



Rural Environment Planning Association Inc.

28 March 2011

Queensland Floods Commission of Inquiry
GPO Box 1738
Brisbane QLD 4001

Dear Sir/Madam,

Submission on Brisbane Floods, January 2011

This submission by the Rural Environment Planning Association Inc. (REPA) addresses several issues arising from the recent floods in Brisbane. It focuses particularly on issues that are of concern to residents of Moggill and Bellbowrie as these Brisbane suburbs were badly affected.

REPA has been active in the western Brisbane suburbs of Brookfield, Upper Brookfield, Pinjarra Hills, Pullenvale, Anstead, Bellbowrie, Moggill and parts of Kenmore Hills since the Association was founded in 1973. REPA has frequently voiced concerns relating to flooding issues.

Our submission addresses the issues as listed in the Call for Submissions. As there is considerable overlap between these issues, they have been numbered and cross-referenced. We have not commented on those issues when it is considered inappropriate for our Association to do so.

a) The preparation and planning by federal, state and local governments; emergency services and the community for the 2010/2011 floods in Queensland

I. Federal Government

1. Telecommunications inadequate

- i. *vulnerability of mobile phone towers* – these failed due to lack of power
- ii. *no mobile re-charging* – also failed due to lack of power
- iii. *land-line telephone inadequacy* - also failed due to lack of power. Most modern land-line telephones now require power. Older phones do not require a separate power supply so functioned where available
- iv. *land-lines congested/overloaded*
- v. *no internet availability* – also failed due to lack of power

2. Main roads, including Federally funded roads, cut by flood waters

II. State Government

3. Power supplies compromised

- i. *Command centre* needs to be in building that will never be flood affected. The new Energex building at Newstead had to be evacuated, and power supply disconnected because of water in the basement
- ii. *Electricity Substations* – these should be above flood levels.

- iii. *Commercial and multi-story buildings* – where these are vulnerable to flooding switchboards should be located above flood level, so as to avoid power outages.
- 4. **Main Roads** – cut by flooding isolating communities
 - i. *Ipswich Highway cut* – alternative routes available
 - ii. *Road access to Bellbowrie/Moggill cut* - Several thousand residents live in this area; alternative access should be provided. In our opinion, provision of all weather access to this large community is essential (photos Moggill Road attached).
- 5. **Ambulance Stations** – these should be situated where they will not be isolated
- 6. **Fire and Rescue Stations** – these should be situated where they will not be isolated

III. Local Government – Brisbane City Council

- 7. **Flood vulnerable assets** should be listed and prioritised for storage above flood levels.
- 8. **Toxic chemicals** – should not be stored in flood-prone areas.
- 9. **Toxic industries** – should not be located in the flood plain
- 10. **Intensive livestock farming** – should not be located in flood-prone areas (A chicken farm at Moggill was inundated, resulting in problems in disposing of 20,000 rotting carcasses)
- 11. **Trees and other native vegetation** should be conserved along river and creek banks to prevent erosion
- 12. **Power installations** – such as switchboards, heating and cooling installations, should be located above flood levels, so as to enable these services to remain viable – see also (a) II 3.iii, above.

IV. Emergency Services

- 13. **SMS numbers** not given for emergency services (these are more likely to work when systems are overloaded)
- 14. **Evacuation centres** – locations need to be identified BEFORE a flood, because of potential failure of communications during a flood – these need to be stocked with food and basic pharmaceutical items. Locations could be displayed in local post offices and on bus-stops.
- 15. **Ambulance and Fire and Rescue stations** – should not be located at sites where they can be isolated (note locations of these centres in Moggill/Bellbowrie area) (see (a) II 5 & 6 above)
- 16. **Helicopter rescue centres** should be available at centres that are likely to become isolated (e.g. Moggill/Bellbowrie)

V. Community

- 17. **Permanent flood markers** - these should be located on power poles and bus stops in order to advise the community of levels. There was widespread ignorance of potential flood levels around Brisbane, despite the 1974 experience. Such measures are used in Lismore (photos Lismore flood markers, attached)
- 18. **Education** - preparedness - BCC did well last year with flood-wise property reports. Nevertheless, there was widespread ignorance of the risks of flooding in much of Brisbane.

b) The performance of the private insurers in meeting their claims responsibilities

No comment

c) All aspects of the response to the 2010/2011 flood events, particularly measures taken to inform the community and protect life, private and public property,

I. Immediate management, response and recovery

1. **Television and radio announcements** were helpful. There was a widespread problem with residents relating flood levels to local areas, hence the need for flood markers (see (a) V 17 above). However announcements were hampered by lack of power and inadequacy of telecommunications systems (see (a) II 3 and (a) I 1 above).
2. **SMS numbers** were not given for emergency services for several days (these are more likely to work when systems are overloaded) (see (a) IV 13 above). These should be publicised and available at all times
3. **Evacuation centres** – location needs to be posted BEFORE flood, because of lack of communications – stocked with food and pharmaceutical items (see (a) IV 14 above).

II. Resourcing, overall condition and deployment of personnel and equipment

No comment

III. Adequacy of equipment and telecommunications systems

4. **Telecommunications** inadequate (see (a) I 1 above)
5. **Power supplies** compromised (see (a) II 3 above)

IV. The adequacy of the community's response

6. The community was frequently unaware or unable to relate the levels given at the Brisbane City Gauge to their local levels. Locally installed flood markers are required (see (a) V 17 above)

d) The measures to manage the supply of essential services, such as power, water and communications during the 2010/2011 flood events

1. **Telecommunications** inadequate (see (a) I 1 above). There was virtually no outside communication for at least 2 days for parts of the Brisbane suburbs of Moggill and Bellbowrie
2. **Power supplies** compromised (see (a) II 3 above)
3. **SMS numbers** not given for emergency services (these are more likely to work when systems are overloaded) (see (a) IV 13 above)

e) Adequacy of forecasts and early warning systems particularly as they related to the flooding events in Toowoomba, and the Lockyer and Brisbane Valleys,

1. Forecasts immediately before flood in Brisbane River – good.
2. Predictions in years preceding 2011 - poor – many incorrectly thought that there would never be another flood like 1974 because of the building of Wivenhoe Dam. This was enhanced by such statements as "Since the last major river flooding back in 1974, Council [BCC] has invested a significant amount of capital in infrastructure improvements to make sure the Brisbane River does not flood like this again" (BCC fact Sheet "Be FloodWise", 2007). Nevertheless, engineers have most certainly been aware of the potential for "a

future flood reaching much greater levels than the 1974 flood" (Cossins, G. 1990¹, attached). Furthermore, the Courier Mail of Wednesday 26 January 1994 ran an article entitled "It will happen Again", in which the likelihood and effects of a 1974 magnitude flood were discussed.

3. Permanent flood markers are needed throughout flood-prone areas, to advise local population or intending residents of the risk (see (a) V 17 above).

f) Implementation of the systems operations plans for dams across the state and in particular the Wivenhoe and Somerset release strategy and an assessment of compliance with, and the suitability of the operational procedures relating to flood mitigation and dam safety

No comment

g) All aspects of land use planning through local and regional planning systems to minimize infrastructure and property impacts from floods

In REPA's opinion, this is where there have been the greatest shortcomings, namely: -

1. **Transport** – need all-weather connectivity for communities – possible use of light rail – easier to construct at raised levels
 - i. The Brisbane suburbs of **Moggill and Bellbowrie** are in serious need of all weather access. Currently, the recently upgraded portion of Moggill Road between Pullenvale Road and Kilkivan Avenue is the **ONLY** link between the suburbs of Pullenvale, Pinjarra Hills, Anstead, Bellbowrie and Moggill and Kenmore and hence Brisbane, other than the cross-river links at Moggill Ferry, Colleges Crossing and Mt Crosby Weir, all of which are subject to flooding. This section of Moggill Road is subject to both river and creek (Moggill Creek) flooding (photos Moggill Road, attached).
 - ii. A possibility could be the construction of a bridge at the crossing point over the Brisbane River of the Moggill Pocket sub-arterial, either as a road or a light rail connection. This location is preferred as the river banks are higher than those at many other locations including the Moggill Ferry.
 - iii. There should be **connectivity** via Grandview Road, Pullenvale, and Haven Road, Upper Brookfield. This connection (which is usually gated) should be opened during flood events to improve access.
2. **Emergency Facilities, Ambulance Stations and Fire and Rescue Stations** – These need to be located in flood free locations and with flood-free access.
 - i. The proposal to locate a **new ambulance station** at the corner of Pinjarra Road and Vyner Street, **Pinjarra Hills** has little to recommend it. It would have been totally isolated during the recent floods.
 - ii. The new **Fire and Rescue Station**, currently being built at the corner of Pullenvale Road and Moggill Road, **Pullenvale**, was isolated from Bellbowrie and from Kenmore during the recent floods. The current Fire and Rescue Station in Kenmore needs to be retained.
3. **Command centres**, e.g. Energex should be located so as not to be affected in any way by flooding (see (a) II 3 i above).
4. **Local electricity substations** should be located above flood levels (see (a) II 3 ii above).

¹ Cossins, Geoffrey (1990) "Surface hydrology: water supply and flooding" in "The Brisbane River", ed. Peter Davie, Errol Stock and Darryl Low Choy, The Australian Littoral Society Inc. pp. 55-62.

5. **Evacuation centres** should be established in flood prone areas and identified in post offices (see (a) IV 14 above). Residents in Moggill did not know where their centre was and could not find out because of lack of communication.
6. **Development on flood prone land** – There should be no further residential or commercial development on flood prone land (2011 levels?) and all efforts should be made to reduce the number of properties that are vulnerable to flooding.
7. Consideration should be given to the provision of **alternative sites** for commercial enterprises that have suffered during the recent flooding. The shopping centre at Bellbowrie in western Brisbane was completely inundated during the recent floods and it is not known (14 March 2011) when the major supermarket (Coles) will be able to re-open (photos of Bellbowrie Shopping Centre, Bellbowrie, during January 2011 floods).
8. Brisbane needs more **public open space** and more recreational space. Council has undertaken to have 40% of the City vegetated with native species by 2030 and flood plains would be appropriate for this and would also provide good wildlife corridors. The bushland levy could be used to buy back flood prone land.
9. A **new base level** should be established for definition of flood prone land. **Brisbane City Council's proposal (8 March 2011) to adopt the January 2011 peak flood level as the new Defined Flood Level for the City is to be commended.**
10. A review of the 1 in 100 flood levels is required for most rivers in Queensland. Because of the high variability in the flow of Queensland rivers, several centuries of flow data are required in order to make reasonably accurate predictions of average recurrence intervals (Ward, 1984²).
11. The probability of **sea-level rise** needs to be taken into consideration, particularly in coastal areas. This could increase adverse effects of river flooding.
12. There should be no storage of **toxic materials** below the flood level (see (a) III 8 above). The presence of toxic and other harmful materials in the water and deposited sediments poses serious health risks and delayed clean-up procedures in many places.
13. There should be no **toxic industrial activity** below the flood level (see (a) III 9 above)
14. **Facilities** such as **Park & Ride** facilities, if built below flood levels should carry notices warning that this is the case; e.g. the Park & Ride at Misty Morn, Kenmore.
15. There should be no **intensive farming** below the flood level (see (a) III 10 above).
16. The **retention of trees and other vegetation** along the banks of fast flowing creeks and rivers is **essential to prevent erosion**. This applies especially to gum trees along the banks of the Brisbane River. Removal of protective vegetation has allowed erosion to occur. Restoration along river banks needs to be carried out very carefully (there have been serious problems at the Moggill Ferry Park).
17. The former proposal to build a **Goodna Bypass**, involving four bridges across the Brisbane River at Moggill could have had serious repercussions in this recent flood. The earthworks involved could have resulted in a re-routing of the river and caused substantial erosion problems. Moreover the bridges as designed were box-girder bridges which would not be able to sustain lateral loads resulting from debris loading.
18. The plans associated with the current proposal to build a **Kenmore Bypass** do not give any indication of flood levels. It is our estimation that a substantial portion of this bypass road would be below the peak height of the January 2011 flood.
19. The current **Neighbourhood Planning for Moggill/Bellbowrie** has made some minor adjustments in response to the January 2011 floods; but in REPA's opinion, a substantial revision of the provisions for this area is required – there should be provision for re-location of the Bellbowrie shopping centre, confirmation that the whole of the area would remain in Precinct 1 of the Brisbane River and a map indicating the January 2011 flooding extent.

² Ward, R.C. (1984) "Some aspects of river flow in Northern New South Wales, Australia", *Jour. Hydrol.*, vol. 71, pp. 31-51.

20. **Building height relaxation** – The proposal to relax building height to provide some protection from flooding is not supported by REPA.
21. **Pontoon failures** – The construction of pontoons is currently allowed in all Precincts of the Brisbane River. Designs for pontoons or structures which serve a similar purpose but can handle a flood of 15 m should be investigated for Precinct 1 of the Brisbane River, otherwise pontoons should be allowed within Precinct 1.
22. **Compensatory cut & fill** – should not be allowed in the **Brisbane River corridor**, especially Precincts 1, and 2. There should be different requirements for different parts of Brisbane depending on situation e.g. backwater flooding as along Oxley Creek and fast flowing river water as in Moggill and St Lucia.

We trust that these comments will be helpful and constructive.

Yours faithfully,



Jennifer LF Hacker

Vice-Chairman
Rural Environment Planning Association Inc.
www.repa.org.au



cc. Dr Bruce Flegg, Member for Moggill
Cr Margaret de Wit, Pullenvale Ward

Moggill Road between Pullenvale Road and Kilkiven Avenue,
during and after the January 2011 flood. Photographs Rachel Griffiths.

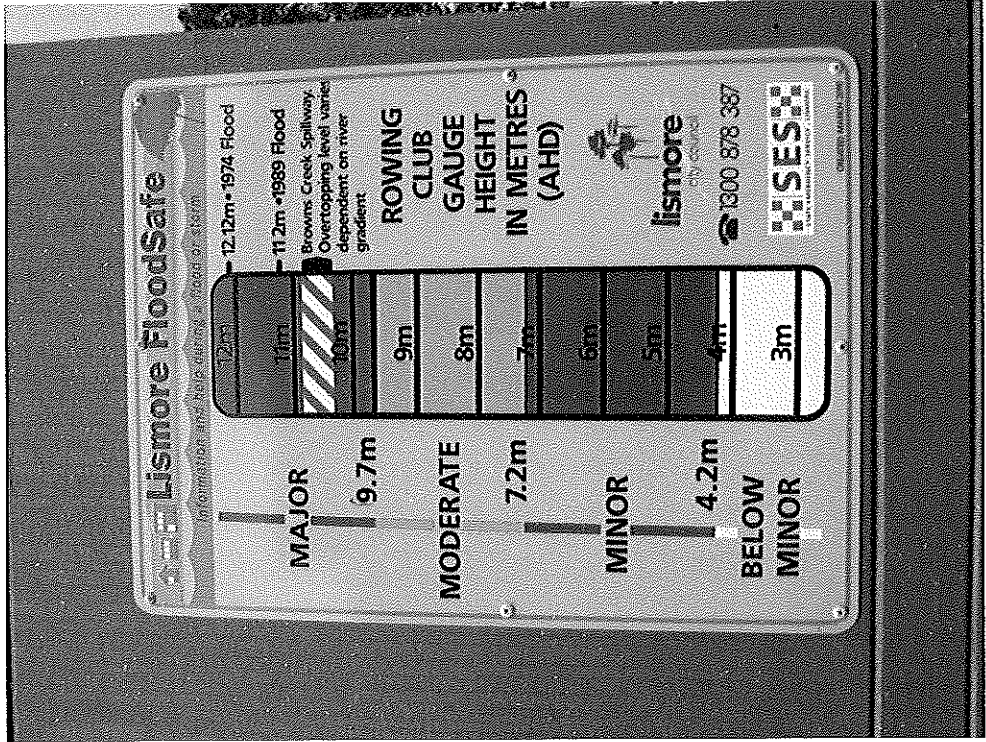


Moggill Road, Rafting Ground Park bus stop - 12 January 2011



Moggill Road, Rafting Ground Park bus stop - 4 March 2011

Flood Markers in Lismore — February 2011. Photographs Anna Williamson



Clear gauge information on flood levels



Advisory flood marker on building column

Bellbowrie Shopping Centre – January 2011 floods



Bellbowrie shopping centre -- 11:53 am 12 January 2011.
Photograph John Bristow



Coles supermarket, Bellbowrie – 5:55 pm 12 January 2011.
Photograph Anna Williamson