

Brisbane City Council
**QUEENSLAND FLOODS
COMMISSION OF INQUIRY**



Dedicated to a better Brisbane

**Initial Submission
11 March 2011**

QUEENSLAND FLOODS COMMISSION OF INQUIRY
BRISBANE CITY COUNCIL – INITIAL SUBMISSION



Dedicated to a better Brisbane

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1. OVERVIEW

- 1.1 The Brisbane City Council (**Council**) welcomes the opportunity to provide an initial submission to the Queensland Floods Commission of Inquiry (**Commission**). Council considers it is in a position to provide information and assistance to the Commission due to its role on behalf of the City of Brisbane when dealing with the devastating flood events of 2010/2011 in Queensland.
- 1.2 This Submission:
- (a) highlights the key aspects of planning, preparation, response and initial recovery undertaken by Council in relation to the January 2011 flood event;
 - (b) sets out facts and statistics which have been collated by Council to provide the Commission with the relevant context to allow it to understand how the events unfolded and the impact of the flood for the City of Brisbane;
 - (c) draws together, in one place, information which informs the community about the key measures undertaken by Council in connection with the flood; and
 - (d) may also be of benefit to other agencies, companies and individuals as they begin to prepare for the wet season of 2011/2012.
- 1.3 In addition, the Lord Mayor has commissioned an independent review of Council's response to the flood event. A Flood Response Review Board (**FRRB**) was appointed on 21 January 2011, chaired by Major General (Retd) Peter Arnison AC, CVO. Members include Emeritus Professor Colin Apelt and Mr Robert Gotterson QC – ([Attachment 1 – Terms of Reference – Flood Response Review Board](#)). A copy of the FRRB Report will be made available to the Commission.
- 1.4 Council wishes to assist the Commission in its consideration of actions available in the short term to prepare for next summer's wet season and ensure that any measures that can be taken are taken to improve the safety of individuals and property.
- 1.5 Council considers there is potential for some aspects of this information to be of benefit to the Commission when developing recommendations as part of its initial report proposed to be published in August 2011.

2. EXECUTIVE SUMMARY

2.1 In January 2011, Brisbane suffered a major river flood of a magnitude not experienced by the City since the catastrophic flood of 1974. The response to the event was managed by the Brisbane Local Disaster Management Group, chaired by the Lord Mayor, in co-operation with State and other agencies in accordance with Council's Disaster Management Plan.

Flood Planning

2.2 Despite the recent period of prolonged drought, Council has methodically planned and maintained a concentrated focus on flooding issues since 2004. This has included the establishment of the Lord Mayor's Suburban Taskforce on Flooding to examine all possible strategies to reduce the impact of significant rain events. Key strategies have been – the Voluntary Home Purchase Scheme, amendments to the City Plan, upgraded design requirements and guidelines, flood preparedness measures (eg the *Floodwise* Information System) and flood emergency measures (eg the Early Warning Alert System).

2.3 Since 2004, Council has also heavily invested in Community Awareness and Education programs, including the *Be Floodwise* campaign, Summer Storm campaigns, free Flood Flag Maps and *Floodwise* Property Reports. In addition, the Lord Mayor has issued a number of media releases since 2004 warning of flooding, urging residents to prepare for a flooding event and to consider their flood insurance cover. Immediately prior to the 2010/2011 summer, in October 2010 the Lord Mayor specifically foreshadowed a potential repeat of the 1974 flood.

2.4 Since 2004/2005, Council through its annual budget has spent (in 2010/2011 dollars) \$481,597,000 on flood-related planning, mitigation, awareness and response initiatives.

Flood Response

2.5 From Sunday 9 January 2011 Council activated its Local Disaster Coordination Centre. On Monday 10 January 2011 at approximately 10:30 am, the Lord Mayor and Council's Chief Executive Officer decided to convene a Local Disaster Management Group Meeting on Tuesday 11 January 2011 at 10:00 am. On 11 January 2011, the Local Disaster Coordination Centre activation was increased and the Lord Mayor issued a media release warning of a major flood event and urged residents to prepare for it. On Wednesday 12 January 2011 at 1:00 pm, in accordance with Council's Evacuation and Emergency Human Services Plan, two evacuation centres were opened by Council. In the lead up to the river peak, Council filled and distributed over 300,000 sandbags. On Thursday 13 January 2011 at 2:57 am, the Brisbane River peaked at 4.46 AHD at the Port Office Gauge. By Friday 14 January 2011, as flood waters were receding, there was a major deployment to commence the response effort.

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- 2.6 The large-scale response involved Council utilising its own assets and resources and working in conjunction with emergency services including Queensland Police Service, Queensland Fire and Rescue Services, Queensland Ambulance Service, Emergency Services Queensland, the State Emergency Service, other government departments and agencies, other councils (particularly Logan City, Gold Coast City and Redland City), the Australian Defence Force and not-for-profit agencies.
- 2.7 In addition, Council coordinated 22,973 registered volunteers from four key marshalling areas to assist with the response effort. This overwhelming community involvement and volunteering effort had not been seen before and was a feature of the disaster response.
- 2.8 As a result of these coordinated efforts, essential services were restored, major roads and arterials were cleared, public transport commenced to operate, flooding debris and damaged household and business property were cleared from suburban streets and residents commenced to return to their homes to clean up and assess damage to their property.
- 2.9 Both before and after the flood peak, Council used many different channels to communicate with flood affected residents and businesses. These channels included media, community service announcements, newsletters, fact sheets, SMS, email, Facebook, Twitter, posters and outdoor advertising.

Flood Recovery

- 2.10 On 28 January 2011 the Lord Mayor established a Recovery Task Group to coordinate the flood recovery. It is anticipated that the recovery phase will last 24 months at an estimated cost to Council of \$440,000,000.

3. **INTRODUCTION**

3.1 Council intends, by this initial submission, to provide information and documents to assist the Commission in its assessment of the following Terms of Reference:

- (a) the preparation and planning by federal, state and local governments; emergency services and the community for the 2010/2011 floods in Queensland;
- (b) all aspects of the response to the 2010/2011 flood events, particularly measures taken to inform the community and measures to protect life and private and public property, including:
 - (i) immediate management, response and recovery;
 - (ii) resourcing, overall coordination and deployment of personnel and equipment;
 - (iii) adequacy of equipment and communication systems; and
 - (iv) the adequacy of the community's response;

3.2 Council's concentration on those Terms of Reference set out above is in response to the request by the Commission for initial submissions relating to matters associated with flood preparedness relevant to next summer's wet season.

3.3 In addition to this initial submission Council intends to:

- (a) provide further submissions in relation to topics of interest to the Commission, including Term of Reference (g) which relates to land use planning;
- (b) provide the Commission with such other documents and information as may be required from time to time, including the provision of documents in parallel with this submission;
- (c) if required by the Commission, provide oral or written evidence; and
- (d) as indicated above, provide the Commission with the findings of the Council's FRRB (which is due to report in May 2011).

4. **CONTEXT**

- 4.1 In January 2011, Brisbane experienced a significant river flood event of a scale not seen since 1974. This followed torrential rain from December 2010 to January 2011, resulting in Wivenhoe Dam filling to 188.5% and Somerset Dam to 189.7% of their supply capacity on 12 January 2011. The Brisbane River broke its banks on Tuesday, 11 January 2011 leading to evacuations in Brisbane's CBD and suburbs located around the River.
- 4.2 On 11 January 2011, the Honourable Anna Bligh MP, Premier of Queensland declared flood affected areas of Queensland a 'disaster zone', including Brisbane. This declaration remained in place until 10:00 am on Tuesday, 25 January 2011. Brisbane's Local Disaster Management Group (**LDMG**) coordinated its response in conjunction with the Queensland Police Service District Disaster Coordinator. Council responded in accordance with the requirements of the *Disaster Management Act 2003* (Qld) and coordinated its response in accordance with its Disaster Management Plan and a supporting Concept of Operation. Council implemented the priorities and direction of the LDMG through its Local Disaster Coordination Centre (**LDCC**). External agencies were coordinated by the LDCC through attached liaison officers. Requests for assistance where appropriate were escalated to the District Coordination Centre (**DCC**) for resolution.
- 4.3 The Brisbane River peaked on Thursday, 13 January 2011 at 4.46m AHD at the Port Office Gauge.
- 4.4 As a result of the 2010/2011 flood events:
- (a) there was the tragic loss of life state-wide including 1 death in the City of Brisbane area;
 - (b) 94 Brisbane suburbs were affected by inundation;
 - (c) some affected people were re-located to Evacuation Centres located at the RNA Showgrounds (1,490 people) and the Queensland Sport and Athletic Centre (480 people);
 - (d) a number of suburbs were fully isolated and it was necessary to accommodate affected residents at unofficial evacuation centres that were established in church halls and local primary schools by members of the community and community groups.

4.5 The business community and related commercial properties in the CBD and suburbs suffered significant inundation, damage and interruption with the CBD closing for a period of five days. This impacted on the economy of the Brisbane region.

4.6 The flood event also substantially damaged some of the City's assets, essential services, and utilities (including power, telecommunications, gas, water supply and sewerage). Mud, silt and debris as well as the inundation of environmentally sensitive areas have resulted in damage to the environmental balance of the Brisbane River catchment area and Moreton Bay.

5. **TERM OF REFERENCE (a)**
PREPARATION AND PLANNING FOR THE 2010/2011 FLOODS IN QUEENSLAND

Council's Statutory Role in Disaster Management

- 5.1 (a) The *Disaster Management Act 2003 Qld (DMA)* provides the key statutory framework for disaster management and operations in the State. It is also the key statutory source of the Council's obligations in respect of disaster management and operations. There are a number of specific provisions relevant to local government's role in disaster management.
- (b) Section 4A DMA sets out the guiding principles for the administration of the Act. It relevantly provides by section 4A(c) that local governments should primarily be responsible for managing events in their local government area.
- (c) The DMA provides for a hierarchy of disaster management groups. The State Disaster Management Group is at the apex, followed by District Disaster Management Groups (responsible for districts comprising a number of local government areas) and Local Disaster Management Groups for each local government area. Section 29 DMA requires a local government to establish a Local Disaster Management Group for its area. The functions of the Local Disaster Management Group are set out in section 30 DMA. They reflect, in general terms, the role of the Local Disaster Management Group as the key planning and management body for disasters in the local government area.
- (d) The DMA provides for an equivalent hierarchy of Disaster Management Plans. Section 57(1) DMA requires a local government to prepare a local disaster management plan for its local government area. The matters which must be included in a local disaster management plan are set out in section 57(2) DMA. They reflect, in general terms, that the local disaster management plan is to provide the key planning tool for management of a disaster in a local government area.

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- (e) Council has prepared a local disaster management plan and reviewed and exercised it regularly. The preparation for and response to the flood event has been undertaken consistently with the obligations imposed by the DMA. Council has not, however, limited its preparation and planning, nor indeed its response to the event, by reference solely to the statutory role reflected in the DMA.

5.2 Despite a period of record breaking drought, Council has methodically planned and maintained a concentrated focus on flooding issues since 2004. Council has also resourced and established a robust disaster response capability, including organisational structures, concepts, plans, procedures and training exercises.

Flood Studies Post 1974 Flood Event

5.3 A number of key flood related reports were prepared and policy decisions taken by Council following the 1974 flood event. The effect of these reports will be part of the further submission to the Commission in April 2011.

Lord Mayor's Suburban Taskforce on Flooding

5.4 (a) December 2004 – The Lord Mayor established the Suburban Taskforce on Flooding (**Taskforce**). The role of the Taskforce was to examine all possible strategies to reduce the effects of significant rain events on areas of the city exposed to frequent flooding. The Taskforce's specific objectives are set out in its Terms of Reference – ([Attachment 2 – Terms of Reference – Lord Mayor's Suburban Taskforce on Flooding](#)).

(b) August 2005 – The Taskforce Report was tabled and identified 24 major findings – ([Attachment 3 – Lord Mayor's Suburban Taskforce on Flooding Report, August 2005](#)). The key findings and initiatives since implemented include:

(i) *Non-Structural Measures* – aimed at reducing or avoiding the susceptibility of new and existing development to flooding, including:

A. Voluntary Home Purchase Scheme – The Voluntary Home Purchase Scheme was a priority action from the Taskforce Report. The aim of the Scheme is to acquire, through voluntary purchase, homes affected by a two-year average recurrence interval (**ARI**) flood event (ie a flood that occurs, on long term average, every two years or has a 1 in 2 chance

of occurring each year) – ([Attachment 4 – Be FloodWise Fact Sheet – Voluntary Home Purchase Scheme](#)):

- 1) The eligibility criteria for this Scheme are:
 - a) The home is predicted to flood once every two years. This means that the home must be within the extent of a predicted two year ARI flood event.
 - b) The property must be in a residential zone.
 - c) Floodwaters must inundate the residential dwelling on the property.
 - d) There is no other solution to stop the property flooding, such as the installation of pipes.
- 2) 45 homes have been purchased since 2005 under the Scheme at a cost of \$50.2m;
- 3) Council has formally sought funding for the Scheme from both State and Federal government representatives but these funding requests were either ignored or rejected – ([Attachment 5 – Correspondence regarding funding for the Voluntary Home Purchase Scheme](#)).
- 4) Council has subsequently requested that the State and Federal governments reconsider the issue of funding for the Scheme – ([Attachment 6 – Correspondence regarding funding for the Voluntary Home Purchase Scheme](#)).

B. City Plan Amendments – Compensatory Earthworks Planning Scheme – This planning scheme policy explains Council’s requirements when re-shaping of land is proposed within a waterway corridor. Earthworks within the waterway corridor will only be considered when they do not conflict with the

Waterways Code or the Filling and Excavation Code – [\(Attachment 7 – Compensatory Earthworks Planning Scheme Policy\)](#).

C. Design Requirements and Guidelines – Council’s subdivision and development guidelines have undergone significant upgrades including:

1) Chapter 1: Flood Affected Land – updated to a risk based approach through the classification of development type and the flood immunity standards being formalised – [\(Attachment 8 – Brisbane City Council Subdivision and Development Guidelines Part A Hazard Management Chapter 1 Flood Affected Land\)](#).

2) Chapter 2: Stormwater Drainage – updated requirements around levees, overland flow paths, building over/near stormwater and easements – [\(Attachment 9 – Stormwater Management Code and Brisbane City Council Subdivision and Development Guidelines Part B Infrastructure Elements Chapter 2 Stormwater Drainage\)](#).

(ii) *Structural Measures* – aimed at physically modifying the natural behaviour of flooding and reducing the frequency and impact of flooding, including:

A. Asset Maintenance and Management Plans;

B. Major and minor drainage capital works programs;

C. Building certification.

(iii) *Flood Preparedness Measures* – aimed at enabling Council to provide the best possible flood information to residents, including:

A. Flood database – Council’s spatial information system now has available numerous layers of data that can be used for planning and response – [\(Attachment 10 – Description of flood database layers\)](#).

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- B. Floodwise Information System – Council funded and developed *Floodwise* for the Brisbane local area. The system is web-based and provides ‘real-time’ rainfall and stream water level data and has now been adopted by some of the other South East Queensland local governments.
 - C. Creek and River Flood Data collated and available for planning and response purposes.
- (iv) *Flood Emergency Measures* including:
- A. Early Warning Alert System (EWAS) – Established in 2009 and free of charge, had 20,441 subscribers on 11 January 2011 – ([Attachment 11 – Living in Brisbane feature, EWAS Subscription Brochure and EWAS Take-Up Rate](#));
 - B. Creek Flood Alert System (Pilot) – The Boondall Pilot Creek Flood Alert Service alerts subscribers via SMS, email and/or voice recorded message when rain and/or creek levels in a nearby creek system (using Council telemetry equipment) indicate their property may be at risk of flooding. The telemetry equipment is located within the Zillman Waterholes. Other flood prone areas were identified and scrutinised through a priority selection process. Three additional sites were offered this service during the 2010/11 Summer Storm Season: Rocklea, Hemmant and East Brisbane;
 - C. A rolling program of installing flashing lights on high priority flood prone roads – ([Attachment 12 – List of Roads with flashing lights](#)).

Flood Related Budget Initiatives

5.5 Council has invested heavily in flood related planning, mitigation, awareness and response initiatives. This investment is outlined below:

- (a) 2004/2005 – Flood Mitigation Activities, Flood Information and Systems and Disaster Management – \$64,225,000;

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- (b) 2005/2006 – Flood Mitigation Activities, Flood Information and Systems and Disaster Management – \$60,896,000;
 - (c) 2006/2007 – Flood Mitigation Activities, Flood Information and Systems and Disaster Management – \$66,884,000;
 - (d) 2007/2008 – Flood Mitigation Activities, Flood Information and Systems and Disaster Management – \$63,732,000;
 - (e) 2008/2009 – Flood Mitigation Activities, Flood Information and Systems and Disaster Management – \$72,559,000;
 - (f) 2009/2010 – Flood Mitigation Activities, Flood Information and Systems and Disaster Management – \$76,833,000;
 - (g) 2010/2011 (Budget) – Flood Mitigation Activities, Flood Information and Systems and Disaster Management – \$76,468,000;
 - (h) TOTAL (in 2010/2011 Dollars) – **\$481,597,000.**

Planning Provisions

5.6 Council has a number of rules in place to mitigate flooding, including:

- (a) Primary planning requirements are that the habitable floor level of all developments must be above the Defined Flood Level (3.7m) plus an extra 500mm.
- (b) Council's Building and Subdivision Guidelines require that new developments must not have any negative effect on flooding, either upstream or downstream.
- (c) Council's Flood Task Force, commissioned by Council, delivered a report on 8 March 2011 which recommended the implementation of a new interim flood level. This interim level will increase the minimum habitable floor level to 500mm above the January 2011 flood peak in most areas with the essential condition that, wherever a higher level has been set as the current Defined Flood Level (DFL), the higher level must apply. This interim position is intended to remain in place until the Commission has had the opportunity to consider the issue – ([Attachment 13 – Joint Flood Task Force Report, March 2011](#)).

This topic will be the subject of a further submission to the Commission in April 2011.

Community Awareness and Education

- 5.7 Since 2004, Council has invested heavily in community awareness campaigns, including:
- (a) *Be Floodwise* campaign – Launched in September 2006 at the height of a prolonged period of drought – ([Attachment 14 – Be Floodwise campaign](#)).
 - (b) Summer Storm Campaigns – ([Attachment 15 – Brisbane City Council Summer Storm campaigns](#)).
 - (c) Flood Flag Maps, free of charge and on-line, that show the water path in each suburb for creek, tidal and river flood events. In 2009, a series of information sessions were held in libraries for residents – ([Attachment 16 – example of two of the 216,500 Flood Flag Maps downloaded and Brochure](#)).
 - (d) Floodwise Property Reports available on-line and free-of-charge that demonstrate the level of flooding anticipated at individual properties – ([Attachment 17 – Example of each of the four types of Floodwise Property Reports](#)).
 - (e) Five *Living In Brisbane* Editions containing flood-related information – ([Attachment 18 – Living in Brisbane editions](#)).
 - (f) In 2009, The Lord Mayor wrote 435,707 letters reminding residents to be prepared for flooding. He also wrote to 68,448 letters reminding residents in at risk locations to be prepared for the summer storm season and flooding from overland flow – ([Attachment 19 – Example letters sent by the Lord Mayor](#)).
 - (g) Lord Mayor Media Releases – The Lord Mayor has issued 18 media releases since 2004 warning of flooding and urging residents to prepare for a flooding event. In October 2010, the Lord Mayor foreshadowed a repeat of the 1974 floods and urged residents in December 2010 to obtain flood insurance if needed – ([Attachment 20 – Lord Mayor's Media Releases](#)).
 - (h) The media has published numerous articles since 2004 where the Lord Mayor has warned of flooding and highlighted flood mitigation measures – ([Attachment 21 – Media articles](#)).

Disaster Response Planning

- 5.8 (a) *Local Disaster Management Group* (LDMG) – Council has a LDMG that coordinated Council's response to the January 2011 disaster. The LDMG is chaired

by the Lord Mayor. The LDMG has met regularly since 2004 – ([Attachment 22 – Minutes and meeting notes of the LDMG, 2010/2011](#)).

- (b) *Disaster Management Plan (DMP)* – Council has a Lord Mayor and District Disaster Coordinator endorsed DMP. This document is regularly reviewed and exercised – ([Attachment 23 – Disaster Management Plan](#)).
- (c) *Disaster Management Concept of Operations* – A Disaster Management Concept of Operations was developed following the Gap Storm event in 2008. This concept created four increasing levels of response (Level 1 to Level 4) that enhanced Council’s ability and capacity to respond to and recover from a significant disaster. Council believes that this concept is unique to Brisbane – ([Attachment 24 – Disaster Management Concept of Operations](#)).
- (d) *Local Disaster Coordination Centre (LDCC)* – The LDCC has a primary location in Brisbane Square and a secondary location at Carindale. Standard Operating Procedures and a Crisis Communications Manual have been developed – ([Attachment 25 – Standard Operating Procedures and Crisis Communications Manual](#)). In total, approximately 36 Council officers are committed per shift. Liaison officers are assigned to deal with external agencies. During the January flood event, the LDCC operated 24 hours per day but with reduced staffing between 10:00 pm - 6:00 am. At a Level 4 response (as during the recent flood event), the LDCC is significantly expanded with the establishment of a:
 - (i) Field Operations Group (FOG) – to manage and coordinate Council assigned and volunteered assets and resources.
 - (ii) Disaster Intelligence Group (DIG) – to gather, interpret and distribute information and intelligence.
 - (iii) Incident Support Group (ISG) – to manage administration, logistics, the call centre scripting and crisis communications.
 - (iv) Forward Planning Group (FPG) – to develop response and recovery plans approximately 72 hours in advance.

The Lord Mayor allocated \$250,000 to the upgrade of the LDCC in 2010. The upgrade was designed by Council’s Disaster Management Group and was completed on 13 December 2010. It provided for greater functionality during activations and included the purchase of state of the art technology.

The LDCC operated to coordinate a targeted and efficient response to the flood affected areas.

Disaster Management Training

- 5.9 Council officers have attended a diverse and significant amount of disaster and emergency management training both internally and externally. Courses include the Australasian Inter-Service Incident Management System (AIIMS), emergency planning, coordinate resources within a multi-agency response and introduction to the Queensland disaster management arrangements – ([Attachment 26 – Summary of disaster management training](#)).

Disaster Management Exercises

- 5.10 Council has conducted numerous disaster management exercises – ([Attachment 27 – Summary of disaster management exercises](#)).

Continuous Improvement

- 5.11 Lessons from major natural disaster events are captured and reviewed. By way of example, the Gap Storm event in 2008 provided a catalyst for Council’s thinking and innovation that resulted in a significantly enhanced response capability.

6. TERM OF REFERENCE (c) RESPONSE TO THE 2010/2011 FLOOD EVENTS

6.1 Summary of the Response

- (a) Council’s response to the January 2011 flood event was in accordance with its Disaster Management Plan.
- (b) The Local Disaster Coordination Centre (LDCC) was activated by the Chief Executive Officer (CEO) following discussion with the Lord Mayor and the Lord Mayor’s Chief of Staff late afternoon on 9 January 2011 at ‘Level 3’ to manage the City’s immediate response to an emerging heavy rainfall threat that evening. The LDCC remained at Level 3 on Monday, 10 January 2011 to monitor weather and environmental conditions. At approximately 10:30 am on Monday, 10 January 2011, the Lord Mayor and the CEO convened an Immediate Action Team (IAT) meeting in Brisbane Square. At this meeting it was decided to convene an LDMG meeting on Tuesday 11 January 2011 at 10:00 am. On 11 January 2011 the LDCC activation was increased to ‘Level 4’.

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- (c) "Water Over Road" and "Road Closed" signs were placed as required in known flooding sites within the various catchments of Brisbane in the weeks leading up to the flood. Brisbane Metropolitan Traffic Management Centre (BMTMC) were advised when roads were closed and re-opened to update their traffic reports. The release of water from Wivenhoe resulted in the closure of Kohlo Road, Colleges Crossing and the Moggill ferry. Traffic control officers were used at the Mt. Crosby weir. As the river height increased, the weir was eventually closed. As the river flooded in Brisbane, road closure signage was directed to major roads such as Milton Road and Coronation Drive.
- (d) In the lead up to the River peak on 13 January 2011, Council filled and made available large quantities of sandbags from 6 depot locations spread throughout the City. Over 300,000 sandbags were distributed. Further details are provided below.
- (e) Council utilised its own assets and resources and worked in conjunction with emergency services including Queensland Police Service (QPS), Queensland Fire and Rescue Services (QFRS), Queensland Ambulance Service (QAS), Emergency Services Queensland (EMQ), the State Emergency Service (SES), other government departments and agencies, other councils (particularly Logan City, Gold Coast City and Redland City), the Australian Defence Force (ADF) and not-for-profit agencies.
- (f) As the River peaked on 13 January 2011, a Council Ready Response Group was used in gathering intelligence on the receding water line and in making initial damage assessments. By 14 January 2011 water had started to recede and the Ready Response Group was joined by the QFRS Rapid Damage Assessment teams. These QFRS teams, with experience from other flood events, were deployed to assist with damage assessment.
- (g) On 14 January 2011, a major deployment was commenced to clear debris from major roads and transport corridors followed by secondary arterials. This included a significant effort by Council, the State Government and its emergency services, donated contractor manpower and equipment from business, resources from other councils and the ADF.
- (h) On the weekend of 15 and 16 January 2011, Council mounted a highly coordinated and extremely effective community volunteer call out to assist flood affected residents to clear mud and flood debris from their homes and damaged possessions. This call out resulted in 22,973 volunteers registering at Council's four key volunteer marshalling areas. These volunteers assisted across the two days and were

supported by a significant effort from Council employees and assets, ADF resources and civilian contractor employees and equipment.

- (i) In the period through to 21 January 2011, Council coordinated the clearing of debris and rubbish to a 'first pass' level of every flood-affected street in Brisbane. In addition, significant progress was made in removing temporary waste dump sites to permanent land fill. On the weekend of 22 and 23 January 2011, a further co-ordinated volunteer effort was mounted, on a targeted basis, to clear and clean parks and recreational facilities. Between 14 January and 22 January 2011, it is estimated that 126,700 tonnes of waste were put into Council and private landfills.
- (j) As a result of these coordinated efforts in a relatively short time, essential services were restored, major roads and arterials were cleared, public transport resumed, flooding debris and damaged household and business property were cleared from suburban streets and residents commenced to return to their homes to clean up and assess damage to their property.
- (k) There remains significant damage to Council infrastructure assets such as the CityCat ferry terminal network and the floating Riverwalk. Many facilities of community and sporting organisations were also flooded including where these facilities are built on Council Land. There is a continuing risk of further damage from riverbank slump which is being managed. In total, 399 individual slips and slumps and river wall failures have been identified to date.
- (l) On 27 January 2011, the Establishment and Coordination Committee (E&C) approved the 'Concept for Recovery'. This Concept provides that the Recovery phase will be initiated with the standing up of the Lord Mayor's Recovery Task Group and its Sub-committees of Community Recovery Co-ordination, Infrastructure Recovery, Finance and Economic Recovery, and Environmental Recovery – ([Attachment 28 – Concept for Recovery](#)).
- (m) From 27 January 2011, the Response phase of the disaster began to transition to Recovery. The LDCC returned to Level 3 operations and the Lord Mayor's Recovery Task Group assumed responsibility for the Recovery Phase. It is anticipated that the Recovery Phase will last for 24 months at an estimated cost to Council of \$440m.

Phases of Response

6.2 Phase 1 – Pre-Peak

8 January 2011 – Flood Peak 2:57 am Thursday 13 January 2011

- (a) LDCC – The developing situation was being monitored by the Disaster Management Duty Officer on 8 January 2011. In total, 323 Council officers assisted in staffing the LDCC. Key LDCC activities were:
 - (i) Stood Up to Level 3 – Sunday 9 January 2011.
 - (ii) Stood Up to Level 4 – Tuesday 11 January 2011.
 - (iii) External agency liaison officers (LO) were allocated to the LDCC, including the ADF, QUU, Energex, QPS, QFRS, St John’s Ambulance, EMQ.
 - (iv) Three times daily situation reports were issued by the LDCC – [\(Attachment 29 – Daily LDCC situation reports\)](#).

- (b) Early Warnings and Corporate Communications – The Early Warning Alert Service was used to warn of heavy rain and possible flash flooding prior to the flooding event. The Lord Mayor conducted numerous media interviews and provided extensive media releases warning of flooding. A specific Lord Mayoral release was issued at 4:16 pm on Tuesday, 11 January 2011 warning of a major flood event and urging residents to prepare by moving possessions, equipment and fittings to a higher location. The Lord Mayor recommended residents download flood flag maps, collect sandbags and sign up to Council’s alert service. In addition, the Lord Mayor confirmed that preparations were being made to establish evacuation centres. A summary of key early warnings and communications follows: [\(Attachment 30 – Early Warning and Corporate Communications Alerts, Community Service Announcements, Releases, Tweets, Posts\)](#)
 - (i) Wednesday, 5 January 2011
 - A. Early Warning Alert Service
 - 1) *11:08am: QLD Severe Weather: Heavy Rain and Localised Flash Flooding. All of Brisbane at risk from later today, Thursday and into Friday.*

 - (ii) Saturday, 8 January 2011

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- A. Early Warning Alert Service
- 1) 11:07 am: *QLD Severe Weather: Heavy Rain and Localised Flash Flooding. All of Brisbane at risk from later today, Sunday, Monday and into Tuesday.*
- (iii) Sunday, 9 January 2011
- A. Early Warning Alert Service
- 1) 11:04 pm: *BoM advises heavy rain expected starting early hrs of morning, local flooding possible. For available sandbag locations contact BCC 3403 8888.*
- B. Twitter – 4 tweets
- (iv) Monday, 10 January 2011
- A. Community Service Announcements (CSA)
- 1) *CityCats and CityFerries affected by today's high tide.*
- 2) *CityCats and CityFerries offline from 8:15pm tonight.*
- B. LM Media Release
- 1) *Brisbane on flood alert for next fortnight.*
- C. Twitter – 17 tweets
- D. Facebook – 2 posts
- (v) Tuesday, 11 January 2011
- A. Early Warning Alert Service
- 1) 8:24 am: Email content: *QLD Severe Weather Warning: Heavy Rainfall and Flash Flooding.* SMS content: *QLD Emergency Flash Flood Warning. Very heavy rainfall is spreading S-SW*

into the greater Brisbane area. Flash flooding is likely in many areas

B. Community Service Announcements

- 1) *Fairfield, New Farm and Indooroopilly Libraries closed due to flood risk*
- 2) *Finalise your preparations ahead of flooding*
- 3) *Brisbane Evacuation Centre activated*
- 4) *Residents encouraged to assist neighbours and friends*
- 5) *More than 900 streets affected by flooding*

C. Flyer Distribution

- 1) 5000 flyers - Frequently Asked Questions on the flooding of property distributed.
- 2) 2000 flyers targeted at cars parked in streets.

D. LM Media Release

- 1) *Brisbane flood concerns escalate*

E. Twitter – 97 tweets

F. Facebook – 13 posts

G. Flood Modelling Maps (12,000m³/sec) placed on-line during the evening of 11 January 2011

(vi) Wednesday, 12 January 2011

A. Community Service Announcements

- 1) *Willawong animal shelter evacuating*
- 2) *Roads affected by flooding – 10 am update*
- 3) *Unofficial evacuation centre loses power*

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- 4) *Untreated sewerage to enter flood waters*
 - 5) *Residents likely to be affected by flooding urged to self evacuate now*
 - 6) *Limited bus services running tomorrow*
 - 7) *Lord Mayor calling for plant and heavy equipment*
 - 8) *Floating river walk to be dismantled*
 - 9) *Flood peak revised down*
 - 10) *Disruptions to bus services due to floods*
 - 11) *Coordination of offers of assistance and donations*
 - 12) *Brisbane water treatment plants still operating as normal – Wed PM*
 - 13) *CBD residents urged to find alternative accommodation*
 - 14) *40,000 Brisbane properties to be affected by flooding*
 - 15) *City Glider services cancelled due to flooding*
 - 16) *Council to provide 2000 more beds to evacuation centres*
 - 17) *Evacuation centre activated in Jamboree ward*
 - 18) *Morning update*
 - 19) *Residents urged to bring own bedding to evacuation centres*
 - 20) *Roads affected by flooding – update PM*
 - 21) *Brisbane water and treatment plants operating as normal*
 - 22) *More libraries close*

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- 23) *Sandbag volunteers no longer required at Council depots*
 - 24) *QEII evacuation centre activated*
 - 25) *Waste services suspended*
 - 26) *Council closes customer services at Brisbane Square*

B. LM Media Release

- 1) *Flood affects being felt but more to come*

C. Twitter – 145 tweets

D. Facebook – 53 posts

(vii) Council's Website – On the morning of Monday, 10 January 2011, Council's Information Services Branch was notified of issues with the website. At this time the website was intermittent, with some users getting through, and some not. This degraded during the day, effectively rendering the website out of action by mid to late afternoon. The root cause of the outage was determined to be directly related to high demand for the online Floodwise Property Report. Staff worked on the website overnight and resolved earlier site loading issues. The site was available again from 5:00 am Tuesday 11 January 2011, but the significant load again caused response issues by early morning. Council decided to revert to a static website that went into production at approximately 1:00 pm on Tuesday, 11 January 2011 resulting in significant performance improvement. On Wednesday, 12 January 2011, a link was provided from the static site which enabled users to access the balance of Council's corporate website.

(viii) Ourbrisbane.com - Ourbrisbane.com delivered timely and valuable information for Brisbane residents on road closures and re-openings, utility updates, safety messages and all manner of general information about the flood. The site also assisted Council's Marketing and Communications Branch on a 24 hour, 7 day basis, in managing social media and web announcements, often working remotely.

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- (c) LDMG – The LDMG met formally for the first time at 10:00 am on Tuesday 11 January 2011. The LDMG led the response, set priorities and resolved issues with external agencies. The LDMG continued to meet daily at 10:00 am. The following information is provided:
- (i) Membership – ([Attachment 31 – List of LDMG members](#)).
 - (ii) Agenda and Meeting Notes – ([Attachment 32 – LDMG Meeting Notes, 11-13 January 2011](#)).
- (d) Operational Planning
- (i) A Flood Event Concept of Operation was developed and approved by the LDMG on 13 January 2011. This Concept provided the basis for the response phase. The ADF and supporting agencies were briefed on this Concept – ([Attachment 33 – Flood Event Concept of Operation](#)).
 - (ii) Operational response sectors were developed early in this phase using Census Collection District (CCD) and Statistical Local Area (SLA) boundaries as their basis. This created a common set of operational boundaries for use by all response agencies. This was a key learning from the Gap Storm of 2008. Council responded and provided support, services and information to areas west and east of the defined sectors – ([Attachment 34 – Sector Map](#)).
 - (iii) Coordinated planning – All key response agencies were represented in the LDCC (both FOG and FPG). This enabled the operational response to be coordinated and priorities to be managed. Planning was informed by agency advice.
 - (iv) Sandbagging – Council provided sandbags to residents from six depot locations at Darra, Balmoral, Newmarket, Stafford, Eagle Farm and Zillmere. In total, 313,478 sandbags were distributed with a total of 395,878 sandbags being filled. Distribution peaked on Wednesday, 12 January 2011 when 174,510 sandbags were distributed.
- (e) Evacuation – Council has an Evacuation and Emergency Human Services Plan (that forms part of the Disaster Management Plan - see Attachment 23). Council coordinated the establishment of evacuation centres. In anticipation of a worst case scenario, commencing on Tuesday 11 January 2011, over 50 potential evacuation

sites were progressively sourced to cater for up to 16,000 evacuees. On Tuesday 11 January 2011, at approximately 1:00 pm, Council opened the first evacuation centre at the RNA Showgrounds. A second evacuation centre was opened at the Queensland Sport and Athletic Centre Mount Gravatt on Wednesday, 12 January 2011. The centres were resourced immediately by Council and Red Cross staff with a 24 hour staff roster in place. Both evacuation centres were managed by Red Cross with Council playing a coordination role in accordance with Council's Evacuation and Emergency Human Services Plan – ([Attachment 35 – Brisbane City Council and Red Cross MOU](#)). Key agencies were Council, ADF, QPS, Department of Communities, Queensland Health, Red Cross, Salvation Army, Lifeline, Micah Projects, Multi-Cultural Development Association, Volunteering Queensland, St John's Ambulance, Muslim Community Agency and Interpreter Services. Key data includes:

- (i) RNA. Operated 11 January 2011 – 19 January 2011:
 - A. Over 1650 evacuees registered with Red Cross.
 - B. Approximately 1450 evacuees at the peak (Thursday, 13 January 2011).
 - C. Over 250 households rehoused.
 - (ii) QEII. Operated 12 January 2011 – 21 January 2011:
 - A. Over 700 evacuees registered with Red Cross.
 - B. Approximately 480 evacuees at the peak (Thursday, 13 January 2011).
 - (iii) Over 70 households were rehoused.
 - (iv) Council Evacuation Centre Communications – Evacuation centre newsletters were prepared and distributed – ([Attachment 36 – Evacuation Centre newsletters](#)).
- (f) Public Transport
- (i) Citycat Services were terminated at 8:15 pm on Monday 10 January.
 - (ii) The Bowen Hills Bus Depot was evacuated on Wednesday, 12 January 2011.

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- (iii) Bus services.
 - A. Tuesday, 11 January 2011 – additional bus sweeper services were provided to address a ‘mini’ peak created due to clearing workers from city and CBD workplaces.
 - B. Wednesday 12 January 2011 – normal services continued from the city/CBD until 6:00 pm.

6.3 *Phase 2 – Post-Peak*
2:57 am Thursday 13 January 2011 – 27 January 2011

- (a) Aerial Photography – Council commissioned a commercial operator to conduct high resolution aerial photography of the river area as close as possible to the river peak. This imagery has been widely used in the on-line media.
- (b) LDMG
 - (i) Continued to meet daily at 10:00 am until Saturday 22 January 2011 – ([Attachment 37 – LDMG Meeting Notes, 13 - 22 January 2011](#)).
- (c) LDCC
 - (i) FOG commenced response operation.
 - (ii) FPG commenced preparation for recovery – (Refer Attachment 28).
 - (iii) DIG produced daily mapping – ([Attachment 38 – example mapping](#)).
- (d) Volunteers – Council coordinated volunteers ranging from individuals through to large commercial donations of labour and heavy equipment.
 - (i) Individual volunteers – Council coordinated, through a specific Council team, approximately 23,000 volunteers on the weekend of 15-16 January 2011. Council established four volunteer coordination centres at the Boondall Entertainment Centre, McGregor State High School, Doomben Race Course and Mt Coot-tha Botanic Gardens where volunteers were registered and allocated to sectors. Volunteers at these centres were then transported by Brisbane Transport buses to and from their allocated sectors. These volunteers were coordinated on the ground by officers from Council’s Libraries and Brisbane Transport. A significant amount of debris was removed and on the second weekend (22-23 January 2011)

a large number of parks were cleaned. This overwhelming community response and volunteering effort had not been experienced before and was a feature of this disaster response effort. Council acknowledges that there were many more unregistered volunteers who assisted with the cleanup. Whilst it is not possible to accurately estimate the total number of volunteers, Council believes that as a result of its 'call to action' there were as many as 50,000 - 60,000 volunteers across the weekend.

- (ii) Heavy equipment and plant – Coordinated by Council's Major Infrastructure Project Office (MIPO). This support enhanced Council's ability to rapidly respond to the removal of debris from temporary debris sites to landfill.
- (iii) Small teams – Council established a team that was responsible for coordinating smaller working groups of volunteered plant and equipment. This volunteered plant and equipment was allocated to Regional Incident Management Teams and the ADF to assist with the removal of debris from streets in flood affected areas.

(e) Waste Management

- (i) City Waste Services (CWS) tonnages to landfill – By 22 January 2011, 126,700 tonnes of debris and waste had been removed from temporary sites to landfill. By 3 March 2011 this figure had risen to 338,494 tonnes. By way of comparison, in 2010 Council disposed of a total of 600,000 tonnes of waste.
- (ii) Temporary debris collection sites were established throughout the flood-affected areas. These temporary sites were cleared using heavy plant and equipment and larger capacity trucks on a priority basis. Temporary sites enabled the rapid removal of debris and waste from streets and contributed significantly to the speed of the cleanup. Council is well advanced in rehabilitating these sites. Transfer stations were also free-of-charge until early February 2011.
- (iii) Hazardous Waste – CWS coordinated the collection of hazardous waste material during the flood clean up period. Requests were received via email from various areas in Council. Between 14 January 2011 and 8 March 2011, CWS recorded 226 requests for hazardous waste removal and 115 requests for asbestos removal which have all been completed.

(f) Community Engagement and Council Communications – Council used many different channels to communicate with flood affected residents and businesses. These channels included media, newsletters, fact sheets, posters and outdoor advertising. A summary of key activities and channels is below: ([Attachment 39 – Releases, Community Service Announcements , Tweets, Posts, 13-22 January 2011](#))

(i) Thursday, 13 January 2011

A. Community Service Announcements

- 1) *Waste services update*
- 2) *Morning flood update*
- 3) *Clean up to begin once floodwaters recede*
- 4) *Bus services to operate from Friday 14 January*
- 5) *Council to provide financial relief to flood victims*
- 6) *Council to provide financial relief to flood victims – CORRECTION*
- 7) *Evacuation centre update*
- 8) *Sandbags still available*
- 9) *Advise to residents in isolated areas of the western suburbs*
- 10) *CityCats and CityFerries service cancelled – terminals decimated but entire fleet saved*
- 11) *Donation of goods to be made to local charities*
- 12) *Brisbane River peak approaching*
- 13) *Flood peak further revised down*

B. LM Media Release

- 1) *Clean up operation to swing into action*

C. Twitter – 58 tweets

D. Facebook – 22 posts

(ii) Friday, 14 January 2011

A. Community Service Announcements

- 1) *Rapid damage assessment teams to be deployed across Brisbane*
- 2) *Residents and volunteers urged to take care in clean-up*
- 3) *Bulk bins available across city for flood damaged goods and spoiled food*
- 4) *Coordinated volunteer clean up taskforce*
- 5) *Be aware of hazardous material*
- 6) *Ivory Street Tunnel closed from 11am to 4pm today*
- 7) *Regular bus timetables resume this weekend*
- 8) *A number of major Brisbane roads and bridges partially re-open*
- 9) *Motorists to take care as city roads and traffic lights still out*

B. LM Media Releases

- 1) *Army joins Brisbane's cleanup effort*
- 2) *BCC fears for Coronation Drive*
- 3) *Flood cleanup volunteer centres announced*

C. Twitter – 9 tweets

D. Facebook – 11 Posts

(iii) Saturday, 15 January 2011

A. Community Service Announcements

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- 1) *Volunteer registrations are full today*
 - 2) *No parking in flood affected areas*
 - 3) *Council issues urgent call for owner operators with small tip trucks*
 - 4) *Residents advised to keep fire hydrants clear of rubbish, furniture*
 - 5) *Large trucks to take waste direct to Rochedale landfill*
 - 6) *Morning update*
 - 7) *Residents asked to avoid unnecessary travel*
 - 8) *Roads closed for clean-up machinery access*
 - 9) *Residents assistance sought in disposing of sandbags*
 - 10) *Volunteer Centres update – volunteers can register at any time*
 - 11) *Volunteer Centres update – equipment needed and registration*
 - 12) *Heavy lifting expected for volunteers tomorrow*
 - 13) *River banks unstable as flood waters subside*

B. Radio Scripts

- 1) *Mosquitoes and snakes*
- 2) *Health and safety advice*
- 3) *Flood collection for flood related debris*
- 4) *Volunteering*
- 5) *Cleaning Rainwater tanks*
- 6) *Electricity and power safety*

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- 7) *Insurance advice for business*
 - 8) *Insurance advice for residents*
 - 9) *Road maintenance*
 - 10) *Waste disposal advice for flood affected areas*
 - 11) *Water dropping in flood affected areas*
 - 12) *Leaving flood evacuation centres and cleanup activities*

C. LM Media Release

- 1) *Bulk bins delivered to flood suburbs for cleanup*

D. Twitter – 16 tweets

E. Facebook – 16 Posts

(iv) Sunday, 16 January 2011

A. Community Service Announcements

- 1) *Empty containers holding water to stop mozzies from breeding*
- 2) *Motorists encouraged to use Milton Road, avoid Coronation Drive*
- 3) *Normal waste pick up resuming Monday 17 January*
- 4) *Light trucks needed to assist with recovery works*
- 5) *Thanks to volunteers*
- 6) *Cleanup turns to clearing footpaths*
- 7) *Urgent call for owner operators with small tip trucks*

B. LM Media Releases

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- 1) *Hundreds of bulk bins hit suburbs for flood cleanup*
 - 2) *Stagger work times tomorrow*
 - 3) *Free vaccinations for flood volunteers*
 - 4) *Check on your neighbours*
- C. Twitter – 42 tweets
- D. Facebook – 21 Posts
- (v) Monday, 17 January 2011
- A. Community Service Announcements
- 1) *Avoid handling materials containing asbestos*
 - 2) *Coronation Drive now fully open*
 - 3) *Council offers vaccinations to flood victims and volunteers*
 - 4) *REMINDER: Council's volunteer coordination centres closed*
- B. LM Media Releases
- 1) *Coro Drive opens to traffic*
 - 2) *REMINDER: Stagger work times today*
- C. Twitter – 33 tweets
- D. Facebook – 15 Posts
- (vi) Tuesday, 18 January 2011
- A. Early Warning Alert Service
- 1) 3.45 pm: SMS content: *QLD Severe T'Storm: Large Hail, Flash Flooding, Damaging Winds. Brisbane CBD, Strathpine, Redcliffe, Mount Mee, Albany Creek areas at risk*

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- 2) 3.33 pm: SMS content: *QLD Severe T'Storm: Large Hail, Flash Flooding, Damaging Winds. Acacia Ridge, Brisbane CBD, Sunnybank, Moorooka, Mt Gravatt areas at risk.*
 - 3) 3.13 pm: SMS content: *QLD Severe T'Storm: Large Hail, Flash Flooding, Damaging Winds. Rocklea, Kenmore, Ipswich, Mt Crosby, Toowong areas at risk.*
 - 4) 3.08 pm: SMS content: *QLD Severe T'Storm: Large Hail, Flash Flooding, Damaging Winds. Logan Village, Beenleigh, Logan City & Sunnybank Hills areas at risk.*
 - 5) 2.48 pm: SMS content: *QLD Severe T'Storm: Large Hail, Flash Flooding, Damaging Winds. Ipswich, Harrisville, Marburg, Amberley, Forest Lake areas at risk.*
 - 6) 12:12 am: King Tide: SMS content: *King tide will occur 21 Jan 10:37 am. Your property may be affected. Please take necessary precautions. Sandbags avail. For locations phone BCC on 3403 8888*

B. Community Service Announcements

- 1) *Residents urged to prepare for higher than usual king tide on Friday*
- 2) *Council calls for volunteers to team up for deployment*

C. LM Media Releases

- 1) *Collection fees waived for lost animals*
- 2) *Council bus services return to normal*
- 3) *Behind the scenes of the Local Disaster Coordination Centre*

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- D. Twitter – 18 tweets
 - E. Facebook – 13 Posts
- (vii) Wednesday, 19 January 2011
- A. Community Service Announcements
 - 1) *Residents advised to take caution on bikeways and pathways*
 - 2) *Animals re-homing process to start on Monday*
 - 3) *Residents asked to report flood damaged library books*
 - B. LM Media Releases
 - 1) *RNA flood evacuation centre closes with residents re-housed*
 - 2) *King tide may cause further flooding in Brisbane*
 - 3) *Brisbane: pitch in to stop mosquitoes*
 - C. Twitter – 21 tweets
 - D. Facebook – 7 Posts
- (viii) Thursday, 20 January 2011
- A. Community Service Announcements
 - 1) *Roads closures due to flooding*
 - 2) *Residents encouraged continuing reporting clean up issues*
 - 3) *Residents urged to register for trade assistance*
 - 4) *Council venues open for business*
 - B. LM Media Release
 - 1) *Donate food to help flood victims*

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- C. Twitter – 32 tweets
- D. Facebook – 12 Posts
- (ix) Friday, 21 January 2011
- A. Community Service Announcements
- 1) *Volunteers encouraged to adopt a park this weekend*
 - 2) *Brisbane urged to be alert ahead of today's king tide*
 - 3) *Residents urged to register for trade assistance*
 - 4) *Community groups and small businesses urged to ask for assistance*
 - 5) *Shop owners urged to dispose of food waste responsibly*
 - 6) *Brisbane roads affected by today's king tide*
- (x) Saturday, 22 January 2011
- A. Community Service Announcements
- 1) *Part of Coronation Drive closed*
 - 2) *Brisbane urged to be alert ahead of king tide today*
 - 3) *All lanes open on Coronation Drive*
 - 4) *Adopt a park initiative proves successful*
- (xi) Fact Sheets – 30 Fact sheets were prepared – ([Attachment 40 – Fact sheets](#))
- (xii) Community Newsletters – 8 Community Newsletters were prepared and distributed to the flood-affected suburbs – ([Attachment 41 – Community Newsletters](#))
- (xiii) Posters with key messages were displayed in flood-affected areas. These posters were predominately fixed to light and electricity poles to ensure

timely information was available to flood affected residents who had no access to other information – ([Attachment 42 – Example of poster](#))

(xiv) Outdoor advertising was used to deliver key messages – ([Attachment 43 – Example of advertising](#)).

(g) Public Transport

(i) Citycat Services remained suspended (limited services recommenced on Monday, 14 February 2011)

(ii) The Bowen Hills Bus Depot was re-occupied on Friday, 14 January 2011 and services re-commenced from this depot on Saturday, 15 January 2011

(iii) Bus services.

A. Thursday, 13 January 2011 – 8 Bus Upgrade Zone (BUZ) routes in service – all other services cancelled

B. Friday, 14 January 2011 – Services re-commenced using a Sunday timetable

C. Saturday 15 January 2011 – Normal services resumed (with diversions in place) – Free Public Transport for one week

D. Supplementary services were put in place to cater for suspended ferry/Citycat services – Route 233 and Route 234 (until 20 February 2011)

E. Routes 192, 232 and 305 operated on an upgraded frequency

(h) Aerial Reconnaissance – Council engaged a commercial helicopter provider to fly daily aerial rotary wing reconnaissance missions during the period 19 - 24 January 2011 with the aim of assisting in the coordination of waste and debris removal. These reconnaissance missions involved Council officers.

(i) Community Health and Safety – Council provided health and safety related information in posters, newsletters and fact sheets. Council's Immunisation Services, in partnership with Queensland Health, mobilised teams to deliver vaccination programs across Brisbane. Free vaccinations were offered to the following groups:

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- (i) Volunteers helping out in flood-affected neighbourhoods across Brisbane.
 - (ii) Residents who were affected by the floods.

Following the initial response of offering free vaccinations at volunteer centres, this free program was then expanded to recovery centres, mobile van sites and infant clinics. A total of 6,338 people were vaccinated against Tetanus (Adult Diphtheria and Tetanus vaccine) across Brisbane at volunteer centres, recovery centres, infant immunisation clinics and Queensland Health mobile clinic vans – ([Attachment 44 – Council Report – Brisbane Flood Recovery Vaccination Clinics](#)).

- (j) Council Officers and Equipment – Commencing on Friday, 14 January 2011, Council launched a planned and coordinated response effort. This response effort included Council officers on duty and volunteers, ADF, SES, support from other local government authorities (both within Queensland and from Interstate) and volunteered equipment and staff from the private sector. By way of example, on 18 January 2011, 1,720 personnel were deployed into the flood-affected areas supported by 665 items of plant and equipment (trucks, bobcats, tippers, backhoes, traffic control, excavators, loaders and street sweepers amongst other equipment).

6.4 *Phase 3 - Recovery*
28 January 2011 onwards

- (a) Lord Mayor's Recovery Task Group (LMRTG) – The Lord Mayor established a Recovery Task Group and supporting Sub-Committees. The recovery structure is:
 - (i) Lord Mayor's Recovery Task Group
 - (ii) Community Recovery Sub-Committee
 - (iii) Finance and Economic Recovery Sub-Committee
 - (iv) Environment Recovery Sub-Committee
 - (v) Town Planning Recovery Sub-Committee
 - (vi) Infrastructure Recovery Sub-Committee
 - (vii) Ward Recovery Sub-Committee

([Attachment 45 – Terms of Reference – Lord Mayor's Recovery Task Group Sub-Committees](#)).

(b) Lord Mayor’s Community Disaster Relief Appeal – Details of the Lord Mayor’s Community Disaster Relief Appeal are on Council’s website at www.brisbane.qld.gov.au

(c) As indicated above, it is anticipated that the Recovery Phase will last for 24 months at an estimated cost to Council of \$440m.

7. **ADDITIONAL TERMS OF REFERENCE (d) AND (e)
THE MANAGEMENT OF THE SUPPLY OF ESSENTIAL SERVICES
THE ADEQUACY OF FORECASTS AND EARLY WARNING SYSTEMS**

7.1 Council considers that the information set out above is also applicable to Terms of Reference (d) and (e). Council does not intend to specifically address those terms further in this Submission.

Colin Jensen
**CHIEF EXECUTIVE OFFICER
BRISBANE CITY COUNCIL**

List of Abbreviations

ADF	Australian Defence Force
AHD	Australian Height Datum
ARI	Average Recurrence Interval
BCC	Brisbane City Council
BMTMC	Brisbane Metropolitan Traffic Management Centre
BOM	Bureau of Meteorology
CCD	Census Collection District
CMC	Crime and Misconduct Commission
CRMC	Corporate Risk Management Committee
CSA	Community Service Announcements
CWS	City Waste Services
DCC	District Coordination Centre
DIG	Disaster Intelligence Group
DMA	<i>Disaster Management Act 2003</i> Qld
DMP	Disaster Management Plan
E&C	Establishment and Coordination Committee
EMQ	Emergency Services Queensland
EWAS	Early Warning Alert System
FOG	Field Operations Group
FPG	Forward Planning Group
FRRB	Flood Recovery Review board
ISG	Incident Support Group
LDCC	Local Disaster Coordination Centre
LDMG	Local Disaster Management Group
LMRTG	Lord Mayor's Recovery Task Group
LO	Liaison Officer
MIPO	Major's Infrastructure Project Office
NBTF	North Bank Task Force

PMF	Probable Maximum Flood
QAS	Queensland Ambulance Service
QFRS	Queensland Fire and Rescue Services
QPS	Queensland Police Service
QUU	Queensland Urban Utilities
SES	State Emergency Services
SLA	Statistical Local Area
Taskforce	Lord Mayor's Suburban Taskforce on Flooding

List of Attachments

1. [Terms of Reference - Flood Response Review Board](#)
2. [Terms of Reference - Lord Mayor's Suburban Taskforce on Flooding](#)
3. [Lord Mayor's Suburban Taskforce on Flooding Report, August 2005](#)
4. [BeFloodWise Fact Sheet – Voluntary Home Purchase Scheme](#)
5. [Lord Mayoral Correspondence regarding funding for the Voluntary Home Purchase Scheme prior 2011](#)
6. [Lord Mayoral Correspondence regarding funding for the Voluntary Home Purchase Scheme 2011](#)
7. [Compensatory Earthworks Planning Scheme Policy](#)
8. [Brisbane City Council Subdivision & Development Guidelines - Part A Hazard Management, Chapter 1 Flood Affected Land](#)
9. [Stormwater Management Code and Brisbane City Council Subdivision & Development Guidelines - Part B Infrastructure Elements, Chapter 2 Stormwater Drainage](#)
10. [Description of flood database layers](#)
11. [Living in Brisbane feature, EWAS Subscription Brochure and EWAS Take-Up Rate](#)
12. [List of Roads with Flashing Lights](#)
13. [Joint Flood Task Force Report March 2011](#)
14. [BeFloodWise campaign](#)
15. [Brisbane City Council - Summer Storm campaigns](#)
16. [Example of two of the 216,500 Flood Flag Maps downloaded and Brochure](#)
17. [Example of each of the four types of Flood Wise Property Reports](#)
18. [Living in Brisbane editions](#)
19. [Example letters sent by the Lord Mayor](#)
20. [Lord Mayor's Media Releases](#)
21. [Media articles](#)
22. [Minutes and meeting notes of the LDMG, 2010/2011](#)
23. [Disaster Management Plan](#)
24. [Disaster Management Concept of Operations](#)
25. [Standard Operating Procedures and Crisis Communications Manual](#)
26. [Summary of disaster management training](#)

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27. [Summary of disaster management exercises](#)
 28. [Concept for Recovery](#)
 29. [Daily LDCC situation reports](#)
 30. [Early Warning and Corporate Communications Alerts, Community Service Announcements, Releases, Tweets, Posts](#)
 31. [List of LDMG members](#)
 32. [LDMG Meeting Notes, 11-13 January 2011](#)
 33. [Flood Event Concept of Operation](#)
 34. [Sector Map](#)
 35. [Brisbane City Council and Red Cross MOU](#)
 36. [Evacuation Centre newsletters](#)
 37. [LDMG Meeting Notes, 13-22 January 2011](#)
 38. [Example Mapping - LDCC](#)
 39. [Releases, Community Service Announcements, Tweets, Posts, 13-22 January 2011](#)
 40. [Fact Sheets](#)
 41. [Community Newsletters](#)
 42. [Example of poster](#)
 43. [Example of advertising](#)
 44. [Brisbane City Council Report - Brisbane Flood Recovery Vaccination Clinics](#)
 45. [Terms of Reference - Lord Mayor's Recovery Task Group Sub-Committees](#)