on streetscape and urban design, building codes play a key role in protecting the safety, health, amenity and sustainability of buildings. These matters should not be subjected to complex planning approval processes as they are already addressed through the building approval process. I do not believe a three tiered approach to building assessments, as suggested by Mr Reynolds, would be practical, timely or likely to result in a positive outcome for the community.
36. With respect to paragraph 12 of Mr Reynolds' statement regarding requiring a person to obtain site specific information, if a building is approved in either a building or planning context, this information is needed. The QDC allows for Local Governments or proponents to provide the information. Further, building

certifiers, building industry practitioners and members of the community need clear guidance about how to build in flood hazard areas, otherwise the results could be buildings that are sub-standard and unsafe. The housing market, and building industry in general, is already experiencing a variety of impacts related to affordability and timeliness of approvals and the State Government is of the view that approval processes should be simplified and streamlined as much as possible.

37. With respect to paragraph 50 of Mr Reynolds' statement, the identification of backwater and inactive flow areas will assist to keep assessment and approval costs down. However, the argument Mr Reynolds makes is not one against building code provisions. Site specific hazards need to be assessed and considered. Mr Reynolds seems to be suggesting that building should be allowed where specific hazards are expected and mapped but the extent of the hazard is not known in any detail. I believe the precautionary approach is more appropriate in these circumstances requiring applicants to identify the risk, where the risk is unknown. As discussed above the applicant will be also able to refer the application to Local Government for a concurrence response if they are not happy to meet this requirement. This will enable the Local Government to have a say on whether the applicant is required to meet the requirements of the QDC
38. The proposed QDC is an improvement on the current system, whereby the Building Code of Australia incorporates a general statement to the effect that a building must withstand the loads and actions to which it would reasonably be expected to be subjected to. In my opinion, expediting the introduction of more detailed design guidance and maintaining a streamlined but effective approval process for building in flood hazard areas will assist Queensland communities to recover from the 2010/11 floods, and to adapt to future flood conditions.



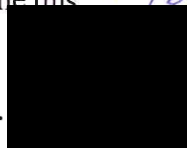
I make this solemn declaration conscientiously believing the same to be true, and by virtue of the provisions of the *Oaths Act 1867*.

Signed



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**Glen Thomas Brumby**

Taken and declared before me, at Brisbane this 16 day of November 2011.



.....  
~~Solicitor/Barrister/Justice of the Peace/Commissioner  
for Declarations~~

# Out of session BICG meeting: Flood code

Wednesday 9 November 2011

Meeting Room 4, 80 George Street, Brisbane

## Attendees:

Glen Brumby

Chair, Building Codes Queensland

Building Codes Queensland

Building Codes Queensland

Building Codes Queensland

Building Codes Queensland

Building Codes Queensland

Building Codes Queensland

Building Codes Queensland

Australian Building Codes Board Office (ABCB office)

Australian Institute of Architects (AIA)

Australian Institute of Building Surveyors (AIBS)

Planning Institute of Australia (PIA)

Brisbane City Council (BCC)

Cement Concrete and Aggregates Australia (CCAA)

Housing Industry Australia (HIA)

Queensland Building Services Authority (QBSA)

Queensland Master Builders Association (QMBA)

Queensland Reconstruction Authority (QRA)

Redland City Council (for Local Government Association of Queensland) (RCC)

## Secretariat:

Building Codes Queensland

The meeting opened at 1:10 pm

### 1. Introduction and apologies

The Chair, opened the meeting and welcomed the members.

### 2. Other business

Nil

### 3. Discussion of National Flood Standard and draft Queensland Development Code

The Chair gave an overview of the proposed draft Queensland Development Code (QDC) for construction of buildings in flood hazard areas and asked the members for their views on the application of the QDC.

QBSA noted that it did not support the exemption from the QDC for adding an extra storey about an existing part of the building that is not being raised. QMBA, HIA and APA supported the exemption.

HIA asked for clarification about the application of the QDC when undertaking repairs to a building. The Chair advised that repairs were exempt. HIA asked that this be specified in the QDC as the current wording was unclear.

The Chair advised that members that during consultation, some Local Governments expressed concern about the requirement for buildings to be built above the defined flood level (DFL). Members discussed the operation and interaction of the building code and planning schemes at some length. Members generally agreed that the main area of interaction was in the height of the floors of habitable spaces in areas that were already developed. Members agreed there needed to be some flexibility in approving the level of infill homes. The BCC member considered that raising buildings should be exempt because raising a building always provided some level of benefit and in an extreme case it may not be practical to raise a home's habitable areas above the flood hazard level.

HIA advised that it shared this concern and concerns about infill and new homes, because it may take away a property owner's development rights. For example, a property owner who was previously granted development approval may now be unable to build on their land because the DFL has increased as a result of the Queensland floods, and the QDC prevents them from building within the DFL.

AIBS agreed, saying that to build a house on eight or nine metre stumps in order for it to be above the DFL would be impractical. The Chair pointed out that was an extreme case and members discussed an example of 5m inundation suggested by the BCC representative.

CCAA said it was worried about the affordability of building above a DFL, for example, costs associated with energy efficiency and suspended timber floors. It suggested that homeowners be given the option to build within the DFL if they build a flood-resistant house. QMBA noted that the cost associated with a flood resistant house would be significant as all materials would need to be water resistant materials. The ABCB Office representative explained that the costs associated with building a flood resilient home that was intended to be inundated would be very high and he considered that it would probably be more practical to build habitable spaces above the flood level.

The Chair advised that some Local Governments would like to see the inclusion of requirements for non-habitable spaces. QMBA said it did not see the necessity for this. The primary concern is life safety, and requirements for non-habitable spaces may prevent property owners from constructing pools and carports.

However, HIA noted that some people may use a non-habitable space, such as a shed, for the storage of valuable items and that these could be lost during a flood event as the result of building within the DFL. Members generally agreed there wasn't a strong case for regulating non-habitable spaces of homes or setting flood resilient materials requirements for non structural elements below the flood hazard level.

HIA reiterated that land which already had permission to be developed would be significantly affected, and suggested that, for this reason, the QDC differentiate between greenfield and existing lots. AIBS supported the proposal, noting the potential impact in areas where the DFL is now higher than prior to the Queensland floods.

The Chair asked if this meant that HIA and AIBS supported new buildings being built with the DFL, noting that this could result in homeowners losing their house during a flood event.

BCC suggested that the QDC provide for an improvement on the performance of the building, but let a homeowner decide whether or not they wish to achieve the maximum performance level, such as for raising buildings. BCC provided the example of its own temporary local planning instrument (TLPI), which includes relating to not complying with the flood requirements.

The Chair asked if there was a need for an exemption mechanism for houses in existing areas. He advised that the Local Governments consulted had given varying degrees of support for this proposal, indicating that they would rather that it be a decision by the building certifier. QBSA disagreed, arguing that it would not be fair for an individual certifier to wear the responsibility and risk, and that it should be part of the assessment process or development application. BCC generally agreed, but noted that it BCC would generally not allow homes to be built below the flood level. The Chair asked the BICG members to confirm that the consensus was for exemptions to be a Local Government issue. Members generally accepted that exemptions should be decided by Local Government. However, HIA said that deciding where a person is allowed to build is a clear planning issue, but suggested that it be considered on a case by case basis. The Chair said that having no recipe seemed like the wrong approach.

The Chair asked the BICG members for their views on the application of acceptable solution A1. HIA suggested that the 1.5m/s figure was arbitrary, and would trigger a hydrological assessment for every development application in Queensland. The Chair clarified that the 1.5m/s referred to the application of the deemed-to-satisfy (DTS) provision. He advised the BICG members that in many areas, flood waters tend to rise and fall, rather than flow. In these areas of backflow or inactive flow, one would simply need to comply with the DTS.

QMBA expressed concern that Local Governments would always put the onus back on the applicant. The Chair acknowledged that this was a possibility, but noted that at some point, the planning system would need to show the water characteristics for an area in order to justify the approvals process. The Chair said that feedback from Local Governments showed that many had records which clearly demonstrated where backwater or inactive flow occurred. Local Governments had also indicated that they would provide information about the average velocity for water flow where possible, and the Chair advised that BCQ would provide assistance where it can.

ABCB provided the example of Gold Coast City Council's (GCCC) flood mapping model, which demonstrates that water flow only tends to be more than 1.5m/s in areas near a floodway, stream or river. The Chair noted that the GCCC model was as simple as making a decision about where inactive flows are.

PIA stated there needed to be a clear avenue for appeals and that the cost of appeals was a serious consideration. The Chair advised that under the proposed QDC appeals could be made through the Building and Development Dispute Resolution Committee.

HIA advised of its concerns that the QDC was being introduced prior to the ABCB national flood standard. HIA suggested if the introduction of a number of different standards within a matter of months would only succeed to confuse industry. The Chair advised that the Local Governments consulted had wanted to see the QDC introduced as soon as possible. The Chair also noted that the project had been in development for some time, and was necessary to clarify issues about building matters being included in planning schemes. AIBS noted its support for the introduction of the QDC as it would stop the inclusion of building matters in planning schemes. HIA agreed that this was a positive outcome, but said it was concerned about the timing.

The Chair asked the BICG members for their views about the provisions relating to services for class 5-9 buildings. Local Governments were generally happy with the services identified. The Chair also noted that if a building is not intended to be occupied during or in the aftermath of a flood, a building certifier could include on the certificate of classification that the building does not need to comply with the utilities performance requirements. AIBS supported the use of certificates of classification for this purpose and members generally agreed this was a practical approach.

The Chair highlighted that the QDC currently does not include the requirement for emergency power supplies for air conditioners. Some Local Governments had expressed interest in seeing this in the QDC. However, the Chair advised that BCQ's position was that to regulate for this may be unnecessary as the QDC is intended to focus on issues relating to emergency, rather than amenity. Where an aged care home could not be occupied during summer due to the air-conditioning not functioning residents may be relocated. In any event members considered these matters, particularly for shops and offices, as being appropriately subject to business planning, not regulation.

The Chair advised that the QDC also included a provision for the installation of reflux valves for sewerage, to protect drainage outlets from backflow. The BICG members generally supported the idea. However, QBSA noted that reflux valves were not always effective. AIBS asked if this provision could be included under the *Plumbing and Draining Act 2002* rather than the QDC, in order to keep plumbing and building issues separate. Mr Reed advised that the provision was included in the QDC, but was called up under the *Standard Plumbing and Drainage Regulation 2003*. QBSA pointed out that this may be an area of concern for building certifiers, if it is another check they need to do, and that consideration should be given to including the requirement in the Queensland Plumbing and Wastewater code.

The Chair said that he was aware that some people had concerns about stormwater issues. However, BCQ was not in the position to address the issue. BCC said that it was a Local Government issue and that it was working towards a solution.

HIA asked how the QDC would work with respect to the QRA's *Planning for stronger, more resilient floodplains* guideline. Dr Oost advised that the guideline was a non mandatory code separate from the QDC. HIA strongly expressed its concern that the guideline was

inconsistent with the QDC, and questioned the validity of releasing such contradictory information. AIBS support HIA's position and suggested that the guideline should not include any references to building work. The Chair asked that QRA take the BICG members' feedback on board.

BCC pointed out that the guideline was not statutory and advised that BCC used it as a reference for flood mapping. RCC suggested that the purpose of the guideline was to promote a planning design to suit the area. The Chair suggested that BCQ work with the QRA to better align the guideline and the QDC. He noted that for the QDC to be effective, it needed to reduce conflict with the planning system and promote consistency.

The Chair asked the BICG members for their views on the provisions relating to freeboards. Currently, the QDC nominates a freeboard, but provides Local Governments the ability and flexibility to set their own. QMBA noted that this could result in 73 heights across Queensland and suggested that for consistency, there be one nominated freeboard, especially since all the freeboard levels only varied between 300mm and 500mm. Any uncertainty or margin of error could instead be factored into the DFL. AIBS and RCC supported this approach. RCC noted that from a building certifier's perspective, a single consistent freeboard would be preferable. Mr Finnimore advised that Local Governments had indicated that they would prefer to set their own freeboard. ABCB noted that it supported this position. The Chair said that BCQ would actively consider BICG's feedback regarding a single freeboard, and asked if the BICG members had any preference as to what that freeboard might be. The BICG members declined to nominate a preferred figure although some mentioned 300mm was a good standard.

The Chair asked the BICG members for any additional comments in relation to the QDC. AIA asked which documents would make up the QDC. Mr Finnimore advised that the QDC and national standard should be read together. BCQ had also developed explanatory notes to assist in understanding the code. AIA also highlighted a typographical error on page three of the QDC, point three under the *Limitation* heading.

The Chair advised the BICG members that they would be kept updated on the development of the QDC.

**The meeting closed at 2:32 pm**

# South East Queensland Local Governments meeting: Flood code

Wednesday 9 November 2011

Level 5, 63 George Street, Brisbane

## Attendees:

Glen Brumby

Chair, Building Codes Queensland (BCQ)

BCQ

BCQ

BCQ

BCQ

Moreton Bay Regional Council

Brisbane City Council (BCC)

BCC

Logan City Council

Gold Coast City Council (GCCC)

GCCC

Ipswich City Council (ICC)

ICC

ICC

The meeting opened at 10.00am

## 1. Introduction

The Chair, opened the meeting and welcomed the members.

## 2. Discussion of National Flood Standard and draft Queensland Development Code

The Chair gave an overview of the proposed draft Queensland Development Code (QDC) for construction of buildings in flood hazard areas and stated when the proposed QDC will apply. He then asked the members for their views on the application of the QDC.

The BCC representative indicated that BCC does not support the QDC taking effect at this stage, particularly because it may prevent them from transferring building provisions currently in its TPLI into its planning scheme. ICC also indicated some concerns about not being able to transfer TLPI requirements into their planning scheme. The Chair indicated BCQ did not support building standards being included in planning schemes and that was not the intention with the TLPIs, which are an interim measure only.

#### Referral agency powers and planning/building interface

There were some suggestions from Local Governments that referral agency powers would not be used due to liability issues, but instead their approach would likely be to not support the application and let the applicant appeal the decision to the Building and Development Dispute Resolution Committees. There were also some suggestions that the term "undesirable" should be removed or amended as it was not a planning term. Some Local Governments suggested that private building certifiers should be able to provide exemptions for raising of, or additions to, existing houses. GCCC indicated that it would never approve of habitable spaces of new homes being built below the flood hazard level and the representative suggested that lots should be purchased by the Local Government in some circumstances.

ICC advised that ICC attendees were unable to provide definite views because they needed further approval from Council. However, ICC reiterated that it considered there were unresolvable conflicts between the QDC and planning requirements. Attendees discussed the building/planning interface at some length. The Chair explained that the QDC would not conflict with heritage rules for existing building because it did not apply to alterations.

#### Flood characteristics

BCC suggested it does not have information about likely flow rates within its area. GCCC indicated it has comprehensive information on flood characteristics, including expected flood levels and flow velocities.

#### Flood resilient materials

BCC suggested there was some value in requiring flood resilient materials below the DFL, for non-structural components.

ICC indicated it may not be practical in some cases to raise habitable floor levels above DFL, and in those cases flood resilient materials should be used. BCC also agreed with ICC that flood resilient materials should be required for non-structural purposes below the DFL, however other Local Governments did not have a strong preference for this.

The Chair agreed that more flexibility was required with regard to raising of existing houses.

#### Sewer reflux valves

There was discussion about the proposed requirements for reflux valves and Local Governments indicated general support for this measure. Some indicated that these valves can potentially fail if not maintained properly and suggested there should be some guidance material published to notify the property about required maintenance of the valve.

#### Commercial buildings

The proposed requirements for commercial buildings were discussed and were supported by all Local Governments present.

#### Air-conditioning and ventilation systems

There was some discussion about air-conditioning and ventilation systems and whether this should be an additional requirement under the proposed QDC, particularly for class 2, 3 and 9a and 9c buildings. There was some difficulty experienced during the 2010/2011 floods with aged care homes not having functioning air-conditioning and residents having to be relocated. However the issue of requiring a backup power supply large enough to supply power for these systems was also discussed.

#### Termite Management Systems

There was some discussion about chemically impregnated termite management systems and potential impacts of floods. There is no known evidence of how these systems are



affected by flood water. It was suggested that the guideline that will accompany the QDC should include a suggestion that chemically impregnated systems should be avoided in flood hazard areas where possible, and should also be checked post floods to ensure they are still operational.

**The meeting closed at 11.00am**

# Local Government Teleconference No. 1

7/11/2011

Teleconference to discuss the early adoption of the draft flood standard

## Attendees:

[REDACTED]	Building Codes Queensland
[REDACTED]	Building Codes Queensland
[REDACTED]	Balonne Shire Council
Scott Norman	Balonne Shire Council
[REDACTED]	Lockyer Valley Shire Council
[REDACTED]	Bundaberg City Council
Des Howard	Barcaldine Region Council
[REDACTED]	Campbell Higginson Planning (private consultant)

## The meeting opened at 10:00AM

[REDACTED] opened the teleconference and welcomed the attendees.

[REDACTED] briefly explained that the Queensland Government was considering the option of adopting the draft national standard for construction of buildings in flood hazard areas (draft standard) early as a Mandatory Part of the Queensland Development Code. He indicated that the purpose of the teleconference was both an opportunity for Local Government to seek guidance on what effects the draft Mandatory Part 3.5 of the Queensland Development Code (draft QDC) will have on building work and allow Local Government to provide feedback before the QDC is considered for adoption in Queensland.

[REDACTED] verified that all attendees to the teleconference had received four documents that had been distributed by the Department of Local Government and Planning, including the draft QDC, the draft standard, explanatory notes and a comparison table between the draft standard and the draft QDC.

[REDACTED] then opened the teleconference up to the attendees of the teleconference to ask questions of the material and to allow them to provide comments on the proposal.

## 1. Matter 1 - Application

[REDACTED] sought clarification relating to the application of the QDC and its interaction with material change of use applications under planning schemes. In particular [REDACTED] suggested flood levels for floors of buildings should be established as part of the planning application. He also stated that the structural and fire safety requirements should not be dealt with under a planning approval and be left to the building development application process.

[REDACTED] agreed with [REDACTED] comments. [REDACTED] clarified that the QDC would be triggered by the declaration of a flood hazard area in a planning scheme. [REDACTED]

further explained that the assessment of floor levels for buildings in a planning approval was not appropriate. agreed that building requirements are not to be included in the planning approval process and that planning schemes are used for land use matters only.

## 2. Matter 2 – Concurrence agency

raised the possibility of Local Government being a concurrence agency where it may be “impractical or undesirable” for additions to houses to comply with the draft QDC. It was explained that a Local Government, in providing a concurrence agency response, may be able to consider planning matters, such as heritage and streetscape issues.

There was general support for a concurrence agency power for Local Governments. This approach was generally seen to be practical and low cost to homeowners.

## 3. Matter 3 – Flood heights

explained how flood heights could be determined under the draft QDC. The first way is by a Local Government declaring a flood height for an area, in accordance with proposed amendments to the *Building Regulation 2006*. It was explained that a Local Government may wish to declare this height based on local knowledge of flooding in the area. Extrapolation from gauge stations could also help a Local Government to identify flood heights. Further, it was suggested that if a Local Government were to declare a height, that it be quantifiable for an area i.e. using a measurement associated with the Australian Height Datum rather declaring a flood height as ‘the height associated with a Q100 event’.

It was explained that where the Local Government does not declare a flood height in accordance with the *Building Regulation 2006*, the draft QDC also allows a flood height to be determined by a person that the assessment manager deems competent to provide this information. It was suggested that a competent person may be someone with sufficient experience or knowledge with determining flood characteristics, such as a hydraulic engineer. Otherwise, where a Local Government has not declared a flood height, it may be determined under the draft QDC by using the highest recorded flood height for the area.

explained that if a Local Government declared flood heights it may reduce housing costs in the area by potentially removing the need to seek expert advice on flood characteristics.

This matter was generally supported by all participants. Concerns were raised about the ability and costs for residents in smaller Local Governments to obtain expert advice where the Local Government decides not to declare a flood height. This was noted and suggested that it was preferred for a Local Government to set the flood height and that in doing so the Local Government may decide to set the height as appropriate for its area, based on its own risk assessment.

## 4. Matter 4 – Inactive flow or backwater area

explained how a Local Government may declare an inactive flow or backwater area. It was explained that such an area is where it would not be expected that water would flow over an area at greater than 1.5m/s. However, a declaration about an inactive flow or backwater area would not be required to have detailed flood studies made to identify these low flow areas. It was explained that local knowledge could again help the Local

Government to declare these areas. An example was used that suggested an area may be able to be identified as an inactive flow or backwater area where the water rises and falls slowly from stormwater infrastructure. Another area could be where, during a peak flood, the amount of structural damage in an area indicates that the area received flows of less than 1.5m/s.

This matter was generally supported. However, it was suggested that there be some guidance provided to Local Governments on this matter. This was noted and suggested that this guidance may be able to be provided in the form of a guideline that accompanies the draft QDC.

## **5. Conclusion**

█ requested that the attendees provide their final comments.

Attendees indicated support for the draft QDC and urged it to be introduced into legislation as soon as possible.

**The teleconference ended at approximately 11:00AM**

# Local Government Teleconference No. 2

8/11/2011

Teleconference to discuss the early adoption of the draft flood standard

**Attendees:**

[REDACTED]

- Building Codes Queensland
- Building Codes Queensland
- North Burnett Regional Council
- Southern Downs Regional Council
- Southern Downs Regional Council
- Southern Downs Regional Council
  
- Western Downs Regional Council
- Western Downs Regional Council
- Townsville City Council
- Townsville City Council

**The meeting opened at 12:00PM**

[REDACTED] opened the teleconference and welcomed the attendees.

[REDACTED] briefly explained that the Queensland Government was considering the option of adopting the draft national standard for construction of buildings in flood hazard areas (draft standard) early as a Mandatory Part of the Queensland Development Code. He indicated that the purpose of the teleconference was both an opportunity for Local Government to seek guidance on what effects the draft Mandatory Part 3.5 of the Queensland Development Code (draft QDC) will have on building work and allow Local Government to provide feedback before the QDC is considered for adoption in Queensland.

[REDACTED] verified that all attendees to the teleconference had received four documents that had been distributed by the Department of Local Government and Planning, including the draft QDC, the draft standard, explanatory notes and a comparison table between the draft standard and the draft QDC.

[REDACTED] then opened the teleconference up to the attendees of the teleconference to ask questions of the material and to allow them to provide comments on the proposal.

## 1. Matter 1 - Application

[REDACTED] requested an explanation regarding the application of the draft QDC.

[REDACTED] advised that the application of the draft QDC would generally be triggered by the designation of flood prone areas through a planning scheme. However, it was pointed out that the draft QDC then contains a table that further specifies certain situations where building work would be required to comply with the draft QDC.

## 2. Matter 2 – Concurrence agency

██████████ raised the possibility of Local Government being a concurrence agency where it may be “impractical or undesirable” for additions to houses to comply with the draft QDC. It was explained that a Local Government, in providing a concurrence agency response, may be able to consider planning matters, such as heritage and streetscape issues.

There was general support for a concurrence agency power for Local Governments. This approach was generally seen to be practical and low cost to homeowners.

## 3. Matter 3 – Flood heights

██████████ explained how flood heights could be determined under the draft QDC. The first way is by a Local Government declaring a flood height for an area, in accordance with proposed amendments to the *Building Regulation 2006*. It was explained that a Local Government may wish to declare this height based on local knowledge of flooding in the area. Extrapolation from gauge stations could also help a Local Government to identify flood heights. Further, it was suggested that if a Local Government were to declare a height, that it be quantifiable for an area i.e. using a measurement associated with the Australian Height Datum rather than declaring a flood height as ‘the height associated with a Q100 event’.

It was explained that where the Local Government does not declare a flood height in accordance with the *Building Regulation 2006*, the draft QDC also allows a flood height to be determined by a person that the assessment manager deems competent to provide this information. It was suggested that a competent person may be someone with sufficient experience or knowledge with determining flood characteristics, such as a hydraulic engineer. Otherwise, where a Local Government has not declared a flood height, it may be determined under the draft QDC by using the highest recorded flood height for the area.

██████████ explained that if a Local Government declared flood heights it may reduce housing costs in the area by potentially removing the need to seek expert advice on flood characteristics.

This matter was generally supported. Concerns were raised about the ability and costs for residents in smaller Local Governments to obtain expert advice where the Local Government decides not to declare a flood height. This was noted and suggested that it was preferred for a Local Government to set the flood height and that in doing so the Local Government may decide to set the height as appropriate for its area, based on its own risk assessment.

## 4. Matter 4 – Inactive flow or backwater area

██████████ explained how a Local Government may declare an inactive flow or backwater area. It was explained that such an area is where it would not be expected that water would flow over an area at greater than 1.5m/s. However, a declaration about an inactive flow or backwater area would not be required to have detailed flood studies made to identify these low flow areas. It was explained that local knowledge could again help the Local Government to declare these areas. An example was used that suggested an area may be able to be identified as an inactive flow or backwater area where the water rises and falls slowly from stormwater infrastructure. Another area could be where, during a peak flood, the amount of structural damage in an area indicates that the area received flows of less than 1.5m/s.

This matter was generally supported. However, it was suggested that there be some guidance provided to Local Governments on this matter. This was noted and suggested that this guidance may be able to be provided in the form of a guideline that accompanies the draft QDC.

## **5. Conclusion**

█ requested that the attendees provide their final comments.

Attendees indicated support for the draft QDC. In particular, attendees from Southern Downs Regional Council were supportive of this approach and suggested that they would be supportive of further involvement by the State in the future. Western Downs Regional Council voiced a similar view to that of Southern Downs Regional Council.

**The teleconference ended at approximately 12:45PM**

**DRAFT-IN-CONFIDENCE**

**Department of Local Government and Planning**

**Building and Other Legislation Amendment  
Regulation (No. ..) 2011**

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[If this instrument is to be notified in an **extraordinary gazette**, the instructing department or agency must telephone the Office of the Queensland Parliamentary Counsel as soon as possible after blues are collected so that appropriate arrangements may be made.

If this instrument is **not** required to be made or approved by the Governor in Council, the instructing department or agency must telephone the Office of the Queensland Parliamentary Counsel [REDACTED] as soon as possible after the instrument has been made.]

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**DRAFT**



***Fundamental Legislative Principles: The OQPC Notebook—***

This publication provides information about the operation of fundamental legislative principles in the context of Queensland legislation. Policy officers involved in the drafting of legislation can request an electronic copy of the latest version of the notebook by emailing <parliamentarycounsel@oqpc.qld.gov.au>.

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Queensland

# Building and Other Legislation Amendment Regulation (No. ..) 2011

Subordinate Legislation 2011 No. ...

made under the

*Building Act 1975*

*Fire and Rescue Service Act 1990*

*Plumbing and Drainage Act 2002*

*Sustainable Planning Act 2009*

DRAFT

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[s 1]

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## **Part 1 Preliminary**

### **1 Short title**

This regulation may be cited as the *Building and Other Legislation Amendment Regulation (No. ...) 2011*.

## **Part 2 Amendment of Building Regulation 2006**

### **2 Regulation amended**

This part amends the *Building Regulation 2006*.

### **3 Amendment of s 6 (Operation of pt 3)**

Section 6(b) from 'that' to 'resolution.'—

*omit, insert—*

'about which a local government may make or amend a provision of a local law or planning scheme or a resolution.'

### **4 Amendment of s 13 (Land liable to flooding)**

(1) Section 13(1)(b)—

*omit, insert—*

(b) declare a height to be the expected flood level for all or part of a natural hazard management area (flood); and

(c) declare a distance to be the freeboard distance for all or part of a natural hazard management area (flood); and

(d) declare a velocity to be the expected maximum flow velocity of flood water all or part of a natural hazard management area (flood); and

- (e) designate part of its area as an inactive flow or backwater area.’
- (2) Section 13(2), from ‘with’—  
*omit, insert—*  
‘with—
- (a) ‘State Planning Policy 1/03 Mitigating the Adverse Impacts of Flood, Bushfire and Landslide’, adopted by the Minister on 19 May 2003; and
- (b) ‘Temporary State Planning Policy 2/11 (TSPP 2/11)’, published by the department in [DATE].’

Query—

Are these documents publicly available? If yes, suggest including an editor’s note advising this.

*Editor’s note—*

These documents are available for inspection on the department’s website at <URL>.’

- (3) Section 13—  
*insert—*
- ‘(4) If the local government declares a freeboard distance, the distance must not be less than 300mm.’

**5 Amendments of s 31 (Inspection procedure) and s 32 (Certificate of inspection)**

Query—

Certificate for aspects of a stage. Could we discuss this please?

Note that s 21 provides a restriction for who can sign a certificate for the stage of work after excavation of foundation material and before any footings for the building or structure is laid. Also note that certificates appear to be only issued for inspection of a stage. C.f. aspect of a stage.

DRAFT

[s 6]

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**6 Insertion of new ss 51BLA to 51BLC**

After section 51BL—

*insert—*

**'51BLA Approval of amendment of QDC by adding part MP3.5**

- '(1) The amendment of the QDC by adding part MP3.5 published by the chief executive on [DATE] is approved under section 13(3) of the Act.
- '(2) The approval takes effect on [DATE].

**'51BLB Approval of amendment of QDC by amending part MP5.4**

- '(1) The amendment of the QDC by amending part 5.4 published by the chief executive on [DATE] is approved under section 13(3) of the Act.
- '(2) The approval takes effect on [DATE].

**'51BLC Approval of amendment of QDC by amending part MP6.1**

- '(1) The amendment of the QDC by amending part MP6.1 published by the chief executive on [DATE] is approved under section 13(3) of the Act.
- '(2) The approval takes effect on [DATE].'

Query—

The Act, s 13 requires that the regulation must state the day that the amendment of the QDC is published. Please advise what this date is.

The amendment to the QDC by the chief executive does not take effect until the regulation approves the amendment. Similar regulations in the past have expressly stated the date the approval takes effect. What are the intended dates for the amendments to take effect?

**7 Insertion of new s 00**

After section 00—

*insert—*

DRAFT

**'0 Commissioning of fire safety installations**

- '(1) This section applies to a fire safety installation that is commissioned in a building.

Query—

Please advise which part of the BCA refers to commissioning a fire safety installation.

The term 'commission' may need review. See its dictionary definition. Is the term defined in the BCA? Note the previous DIs indicated that this provision regulated testing of fire safety installations.

Drafter's note—

Placement of new section to be decided.

- '(2) An appropriately qualified person must commission the installation in compliance with the document called 'Fire hydrant and sprinkler system commissioning and periodic maintenance procedure', published by [NAME] in [DATE].

Query—

Could we discuss this please? It is not clear if a reference is needed to MP6.1.

- '(3) The person must complete the approved form and give the owner of the building a copy of the approved form within [PERIOD] days after commissioning the installation.

Query—

When is the form to be given?

See the BFSR and note that the notice goes to the owner. C.f. occupier. Please clarify why there is an inconsistency.

- '(4) The person must, for at least 5 years from the day the installation is commissioned, keep a record of the approved form, unless the person has a reasonable excuse.

- '(5) In this section—

DRAFT



[s 8]

*appropriately qualified person* see the *Building Fire Safety Regulation 2008*, schedule 3.’

Drafter’s note—

Drafter to consider whether a regulation is needed to require compliance with a procedure in the QDC. Also note, the Act, s 30 ‘building work carried out under the QDC’. Discuss with IO and D2.

## 8 Amendment of s 54 (Fees)

Section 54—

*insert—*

- ‘(4) If the chief executive grants a request to fast-track the decision and the decision is not made within 2 business days, the chief executive must refund the fast-track fee to the applicant.’

Drafters note—

Fees for application under the Act, s 38 that are not fast-tracked—to discuss with IO. N.B. The Act, s 261 refers to fees payable. A refund of a fee for an application not decided within 20 days is contrary to the chief executive’s obligation under the Act, s 41(4). Drafter to discuss with IO and D2.

## Part 3 Amendment of Building Fire Safety Regulation 2008

### 9 Regulation amended

This part amends the *Building Fire Safety Regulation 2008*.

See s 50 of the BFSR and note previous comment about reference to the testing procedure c.f. reference to MP6.1. Does s 50 need amendment?

Note also s 50 refers to a person c.f. an appropriately qualified person. Should this be amended?

**10 Insertion of new s 51**

After section 50—

*insert—*

**'51 Record of maintenance of prescribed fire safety installations**

- '(1) A person who carries out maintenance of a prescribed fire safety installation must complete an approved form.
- '(2) The person must give the owner of the building a copy of the approved form with [PERIOD] days after maintaining the installation.

Query—

When is the form to be given?

Compare subsection (2) to s 54. Please clarify why form is to be given to the owner.

Could we discuss both ss 50 and 54 and the references to owners and occupiers?

- '(3) The person must, for at least 5 years from the day the installation is maintained, keep a record of the approved form, unless the person has a reasonable excuse.'

**11 Amendment of sch 3 (Dictionary)**

Schedule 3, definition *appropriately qualified person*—

*omit, insert—*

[s 12]

---

*'appropriately qualified person*, for carrying out maintenance of a prescribed fire safety installation of a particular type, means a person who holds a licence of a class or type, or with an endorsement—

- (a) that is—
  - (i) stated in the *Queensland Building Services Authority Regulation 2003*, schedule 2A; or
  - (ii) stated in the *Plumbing and Drainage Regulation 2003*, schedule 2, items 4 to 6; or
  - (iii) stated in the *Plumbing and Drainage Regulation 2003*, schedule 3, items 4 and 5; and
- (b) for which the scope of work includes the maintenance of prescribed fire safety installations of that type.'

DRAFT

## **Part 4                      Amendment of Plumbing and Drainage Regulation 2003**

### **12      Regulation amended**

This part amends the *Plumbing and Drainage Regulation 2003*.

### **13      Replacement of pt 4, hdg (Transitional provision for Plumbing and Drainage Legislation Amendment Regulation (No. 2) 2009)**

Part 4, heading—

*omit, insert—*

## **'Part 4                      Transitional provisions**

**'Division 1 Transitional provision for Plumbing  
and Drainage Legislation  
Amendment Regulation (No. 2) 2009**

**14 Insertion of new pt 4, div 2**

Part 4—

*insert—*

**'Division 2 Transitional provision for Building  
and Other Legislation Amendment  
Regulation (No. ..) 2011**

Drafter's note—

Blank insertion point.

Review whether this transitional provision is needed.

**'13 Applications for a licence or endorsement to continue  
under pre-amended regulation**

'(1) This section applies if, before the commencement, an application was made under the Act, section 37 and the application had not been decided.

'(2) The pre-amended regulation continues applies to the application.

'(3) In this section—

*commencement* means the commencement of this section.

*pre-amended regulation* means this regulation as in force immediately before the commencement.'

Note—

To discuss transitional issues for renewals or restorations of licences.

[s 15]

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**15 Amendment of sch 2 (Qualifications, practical experience and scope of work for restricted licences)**

- (1) Schedule 2, item 4, column 2, paragraph (c)—  
*omit.*
- (2) Schedule 2, item 4, column 3, paragraphs (a) and (b)—  
*omit, insert—*  
'no prescribed practical experience'.
- (3) Schedule 2, item 5, column 2, paragraphs (a) and (b)—  
*omit, insert—*  
'the competencies in an apprenticeship in fire protection'.

**16 Amendment of sch 3 (Qualifications, practical experience and scope of work for endorsements)**

- (1) Schedule 3, item 4, column 2, paragraph (b)—  
*omit.*
- (2) Schedule 3, item 4, column 2, paragraph (c)—  
*renumber* as paragraph (b).
- (3) Schedule 3, item 4, column 3, paragraphs (a) and (b)—  
*omit, insert—*  
'no prescribed practical experience'.

**Part 5 Amendment of Standard Plumbing and Drainage Regulation 2003**

**17 Regulation amended**

This part amends the *Standard Plumbing and Drainage Regulation 2003*.

DRAFT

**18 Amendment of s 8A (Compliance with Plumbing Code of Australia)**

Section 8A(2), from 'AS/NZS'—

*omit, insert—*

'the following—

- (a) AS/NZS 3500.5:2000 (National plumbing and drainage—domestic installations);
- (b) AS/NZS 3500.3:2003 (Storm water drainage);
- (c) AS/NZS 1546.2:2001 (Waterless composting toilets).'

**19 Amendment of s 8B (Compliance with QPW code)**

- (1) Section 8B(1), from 'Plumbing' to 'sewerage'—

*omit, insert—*

'Plumbing work and drainage'.

- (2) Section 8B(2), from 'Plumbing' to 'sewerage'—

*omit, insert—*

'Plumbing work and drainage'.

Query—

Could we discuss how the definitions of plumbing work and drainage work cover the meaning of on-site sewerage work?

Could we discuss the use of the term 'plumbing and drainage work' c.f. 'plumbing work and drainage work'.

**20 Amendment of s 9 (Regulated work and on-site sewerage work)**

- (1) Section 9, heading—

*omit, insert—*

**'9 Compliance with applied provisions'**

- (2) Section 9(1), from 'regulated' to 'sewerage'—

[s 21]

---

*omit, insert—*

'plumbing work and drainage'.

**21 Omission of s 10 (Minor work and unregulated work)**

Section 10—

*omit.*

**22 Insertion of new s 12A**

Part 2—

*insert—*

**'12A Limited application of some applied provisions**

'The applied provisions mentioned in schedule 1, items 2 to 4, apply to plumbing work and drainage work—

- (a) to the extent that the applied provisions refer to plumbing work and drainage work; and
- (b) at the stage of the completion of all aspects of the building work.'

Query—

Is the stage of the building work correctly identified? Consider a cross reference to the BR is appropriate, such as section 24(3)(f).

**23 Amendment of s 25 (Meaning of *remote area*)**

Section 25(3), definition *local government*—

*omit.*

**24 Amendment of sch 1 (Applied provisions)**

Schedule 1, items 1 to 8—

*omit, insert—*

- '1 Queensland Development Code, part MP3.5 (Construction of buildings in flood hazard areas)
- 2 Queensland Development Code, part MP4.1 (Sustainable buildings)
- 3 Queensland Development Code, part MP4.2 (Water savings targets)
- 4 Queensland Development Code, part MP4.3 (Alternative water sources—commercial buildings)'.

Query—

This provision omits AS/NZS 3500.1.2003 and 3500.4.2003. Are ss 11 and 12 of the regulation still needed?

- 25 Omission of sch 5 (Local governments for remote areas)**  
Schedule 5—  
*omit.*

## **Part 6 Amendment of Sustainable Planning Regulation 2009**

- 26 Regulation amended**  
This part amends the *Sustainable Planning Regulation 2009*.

- 27 Insertion of new pt 7A**  
After section 41—  
*insert—*

## **'Part 7 Transitional provision for Building and Other Legislation**



[s 28]

## Amendment Regulation (No. ..) 2011

Drafter's note—  
Blank insertion point.  
Consider if transitional provision is needed.

### '41A Applications for building development approval to continue under pre-amended regulation

- '(1) This section applies if, before the commencement, an application for a building development approval was made and the application had not been decided.
- '(2) The pre-amended regulation continues applies to the application.
- '(3) In this section—  
*commencement* means the commencement of this section.  
*pre-amended regulation* means this regulation as in force immediately before the commencement.'

### 28 Amendment of sch 7 (Referral agencies and their jurisdictions)

- (1) Schedule 7, table 1, item 1, column 1—  
*insert—*  
'(c) includes an alternative solution for the relevant performance criteria set out in the BCA or the Queensland Development Code, part 2.3, for the fire safety system; or

DRAFT

- (d) includes fire and evacuation plans assessed against the Queensland Development Code, part 2.3, schedule 2’.

Query—

For MP2.3, are special fire services the same as for MP 2.2?

Is a reference to the volume of the BCA needed?

Should evacuation plans for MP2.2 also be stated?

- (2) Schedule 7, table 1, item 1, column 3—

*insert—*

‘For item 1(c) and (d)—the Building Act, chapter 0’.

Query—

Is the referral jurisdiction chapters 3 and 4 or ch 7A?

- (3) Schedule 7, table 1—

*insert—*

‘Building work within flood hazard area			
29	Building work that is an addition to an existing building and within a flood hazard area if—	The local government—as a concurrence agency	Whether it is impractical or undesirable for the building work comprising an addition to an existing building to comply with the Queensland Development Code, part 3.5’.
(a)	the Queensland Development Code, part 3.5, applies to the work; and		
(b)	the work does not comply with an acceptable solution stated in the part		

**29 Amendment of sch 15 (Referral agency assessment periods)**

- (1) Schedule 15, item 1, column 1—

*insert—*

‘(d) building work within a flood hazard area’.

- (2) Schedule 15, item 1, column 2, after ‘15’—

[s 29]

---

*insert—*  
'10'.

Query—

The term 'flood hazard area' should be defined. Can this term be defined by reference to a designation by a local government under the Building Regulation?

---

ENDNOTES

- 1 Made by the Governor in Council on . . .
- 2 Notified in the gazette on . . .
- 3 Laid before the Legislative Assembly on . . .
- 4 The administering agency is the Department of Local Government and Planning.

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## MP 3.5 – CONSTRUCTION OF BUILDINGS IN FLOOD HAZARD AREAS

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**Purpose**

To ensure *buildings* located in *flood hazard areas*:

- (a) resist flotation, collapse or significant permanent movement caused by flood water; and
- (b) safeguard occupants and other people against illness or injury caused by flood water affecting *buildings*; and
- (c) are appropriately protected from the effects of flood water by standards for *utilities* and drainage outlets associated with *buildings*.

**Commencement**

This version of Mandatory Part (MP) 3.5, published on 11 November 2011, commences on 25 November 2011.

**Application**

- (1) This Part applies to the lawful carrying out of building work<sup>1</sup>, as indicated by crosses (☒) in the relevant columns in Table 1, located wholly or partly within a *flood hazard area*.

Table 1 – Application of MP 3.5

Application	Performance Requirements		
	P1	P2	P3
Construction of a new <i>class 1, 2, 3, 9a or 9c building</i> , or a <i>class 4</i> part of a <i>building</i> .	☒	☒	☒
Relocation of a <i>class 1 building</i> .	☒	☒	☒
Additions to a <i>class 1 building</i> where the additions constitute 50% or more of the <i>floor area</i> of the existing <i>building</i> .	☒	☒	☒
Additions to a <i>class 2, 3, 9a or 9c building</i> , or a <i>class 4</i> part of a <i>building</i> .	☒	☒	☒
Construction of a new <i>class 5, 6, 7, 8 or 9b building</i> .		☒	☒

<sup>1</sup>Any plumbing or drainage work included in this Part is plumbing and drainage work under the *Plumbing and Drainage Act 2002* (PDA) and is subject to the requirements under the PDA.

- (2) Despite sub-section (1), this Part does not apply to:
  - (a) a *building* with an importance level 4 as specified by the *BCA*; or
  - (b) alterations that are not additions to the *floor area* of an existing *building*; or
  - (c) raising an existing *building*; or
  - (d) repairing an existing *building*; or
  - (e) adding an extra storey above an existing part of a *building*; or
  - (f) a floating *building* that is anchored to mooring piles that comply with Mandatory Part 3.1 of the Queensland Development Code, *performance requirement 3*; or

- (g) *utilities* for a new *class 5, 6, 7, 8 or 9b building* where the *building's* certificate of classification states that the *building* is not intended to be occupied during, or in the aftermath of a *DFE*; or
- (h) additions to an existing *class 1 building* or a new *class 1 building*, where a Local Government gives the assessment manager a concurrence agency response that it would be impractical or undesirable for the addition, or *building*, to comply with some or all of this Part; or
- (i) a *building* located on a lot that is subject to:
  - (i) significant mudslide or significant landslide caused by rainfall or runoff, where it would be reasonable to expect that the mudslide or landslide would affect the part of the lot where the *building* is to be located; or
  - (ii) storm surge.

Note:

See the *Act*, section 36 and section 37.

### **Limitation**

The *acceptable solution A1* for this Part only applies to a *building* located on a lot if:

- (a) the Local Government has declared, under section 13 of the *Building Regulation 2006*, an expected *maximum velocity* for the area in which the lot is located, that is less than 1.5 metres per second; or
- (b) it is reasonable to expect the lot to be subjected to a *maximum velocity* of less than 1.5 metres per second; or
- (c) the lot is located in an *inactive flow or backwater area*.

### **Referral agency**

Under section (2) (h) of the Application section of this Part, Local Government is a concurrence agency for a building development application for a new *class 1 building*, or additions to an existing *class 1 building*, where the applicant seeks to not comply, either wholly or partly, with this Part.

Note:

In providing a concurrence agency response, the Local Government may take into account matters such as:

- (a) the expected level of flood inundation, the level of surrounding homes and any practical difficulties in achieving compliance; and
- (b) the level of an existing building for additions and any practical difficulties in achieving compliance; and
- (c) heritage or other planning related matters.

### **Compliance with the Queensland Development Code**

Compliance with this Part can be achieved only by:

- (a) complying with the relevant *acceptable solution* for the *performance requirement*; or
- (b) formulating an *alternative solution* that complies with the *performance requirement* or is shown to be at least equivalent to the *acceptable solution*; or
- (c) a combination of (a) and (b).

Note:

See the *Act*, section 14.

## Associated requirements

- *Building Act 1975*
- Building Code of Australia (BCA)
- *Building Regulation 2006*
- *Plumbing and Drainage Act 2002*
- *Standard Plumbing and Drainage Regulation 2003*
- *Sustainable Planning Act 2009*
- *Sustainable Planning Regulation 2009*

## Definitions

Note:

Italicised words within the body of the text, other than legislation titles, are defined below.

- (1) The following definitions define particular words used in this Part and in sections 2.6 – 2.11 and 2.13 of the *draft national standard*:

***acceptable solution*** see the *Act*, section 14.

***Act*** means the *Building Act 1975*.

***alternative solution*** see the *Act*, schedule 2.

***Annual Exceedance Probability*** means the likelihood of occurrence of a flood of a particular size or larger in any one year, usually expressed as a percentage.

***BCA*** see the *Act*, section 12.

***building*** see the *Act*, schedule 2.

***class***, for a *building* (or part of a *building*), means the classification of the *building* (or part of a *building*) as determined under the *BCA*.

***competent person*** see the *Building Regulation 2006*, section 17(3).

***defined flood event (DFE)***, for a *flood hazard area*, means a flood event during which flood water rises to the *DFL* for the area.

***defined flood level (DFL)***, for a lot located in a *flood hazard area*, means:

- (a) the expected flood level for the area declared by a Local Government under the *Building Regulation 2006*, section 13; or
- (b) if a Local Government has not declared an expected flood level—
- (i) the 1% *Annual Exceedance Probability* flood level for the lot, as determined by a *competent person*; or
  - (ii) the highest recorded flood level for the lot.

***draft national standard*** means the draft national Standard for Construction of Buildings in Flood Hazard Areas, prepared by the Australian Building Codes Board, version 7, dated October 2011.

**enclosed**, for a non-habitable room, means a room that is completely surrounded on all sides by walls that would restrict, but not necessarily totally prevent, flood water from entering the room.

Example

A room surrounded on all sides with a brick veneer wall (including weep holes) and a garage or pedestrian door would be considered to be enclosed. However, a room surrounded by cladding incorporating gaps that allow relatively free movement of water would not be considered enclosed.

**essential services** means services related to a fire safety installation that is required by the Queensland Development Code or the BCA.

**finished floor level** see the *draft national standard*, section 1.7.

**flood hazard area** means an area, whether or not mapped, designated by a Local Government as a natural hazard management area (flood) under section 13 of the *Building Regulation 2006*.

**flood hazard level**, for a *flood hazard area*, means the *DFL* plus the *freeboard*.

**floor area** see the Act, Schedule 2.

**freeboard** for a *building*, means an additional distance above the *DFL* of 300mm.

**habitable room** see the *draft national standard*, section 1.7.

**hydrodynamic action** see the *draft national standard*, section 1.7.

**hydrostatic action** see the *draft national standard*, section 1.7.

**inactive flow or backwater area** means an area designated by a Local Government as an inactive flow or backwater area under section 13 of the *Building Regulation 2006*.

**maximum velocity** means the maximum flow rate of water over the area in which the lot is located during a *DFE*.

**performance requirement** see the Act, section 14.

**utilities** means any of the following:

- (a) lift motors and lift motor rooms for emergency lifts;
- (b) electrical switchboards and meters;
- (c) back-up power supplies and generators for *essential services*;
- (d) sprinkler valve rooms and any associated pumps;
- (e) fire indicator panels;
- (f) controls for stairwell pressurisation and air-handling systems used for smoke control;
- (g) hot water systems.

**wet flood proofing** see the *draft national standard*, section 1.7.

- (2) To remove any doubt, it is declared that a definition mentioned in this Part applies for the purposes of interpreting sections 2.6 – 2.11 and 2.13 of the *draft national standard*.



PERFORMANCE REQUIREMENT	ACCEPTABLE SOLUTION
<b>Buildings in flood hazard areas</b>	
<p><b>P1</b> A <i>building</i> must be designed, constructed, connected and anchored so that, in the event of a flood up to a <i>DFE</i>, it:</p> <ul style="list-style-type: none"> <li>(a) resists flotation, collapse or significant permanent movement, resulting from: <ul style="list-style-type: none"> <li>(i) <i>hydrostatic action</i>; and</li> <li>(ii) <i>hydrodynamic action</i>; and</li> <li>(iii) erosion and scouring; and</li> <li>(iv) wind; and</li> <li>(v) any other action; and</li> </ul> </li> <li>(b) safeguards occupants and other people against illness and injury caused by flood water affecting the <i>building</i>, or the part of the <i>building</i>.</li> </ul>	<p><b>A1</b> The <i>building</i> complies with sections 2.6 – 2.11 and section 2.13 of the <i>draft national standard</i>.</p> <p>Note:</p> <ul style="list-style-type: none"> <li>1 The definitions for this Part apply for the purpose of interpreting sections 2.6 – 2.11 and section 2.13 of the <i>draft national standard</i>.</li> <li>2 Where A1 does not apply to a <i>building</i>, or part of a <i>building</i>, (refer to limitations in this Part), an <i>alternative solution</i> will be required to comply with P1. To formulate an <i>alternative solution</i>, the services of an engineer may be required.</li> </ul>
<p><b>P2</b> <i>Utilities</i> associated with the <i>building</i> must be designed or located to reduce the effects of flood water on <i>utilities</i> in the event of a flood up to a <i>DFE</i>.</p>	<p><b>A2</b> <i>Utilities</i>, other than electrical meters for <i>class 1 buildings</i>, are located above the <i>flood hazard level</i>.</p> <p>Note:</p> <ul style="list-style-type: none"> <li>1 Electrical installations must be installed by a licensed electrician. Electrical meters must also be installed in accordance with electrical entity requirements.</li> </ul>
<p><b>P3</b> Drainage outlets associated with, and located on the same lot as, a <i>building</i> in a <i>flood hazard area</i> must be designed so that the effects of flood water are reduced in the event of a flood up to a <i>DFE</i>.</p>	<p><b>A3</b> (1) Drainage outlets for a <i>building</i> are protected from backflow by fitting a reflux valve for sewerage on the lot in close proximity to the <i>building's</i> drainage connection point or in a location as specified by the Local Government.</p> <p>(2) Reflux valves installed under (1) are accessible for maintenance unless otherwise specified by the Local Government.</p>

**Note:** Some planning schemes may not permit development to be carried out on land prone to flooding. Check with the Local Government in the area to determine what land use restrictions apply to the lot.