

**HUMPHREYS  
REYNOLDS  
PERKINS**  
planning consultants

**BRISBANE**

Level 11  
40 Creek Street  
Brisbane 4000 Australia  
T 07 3221 8833  
F 07 3221 0278  
E mail@hrppc.com.au  
W www.hrppc.com.au

**DIRECTORS**

Jeff Humphreys  
BRTP(Hons),BA,FPIA  
David Perkins  
BRTP,MPIA  
Steve Reynolds  
BRTP,MSc(EnvMgt),MPIA

**ASSOCIATES**

John Morwood  
BAS(BE),GDURP,MPIA  
Leisa Sinclair  
BAppSc(Surv),GDURP,MPIA,MUDIA  
John Van As  
BRTP(Hons),MBA,AssocDipBus(REV),MPIA  
Ben Lyons  
BBtEnv(Urb&RegPlan),GDURP,MPIA

Associated Humphreys  
Reynolds Perkins practices:

**GOLD COAST**

T 07 5594 1322  
F 07 5594 1366

**NORTH QUEENSLAND**

T 07 4953 2877  
F 07 4953 2577

**SUNSHINE COAST**

T 07 5451 0044  
F 07 5443 1688

---

## Building Controls for Flood Hazard Areas

Recommendations to the  
Queensland Floods Commission of Inquiry

---

Prepared by **Steve Reynolds**  
Humphreys Reynolds Perkins  
Planning Consultants

7 November 2011

**Disclaimer:**

This advice is based on my opinion of the town planning issues that arise from the statutory provisions relating to this matter. Comments and conclusions in or construed from this advice relating to matters of law are not to be relied upon. You should only rely upon the advice of your professional legal advisors with respect to matters of law.

# Table of Contents

- 1.0 INTRODUCTION**
- 2.0 QUESTION 1**
  - 2.1 Introduction
  - 2.2 Response
- 3.0 QUESTION 2**
  - 3.1 Introduction
  - 3.2 Response
- 4.0 QUESTION 3**
  - 3.1 Introduction
  - 3.2 Response
- 5.0 QUESTION 4**
  - 3.1 Introduction
  - 3.2 Response
- 6.0 QUESTION 5**
  - 3.1 Introduction
  - 3.2 Response
- 7.0 QUESTION 6**
  - 3.1 Introduction
  - 3.2 Response
- 8.0 CONCLUSION**

## **BIBLIOGRAPHY**

## **APPENDICES**

### **Appendix A – Curriculum Vitae**

## 1.0 INTRODUCTION

1. This report responds to a request from the Queensland Floods Commission of Inquiry (QFCI) to address the following questions:
  1. *“What are the advantages and disadvantages of incorporating building controls for flood hazard areas in:
    - a. the Building Code of Australia;
    - b. Australian Standards;
    - c. the Queensland Development Code;
    - d. local government planning schemes; and
    - e. any other type of regulatory document you consider relevant.*
  2. *Through which document or documents identified in item 1 are building controls for flood hazard areas most effectively regulated?*
  3. *Should the following building controls be made mandatory or non-mandatory requirements (please provide reasons):
    - a. the setting of a minimum freeboard for habitable floor levels;
    - b. the use of flood resilient building materials or design for flood hazard areas; and
    - c. essential services being located out of a flood hazard area.*
  4. *Should there be building controls for commercial buildings? If so, please provide examples of what controls should be mandatory or non-mandatory. For example, should there be mandatory building controls relevant to the storage of chemicals or toxic substances in commercial buildings?*
  5. *What are the advantages and disadvantages of Queensland adopting the Draft Standard prior to its inclusion in the Building Code of Australia and are you supportive of this early adoption?*
  6. *Please provide any general commentary you may have in relation to the proposed Draft Standard.”*
2. Each section of this report addresses one of these questions.
3. The issues raised by the questions are complex and relate to multiple jurisdictions and professional disciplines. The time to address these questions has been limited. Consequently, my opinions and recommendations ought to be treated as preliminary, not definitive. Where appropriate, I have clarified where more, or less, certainty applies.

## 2.0 QUESTION 1

### 2.1 Introduction

1. This section addresses Question 1:

*“1. What are the advantages and disadvantages of incorporating building controls for flood hazard areas in:*

- a. the Building Code of Australia;*
- b. Australian Standards;*
- c. the Queensland Development Code;*
- d. local government planning schemes; and*
- e. any other type of regulatory document you consider relevant.”*

### 2.2 Response

2. The relative technical advantages of incorporating controls into the Building Code of Australia ('BCA') or the Australian Standards are beyond my expertise. I note Mr Brumby says<sup>1</sup> a Standard should contain the 'recipe' for doing something whilst the 'policy' should be in the building codes (controlled by governments). I generally agree with this proposition. The current draft standard for Construction of Buildings in Flood Hazard Areas ('Draft Standard') contains both elements, being performance solutions as well as methodologies for structural assessment (eg. formulas for hydrostatic and debris actions).
3. The advantage of the Queensland Development Code ('QDC') is to address building code matters unique to Queensland, which are not dealt with in the same manner in the BCA. This may be legitimate for certain flood control measures and might include bringing forward controls that may otherwise take more time to incorporate into the BCA.
4. I acknowledge there is fine line between building controls that aim to protect 'life' compared to 'property' (or aimed to protect 'community resilience', a term I prefer which was stated by Mr Brumby<sup>2</sup>). Whilst I think community resilience is mostly managed through the planning process (the planning scheme) by allocation of land use, there are some building aspects (eg. protection of services) which are clearly desirable for community resilience but which are squarely matters a building certifier could address via the building certification process. At present, it is questionable whether a planning scheme can address building services, having regard to current legislation.
5. The key planning question with regards to flood controls, is the appropriateness of containing controls in building codes, as opposed to a

---

<sup>1</sup>See Mr Brumby Transcript 28 September 2011 on page 3315 lines 20 to 30.

<sup>2</sup>See Mr Brumby Transcript 28 September 2011 on page 3341 line 55.

planning scheme (including a Temporary Local Planning Instrument). A number of complex issues apply:

- a. the degree to which a planning scheme can regulate building work under current legislation – or ought to regulate building work if that legislation is amended;
  - b. the degree to which it is appropriate to vest authority for certain decisions in the hands of private certifiers, as opposed to the local government planning authority (eg. certifiers determining ‘reasonable’ flood protection and/or choosing a local government as a referral agency);
  - c. the practicality (useability) of locating building control matters in several places – within planning schemes and building codes (QDC; BCA and Draft Standard);
  - d. the implications of compensation for injurious affection provisions under the *Sustainable Planning Act 2009* (‘SPA’) on the ability for local government to change existing use rights, as opposed to those rights being altered via the building approval process;
  - e. how existing planning approvals (for material change of use and/or preliminary building work) are affected by building control measures in flood prone areas;
  - f. how a lack of information about flooding (in planning schemes) affects the ability to practically implement building controls for flood prone areas;
  - g. whether it is practical to require individual building work proponents to carry out independent flood investigations, having regard to cost implications;
  - h. the need for consistency in controls across the State, compared to the desire for local government to have autonomy to manage particular matters;
  - i. the impact of certain building controls for flood management (eg. floor levels; building placement; building design) upon amenity considerations that raise planning issues (eg. streetscape; heritage; overlooking); and
  - j. the utility of providing flood control provisions in a State Planning Policy (SPP), Temporary State Planning Policy (TSPP); State Regulatory Provision (SRP) or the Queensland Planning Provisions (QPP).
6. The resolution of these competing and complex considerations is beyond the scope of this paper. However, I can provide the following observations.
7. Issue (a) raises legal questions beyond my expertise. If the law does (or is changed) to facilitate building matters controlled under planning schemes, the issue becomes one of system efficiency. In my view, unless there are likely to be adverse planning consequences, building matters

ought to be contained within building codes for private certifiers to process. This is to maximise the efficiency of the planning system. However, there are likely to be building matters with likely adverse planning consequences, such as the kind referenced in issue (i). Another consideration is the earlier discussion on community resilience (protection of property). If the building codes are to deal only with matters of life protection, then other building matters relevant to community resilience must fall within the planning scheme. This might include the protection of service infrastructure in commercial buildings (to facilitate post flood recovery). In this case, building code matters will be split squarely between the building codes and the planning scheme, leading to the potential for some confusion (refer issue (c)).

8. Issue (b) is a mechanical consideration relevant to how building codes are drafted. At present, the draft QDC provisions for flooding provide, in my view, too much autonomy for private certifiers. As I understand the current draft, certifiers have the autonomy to determine whether flood protection measures are 'reasonable', which is too flexible and likely to lead to inequitable application and inconsistency throughout the State. Further, certifiers appear to be able to elect whether local government is a Referral Agency for an application, which would have similar consequences. If a local government is not a Referral Agency, they may not have an opportunity to consider amenity considerations such as those in issue (i). For example, a comprehensive flood report might satisfy the certifier, negating the need for the referral, but causing amenity impacts.
9. Issue (c) is of limited concern, when development requires a prior development application assessable against the planning scheme. In those cases, conditions of approval are available to the certifier (which might include relevant building matters), prior to the lodgement of the building application. This commonly occurs<sup>3</sup>. Issue (c) is of some concern for self-assessable development, as additional building control measures in a planning scheme may trigger a planning application in addition to a building application, leading to process inefficiencies.
10. Issue (d) arises because SPA limits compensation for planning controls imposed due to natural processes (including flooding), but it is a limited exclusion as it does not apply if conditions on development could have significantly reduced the risk instead. This has some affect upon local governments resolve in changing land use rights in flood prone areas. In contrast, building controls in building codes, which might have a similar practical effect, may not give rise to compensation. The implication is that some local governments may support stronger building controls for this reason only, whereas others may not as they have less compensation exposure. This issue needs further investigation, consultation and potentially legislative reform.

---

<sup>3</sup> Note: Ipswich City Council has recently introduced a TLPI which requires all dwelling houses in flood prone areas to require code assessment against the planning scheme. This facilitates the imposition of conditions relating to flood impacts, prior to building certification.

11. Issue (e) is a practical consideration. For example, a local government may have imposed specific amenity conditions on an approval, which when building approval is sought is subject to new QDC flood controls. Those controls may directly conflict with the conditions of approval. Which has precedence? Is the approval invalidated? Other examples will raise different issues.
12. Issue (f) is central to the current QDC and Draft Standard proposals. Put simply, there is such a lack of information and consistency of information in Queensland, that the draft QDC and Draft Standard are unlikely to have broad utility. Rather, they are likely to impose requirements that are unworkable, when combined with the existing mapping triggers in many local government areas. In those cases, I would expect local government to opt out of the controls. The irony, is that a few larger local governments will be likely to have the available information to trigger the provisions, but will also be the most reluctant to accept external control by private certification. Many local governments map flood extent, but not depth. Very few local governments in Queensland have flood hazard mapping and where it exists, it is unlikely to relate to the velocity limits proposed in the Draft Standard (and draft QDC).
13. Issue (g) is related to (f) above. Where there is insufficient information on flood location; depth and velocity (which will be most of Queensland), the Draft Standard (and QDC) requires site specific flood analysis. This is impractical for all but the largest of projects. The costs would simply be too prohibitive. In most cases, it would be cheaper to accept the increased build cost to flood proof a building, than to carry out the study. However, it is not clear from the Draft Standard (or QDC) what level of flood proofing might be the default requirement (in the absence of a study). In either case, the increased cost on construction needs to be considered, in terms of balancing affordability; life protection and community resilience.
14. Issue (h) recognises that consistency in terminology and application of provisions is desirable. For example, multiple local government provisions requiring slightly different services protection is inefficient and can lead to confusion and error. One common provision is clearly more appropriate. However, there will be control issues that a local government wishes to apply a local solution. This may be appropriate and desirable. It is also desirable to identify, for all Queensland local governments, what those local control issues should be and to recognise only those issues in the legislative mechanisms.
15. Issue (i) is critical to the broader issues discussed above. It is the impact of flood controls upon planning considerations, such as amenity, that lead to the strongest resistance by local government to building control by private certification. The issues are legitimate and ought to be the subject of broad consultation and consideration. There may be mechanisms that can be applied (such as triggers for floor heights or heritage listings), that can assist to address some of these considerations. It is likely some local governments will have more concern about such matters than others (due to local circumstances; community expectations or available resources).



Therefore, the solution should be flexible to enable a local government to opt in or out of local planning control over building matters in flood prone areas.

16. Issue (j) is relevant to implementation. Once it is determined which building control matters should be have any planning influence, it will be necessary to determine the appropriate implementation method. SPP's and TSPP's offer limited scope. They can directly influence the content of a new planning scheme and provide matters for assessment, but not a regulatory control mechanism. They can set in place a 'fast track' method to amend a planning scheme (as a 'minor amendment') to include a regulatory mechanism, such as the current draft TSPP 2/11. A State Regulatory Provision could be of assistance, to set in place common provisions for those flood control matters that have a planning dimension. Local circumstances could be incorporated by enabling local government to identify localities or limits to apply to set provisions. Similarly, the QPP could achieve the same outcome with similar provisions – but will take time to be implemented as it only affects new planning schemes.

### 3.0 QUESTION 2

#### 3.1 Introduction

17. This section addresses Question 2:

*“2. Through which document or documents identified in item 1 are building controls for flood hazard areas most effectively regulated?”*

#### 3.2 Response

18. I have provided some comments with respect to this question in my answers to question 1. Generally, building controls for flood hazard are likely to be most effectively regulated in different documents. It is unlikely one document will achieve the required effectiveness.

19. I cannot answer this question directly, given the lack of time for consultation and analysis available to me. What is required is a process to determine, for each building control:

- a. whether the control should be subject to local government planning influence and if so, whether that influence should be optional?
- b. whether the control should be mandatory and if so, under what conditions?
- c. whether the control relates to the protection of life or is focussed primarily on community resilience?
- d. to what type of development should the control apply (eg. commercial)?
- e. how onerous is the building control compared to how accurate is the trigger (eg. map) that gives the control effect; and
- f. in which instrument the control ought to reside?

20. The building controls which are applicable may be broadly summarised as those which seek to control:

- a. floor levels;
- b. materials;
- c. services;
- d. structural integrity;
- e. fill levels;
- f. drainage outlets; and
- g. emergency egress.

21. The last question (e) will only be clear once the previous questions have been answered. The process requires consultation with local government

and building services authorities, within a legal context. Once the overall position is better understood, it is likely that some compromises may be necessary to ensure efficiency of the overall system. Again, such trade-offs will not be known until the whole is better understood .

22. I do not believe, on the information available to me, that such information has been determined to the degree necessary to make decisions at this time.
23. I have the following comments on each document identified in question 1:

The Building Code of Australia

24. It is appropriate for the BCA to be the default location for building controls for flood management, unless a variation or different State of local requirement is necessary (which ought to then default to one of the documents below). Generally, I agree with Mr Brumby<sup>4</sup> where he says it is *'always considered preferable to incorporate building matters into State or national building regulations wherever possible'* to promote a consistent approach, utilise the expertise of building certifiers and avoid duplication of process.

Australian Standards

25. It is appropriate for the Draft Standard to contain methodologies underpinning building controls in other documents. I question whether it should include matters of building control policy, as it does currently.

Queensland Development Code

26. It is appropriate for the QDC to contain urgent building controls that may otherwise take more time to come into force in the BCA (when they come into force the QDC provisions should be withdrawn).
27. It is also appropriate for the QDC to contain State relevant building controls which supplement the BCA or which rely on local government decisions to take effect. Until the future BCA content is known, it is unclear the extent to which QDC provisions will be necessary at that time.

Local Government Planning Schemes

28. It is appropriate for planning schemes to identify planning circumstances upon which standard building controls ought to be varied. These might relate to amenity considerations; the accuracy of the mapping that triggers the control or the resources available to the local government.
29. The most likely candidate building controls for local government planning influence include:
- a. floor levels;
  - b. materials; and
  - c. fill levels.

---

<sup>4</sup>see QFCI Statement of Glen Thomas Brumby para 52.

State Planning Policies (and TSPP's)

30. The provisions of the SPP (and any TSPP) need to be synchronised with the final building control system, as well as best practice for land use control within flood prone areas. I have prepared a separate paper regarding Flood Mapping in Queensland Planning Schemes that recommends an approach for consideration in a revised SPP 1/03.
31. SPP's can also include guidance for local government (to facilitate common approaches to flood management across the State) as well as facilitate more rapid inclusion of flood mechanisms (and mapping) in planning schemes.

State Regulatory Provisions

32. SRP's may be appropriate to operate in conjunction with the QDC (or BCA) to facilitate appropriate local government planning influence. A standard State-wide approach to planning matters might assist to address standard planning controls for building matters, in relation to:
  - a. the wide discrepancy in mapping flood prone areas in Queensland (by assisting to define where building controls apply); and
  - b. standard provisions for the consideration of amenity applicable to building control matters.

Queensland Planning Provisions

33. The QPP can contain the same provisions as the SRP's, given it only applies to future planning schemes and not existing planning schemes.
34. In addition, the QPP is can contain mandatory and non-mandatory provisions and statements for flood prone areas generally, which need to be coordinated with any amended SPP 1/03.

## **4.0 QUESTION 3**

### **4.1 Introduction**

35. This section addresses Question 3:

*“3. Should the following building controls be made mandatory or non-mandatory requirements (please provide reasons):*

- a. the setting of a minimum freeboard for habitable floor levels;*
- b. the use of flood resilient building materials or design for flood hazard areas; and*
- c. essential services being located out of a flood hazard area.”*

### **4.2 Response**

36. In my opinion, minimum freeboard ought to apply as a standardised mandatory requirement across Queensland, with the level able to be varied at the discretion of the local government for planning reasons. This discretion is necessary to maintain amenity or to protect heritage buildings and precincts. Whilst many local governments will identify locations where discretion is appropriate, others will not.

37. In my opinion, flood resilient materials ought not apply as a standardised mandatory requirement across Queensland, because of the lack of information available to implement such a requirement. Where information is available, it may be suitable for a local government to elect to require such controls at their discretion. In such cases, some variation of standard materials may be appropriate, for example to protect the integrity of heritage buildings or character precincts.

38. In my opinion, essential service locations ought to be capable of standardised mandatory application across Queensland.

## 5.0 QUESTION 4

### 5.1 Introduction

39. This section addresses Question 4:

*“4. Should there be building controls for commercial buildings? If so, please provide examples of what controls should be mandatory or non-mandatory. For example, should there be mandatory building controls relevant to the storage of chemicals or toxic substances in commercial buildings?”*

### 5.2 Response

40. In my opinion, commercial building give rise to the following flooding considerations:

- a. capacity to recover post-flood (relevant to community resilience);
- b. storage of chemicals or toxic substances;
- c. affect upon flood dynamics (altering flood conditions upstream or downstream);
- d. flood damage to the building; and
- e. emergency access considerations.

41. Item (a) is important for the economic bases of local government areas. A key component is the location and design of mechanical/electrical services and drainage outlets. These are reasonable mandatory building controls for commercial buildings.

42. Item (b) is important to the environmental bases of local government areas. It is reasonable to control the storage of such substances; however, there exists an overlap with environmental regulation (eg. ERA’s for storage of chemicals or toxic substances). Building plans may not specify the location of such substances. Further consideration needs to be given to the best means to avoid duplication and ensure adequate control.

43. Item (c) is a matter relevant when a planning application is required, for assessment against the planning scheme, because it can relate to the fundamentals of whether a use is appropriate for a parcel of land. For self-assessable (as-of-right) development it is not reasonably applicable. Item (c) is not appropriate for building controls (it is a planning matter).

44. Item (d) is not a critical consideration for building control of commercial buildings. Commercial proponents are capable of making their own judgements on flood integrity based on investment longevity; sustainability and insurance considerations.

45. Item (e) is not as relevant for commercial premises as to residential premises, due to the shorter lead-time to evacuate and the non-habitable character of the buildings (no-one sleeps there). However, it is a planning consideration whether there ought to be a flood emergency management plan in place, if significant numbers of people are involved or wider

precincts are affected. This can best be managed through conditions on a town planning approval (eg. material change of use application), not via the building work approval process.

## 6.0 QUESTION 5

### 6.1 Introduction

46. This section addresses question 5:

*“5. What are the advantages and disadvantages of Queensland adopting the Draft Standard prior to its inclusion in the Building Code of Australia and are you supportive of this early adoption?”*

### 6.2 Response

47. In my opinion, the advantages are limited. The controls for building services and drainage outlets are worthy and ought to be implemented as soon as possible. However, I note similar building services controls are already in place in several planning schemes<sup>5</sup>.

48. The disadvantages are considerable. They principally relate to:

- a. the inadequacy of mapping to trigger the controls;
- b. the cost of implementing the controls; and
- c. the need for local planning influence on some controls.

49. Flood mapping in Queensland varies widely<sup>6</sup>. Information on flood depth and velocity is rarely available, but is necessary to implement the deemed to comply provisions of the code. The Queensland Reconstruction Authority (QRA) is preparing flood maps for many parts of Queensland without prior flood mapping. The intent is that together with TSPP 2/11, these maps can be used to trigger the new code requirements. However, given the information required to implement the code, it is very likely that more areas than necessary will be subject to the code requirements. The code is drafted as a ‘targeted’ instrument; however, because of the Queensland mapping, it will result somewhat as a ‘scattergun’ approach. This is not its intent<sup>7</sup>.

50. Because of the mapping issue, the result will be most building applications having to carry out individual flood studies. Apart from major building projects, this is folly. The availability of data and cost of such work is beyond the scope of individual proponents. Similarly, the alternative of meeting all the criteria (to avoid doing the study) will add costs that may not be necessary for the site. Either way, the costs will be significant and only in some cases warranted.

51. As discussed elsewhere in this report, there is an appropriate need for local planning influence on some building controls. It is not appropriate to allow building certifiers an open brief to determine what is ‘reasonable’

---

<sup>5</sup> For example: BCC; Bundaberg; Burnett; ICC; Caboolture; Pine Rivers; Redcliffe; Redland; Rockhampton; Maroochy and Whitsunday planning schemes.

<sup>6</sup> See my separate report Flood Mapping in Queensland Planning Schemes

<sup>7</sup> The Australian Building Codes Board (ABCB) recognise this limitation in the draft Information Handbook (see second paragraph on page 31)



flood protection or whether to elect to refer a building application to local government. Similarly, there are some building controls that warrant amenity and heritage assessment, beyond the capacity of private certifiers. More 'checks and balances' need to apply to the final system before it is appropriate for State-wide application.

## 7.0 QUESTION 6

### 7.1 Introduction

52. This section addresses question 6:

*“6. Please provide any general commentary you may have in relation to the proposed Draft Standard.”*

### 7.2 Response

53. In my opinion, the Draft Standard (and BCA) could canvass alternative measures, depending on the degree of flooding information available and the type of application. It can then be the choice of the State and/or local government to select the standard of protection, balanced against the cost and availability of information. In this manner, some controls might be implemented now, whilst on a path to reach higher protection with the future availability of better information. Otherwise, as proposed, it is likely very additional protection will be achieved in practice. I fear it is currently an ‘all or nothing’ strategy.

54. For example, the criteria in the Draft Standard might apply as drafted, where depth and velocity information is available. A lesser detailed, perhaps more performance based, set of criteria might apply where only the DFE is available (similar to currently provided in the BCC and ICC TLPI’s). Below that, more basic measures might apply where there is no DFE. This tiered approach requires some interrogation, but could form a useful starting point for how to introduce building control measures in a timely manner, without unintended adverse consequences.

55. I also note the Draft Standard has yet to be subject to the National Regulatory Impact Statement process, which is likely to yield further responses relevant to the matters raised in this paper.

56. It is also relevant that any future building controls should be coordinated with the same terminology and methodologies contained in the review of SPP 1/03. For example, the delineation of different flood events, including hazard (velocity and depth), is likely to be suitable for local government planning as well as triggering certain building requirements as proposed.



**Steve Reynolds**

Humphreys Reynolds Perkins  
Planning Consultants

## **BIBLIOGRAPHY**

ABCB: *Australian Building Codes Board* (Intergovernmental Agreement) (April 2006)

ABCB: *Construction of Buildings in Flood Hazard Areas – Information Handbook Version 5* (October 2011)

ABCB: *Draft Standard for Construction of Buildings in Flood Hazard Areas - Version 7* (October 2011)

Council of Australian Governments: *Best Practice Regulation* (October 2007)

Queensland Floods Commission of Inquiry Exhibit 667: *Letter from Ipswich City Council to Department of Local Government and Planning* (24 August 2011)

Queensland Floods Commission of Inquiry Exhibit 911: *Statement of John Adams* (2 September 2011)

Queensland Floods Commission of Inquiry Exhibit 912: *Supplementary Statement of John Adams* (25 October 2011)

Queensland Floods Commission of Inquiry: *Statement of Department of Innovation, Industry, Science and Research* (Cwth) (28 October 2011)

Queensland Floods Commission of Inquiry: *Statement of Glen Thomas Brumby* (15 September 2011)

Queensland Floods Commission of Inquiry: *Transcript of Glen Thomas Brumby Evidence* (28 September 2011)

Queensland Government (Growth Management Queensland): *Queensland Planning Provisions – Draft Version 3.0* (October 2011)

Queensland Government (Queensland Reconstruction Authority): *Planning for Stronger, More Resilient Floodplains: Part 1 – Interim Measures to Support Floodplain Management in Existing Planning Schemes* (September 2011)

Queensland Government (Queensland Reconstruction Authority): *Temporary State Planning Policy 2/11 – Planning for Stronger, More Resilient Floodplains* (September 2011)

Queensland Government: *Queensland Development Code – draft MP 3.5 - Construction of Buildings in Flood Hazard Areas* (28 October 2011)

Queensland Government: *State Planning Policy 1/03 – Mitigating the Adverse Impacts of Flood, Bushfire and Landslide* (1 September 2003)

Queensland Government: *State Planning Policy 1/03 Guideline – Mitigating the Adverse Impacts of Flood, Bushfire and Landslide* (June 2003)

Somerset Regional Council: *Temporary Local Planning Instrument 01/11 – Somerset Interim Flood Response* (2011)

Various Planning Schemes in Queensland for flood controls – BCC; BRC; CRC; GRC; GGCC; ICC; LVRC; LCC; MRC; MBRC; RCC; RRC; SCRC; TCC and WRC

Various Queensland legislation including *Building Act 1975*; *Queensland Development Code* and *Sustainable Planning Act 2009*

[www.abcb.gov.au](http://www.abcb.gov.au)

[www.dlgp.qld.gov.au/building](http://www.dlgp.qld.gov.au/building)

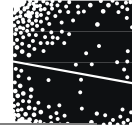
## **APPENDIX A – CURRICULUM VITAE**



# STEVE REYNOLDS

*BRTP Msc (Env Mgt) MPLA*

**DIRECTOR**



**HUMPHREYS  
REYNOLDS  
PERKINS**  
planning consultants

BRISBANE OFFICE  
LEVEL 20,

344 QUEEN STREET  
BRISBANE 4000

TEL: 07 3221 8833

FAX: 07 3221 0278

EMAIL: [steve.reynolds@hrppc.com.au](mailto:steve.reynolds@hrppc.com.au)

WEB: [www.hrppc.com.au](http://www.hrppc.com.au)

## QUALIFICATIONS:

Bachelor of Regional and Town Planning, University of Queensland 1984

Master of Science (Environmental Management), Griffith University 1994

## PROFESSIONAL AFFILIATIONS:

Member, Planning Institute of Australia

Member, Queensland Environmental Law Association

Past President, Brisbane Development Association

Former Member, Transit Oriented Development (TOD) Task Force

Former Member, Urban Renewal Task Force

## FIELDS OF SPECIAL COMPETENCE

Statutory Town Planning

Strategic Planning

Environmental Planning

Expert Witness

## CAREER

*March 1992 to Present:*  
*Humphreys Reynolds Perkins Planning Consultants*  
*(Director since 1998)*

*April 1988 to August 1991:*  
*Senior Planner at Michael Burrough Associates Town Planning Consultants, United Kingdom*

*November 1987 to April 1988:*  
*Contract Planning Officer at London Borough of Newham, United Kingdom*

*April 1986 to May 1987:*  
*Planning Officer at Queensland Department of Local Government, Brisbane*

*March 1985 to April 1986:*  
*Assistant Planning Officer at Mulgrave Shire Council, Cairns*

*December 1984 to February 1985:*  
*Contract Town Planner at Heathwood Cadillo and Wilson Planning Consultants, Brisbane*

*October 1983 to February 1984:*  
*Contract Planning Assistant at Australian Survey Office - Queensland Branch*

## Planning Scheme Documents

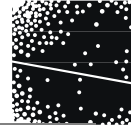
Preparation and review of statutory and strategic planning scheme provisions, including contributing to:

- Beaudesert Shire Planning Scheme;
- Albert Shire Planning Scheme;
- Mulgrave Shire (now Cairns) Planning Scheme;
- Douglas Shire Planning Scheme;
- Various local government draft Town Planning Schemes and Local Government by-laws relating to town planning and associated matters submitted to the Department of Local Government for approval;
- Preparation of statutory planning controls embodying policies of State significance, (for example, the retention of quality agricultural land);

# STEVE REYNOLDS

*BRTP Msc (Env Mgt) MPLA*

**DIRECTOR**



**HUMPHREYS  
REYNOLDS  
PERKINS**  
planning consultants

BRISBANE OFFICE  
LEVEL 20,  
344 QUEEN STREET  
BRISBANE 4000  
TEL: 07 3221 8833  
FAX: 07 3221 0278  
EMAIL: [steve.reynolds@hrppc.com.au](mailto:steve.reynolds@hrppc.com.au)  
WEB: [www.hrppc.com.au](http://www.hrppc.com.au)

curriculum vitae

## **Studies and Investigations**

### ***Planning Studies***

Preparation of studies and investigative reports on planning issues relevant to statutory and strategic planning, either leading project or as sub-consultant, including:

- Queensland State Coastal Management Plan for the Environmental Protection Agency;
- Cardwell/Hinchinbrook Regional Coastal Management Plan, in partnership with the Department of Environment and Heritage and the Great Barrier Reef Marine Park Authority;
- Preparation of a Centre Development Plan and subsequent management plans for Maroochydore Town Centre;
- Preparation of town centre redevelopment plan for Murwillumbah town centre;
- Regional Business Centre analysis in Albert Shire relating to the Brisbane to Gold Coast railway for Queensland Rail;
- Preparation of a report detailing the potential land capacity of certain Commonwealth properties, in particular, the development potential and future use of the existing Brisbane International and Domestic Airports.
- Growth model for future population and employment over a 30 year horizon in the Brisbane Statistical Area, as an input to traffic forecasts for the Airport Link project;
- Local area capacity studies and broad population analysis relevant to urban growth projections applying to the Northern Link project;
- Hervey Bay Coastal Management Study recommending works and strategic policy direction for coastal protection;
- Byron Shire Coastal Management Plan.

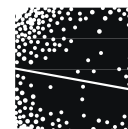
### ***System Reform***

- Project direction of a multidisciplinary study into the management of significant coastal landscapes in Queensland, for the Department of Environment;
- Report recommending implementation mechanisms for a regional open space system (ROSS) in south-east Queensland, for the Department of Lands and DHLGP;
- Review of the Local Government (Planning and Environment) Act and the recommendation of legislative reforms with relation to zoning mechanisms, development processes, compensation and plan making processes for the Department of Housing, Local Government and Planning;

# STEVE REYNOLDS

*BRTP Msc (Env Mgt) MPLA*

**DIRECTOR**



**HUMPHREYS  
REYNOLDS  
PERKINS**  
planning consultants

BRISBANE OFFICE  
LEVEL 20,  
344 QUEEN STREET  
BRISBANE 4000  
TEL: 07 3221 8833  
FAX: 07 3221 0278  
EMAIL: [steve.reynolds@hrppc.com.au](mailto:steve.reynolds@hrppc.com.au)  
WEB: [www.hrppc.com.au](http://www.hrppc.com.au)

curriculum vitae

- Preparation of report to Government on regional planning procedures and legislation in the United Kingdom and its relevance to the future regional planning framework in Queensland.

## **Environmental Management**

- National review and report on biodiversity conservation in urban and semi-urban areas for the Commonwealth Department of Environment, Sports and Territories;
- Review of proposed Environmental Protection Legislation for the Department of Environment and Heritage, to identify the scope of legislative and non-legislative reforms to better integrate planning and environmental protection processes;
- Preparation of ("Greens Plans") for Pine Rivers Shire and Logan City;
- National audit of Environmental Protection and Biodiversity Conservation Act for the National Department of Environment and Heritage to test compliance at local government level.

## **Master Planning**

Preparation of master plans for town centre and urban expansion areas either as team leader or a sub-consultant, including:

- land use study for Roma Street Goodsyrd site and the Queensland Place site for the Queensland Government;
- Rocky Springs Masterplan for a new community of 40,000 persons in Townsville;
- Hervey Bay Main Street urban development parcel, integrating new development into surrounding fabric;
- Various masterplanning projects in China, mostly as multidisciplinary team leader, including Dalian City coastal urban expansion project; Xia Chang Huangzou CBD Masterplan and Grand Canal Masterplan Huangzou;
- Mango Hill (now North Lakes) Masterplan for Lend Lease Developments;
- City Port masterplan project in Cairns for major marina expansion;
- Maroochydore regional Centre Development strategy;

## **Development Projects**

Strategic planning advice and implementation of development processes for private sector development projects throughout Queensland, including:

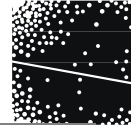
- mixed use and CBD projects requiring design guidance and multidisciplinary coordination;
- significant retail experience in all major urban areas for clients including Westfield, Stockland, Leda, AMP, Lend Lease and others;



# STEVE REYNOLDS

*BRTP Msc (Env Mgt) MPLA*

**DIRECTOR**



**HUMPHREYS  
REYNOLDS  
PERKINS**  
planning consultants

BRISBANE OFFICE  
LEVEL 20,  
344 QUEEN STREET  
BRISBANE 4000  
TEL: 07 3221 8833  
FAX: 07 3221 0278  
EMAIL: [steve.reynolds@hrppc.com.au](mailto:steve.reynolds@hrppc.com.au)  
WEB: [www.hrppc.com.au](http://www.hrppc.com.au)

curriculum vitae

- residential, commercial and industrial development proposals throughout Queensland;
- Preparation and coordination of development applications and planning reports relating to a wide variety of major development proposals throughout the United Kingdom

## **Expert Advice for Courts of Law**

- Significant experience providing expert evidence in the Planning and Environment Court, Land Court and Supreme Court, relevant to all areas of planning expertise.

## **Publications**

Steve regularly prepares and presents papers on topical planning issues. Recent papers include:

- *'Implementing ESD under the SPA'*
- *An introduction to The Sustainable Planning Bill 2009;*
- *Creating a Standard Planning Scheme: The Queensland Planning Provisions;*
- *Integrated Planning Act – Is it Too Complex?;*
- *Bureaucracy and Mediocrity – Development Assessment Under IPA.*

These papers are available for download from [www.hrppc.com.au](http://www.hrppc.com.au).