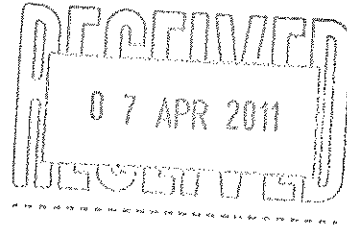


When telephoning or calling  
please ask for April, 2011.



Ms Jane Moynihan  
Executive Director  
Queensland Floods Commission of Inquiry  
GPOP Box 1738  
**BRISBANE 4001**

Dear Ms Moynihan

**Re: Requirement to Provide Written Information to Commission of Inquiry**

I, Scott Leslie Daniel Norman, Local Disaster Coordinator of the Balonne Local Disaster Management Group, Balonne Shire Council provide the following written statement in regard to the recent flooding event.

Balonne Shire suffered flooding in March, 2010, and twice in the December, 2010 to January, 2011 period.

The information I provide relates to December 2010 – January 2011 events.

1	<b>The local planning and preparation, including training, undertaken in advance of and/or in relation to the 2010/2011 flood events</b>
	<p>(a) Balonne Shire responded to a flood event with a higher peak and more widespread inundation in March 2010. The response phase was approximately one month and was valuable preparation for the Local Disaster Management Group. The Disaster Management Plan was subsequently amended with the key learning prior to the December 2010/January 2011 event. Recent training attended included:</p> <ul style="list-style-type: none"><li>• 16<sup>th</sup> February 2010 – The Natural Disaster Relief and Recovery Arrangements, St George RSL; conducted by EMQ, Department of infrastructure and Planning and Department of Transport and Main Roads.</li><li>• 4<sup>th</sup> August 2010 – Changes to Queensland's Disaster Management Arrangements, Roma Cultural Centre, Roma; presented by QPS and EMQ.</li><li>• 19<sup>th</sup> August 2010 – Rain, Hail or Shine. Do you have a plan? Presented in conjunction with EMQ, The Experiences of the March 2010 Flood at the LGMA Queensland – Darling Downs and South West Queensland Branch Annual Conference.</li><li>• 9<sup>th</sup> September 2010 – Enhance your preparedness for the storm and flood season, St George RSL; conducted by EMQ and the Bureau of Meteorology.</li></ul>

2	<p><b>Any measures implemented immediately prior to or during the 2010/2011 flood events that were designed to mitigate the effect of any flooding (for example, sandbagging, temporary levees), including an assessment of the performance of those measures.</b></p>
	<p><u>Town of St George</u></p> <p>(a) During the event, a temporary levee was in place designed to protect the majority of the Town to a flood height of 14.5 metres, being the agreed preparation height. The flood peaked 13.2 metres so the adequacy of the levee was largely untested. However, the levee was inspected by Australian Defence Force (ADF) Engineers who were satisfied with the design and construction. Where the water did reach the levee, the levels design and construction proved sound.</p> <p>(b) Numerous levees were also constructed by individuals on private land. All but one were effective, though in some cases they did leak, which required water to be pumped out.</p> <p>(c) Sandbagging of essential infrastructure was carried out by Council to the protection height (14.5m). Sandbagging stations were made available for residents to prepare their individual properties. Residents were assisted by volunteers as well as Council staff.</p> <p>(d) The stormwater system was blocked to prevent backflow inundation of the Town from the Balonne River. However, the stormwater system leaked at Andrews Street (on the eastern side of the Town), so a sump was dug by Council and the water was trucked out in tankers.</p> <p><u>Town of Thallon</u></p> <p>(e) To prepare for the flood event, the existing levee was augmented by approximately 0.5 metres. Heavy machinery was also put on standby to repair any breaches of the levee.</p> <p>(f) Levees were otherwise inspected at regular intervals to ensure they were adequate and check for breaches.</p> <p>(g) The measures implemented were effective and town of Thallon was not inundated, as was partially the case in during the March 2010 floods.</p> <p><u>Town of Mungindi – (Queensland side)</u></p> <p>(h) The existing levees were inspected prior to flood peak, and heavy machinery was placed on standby to repair any breaches.</p> <p>(i) The existing levees were effective to prevent inundation.</p> <p><u>Town of Dirranbandi</u></p> <p>(j) The existing levee was augmented for the anticipated flood, and there were regular patrols of levee.</p> <p>(k) Heavy machinery was again placed on standby to repair any breaches.</p> <p>(l) Water pumps were also put in place to combat leaks by pumping water.</p> <p>(m) The measures implemented in the Town were effective.</p>
3	<p><b>Local participation, or otherwise, in Emergency Management Queensland's (EMQ) 2010 Pre-Season Flood and Cyclone Workshop, including an assessment of the local assistance gained thereby.</b></p>
	<p>(a) The following Council officers attended the National Disaster Relief and Recovery Arrangements (NDRRA) workshop in St George run by EMQ, the Department of Infrastructure and Planning, Department of Transport and Main Roads on 16 February 2010:</p> <ul style="list-style-type: none"> <li>• Scott Norman (Chief Executive Officer);</li> <li>• [REDACTED] (Director Technical Services);</li> <li>• [REDACTED] (Deputy Local Controller SES );</li> <li>• [REDACTED] (St George Group Leader SES );</li> <li>• [REDACTED] (Director Corporate and Community Services);</li> <li>• [REDACTED] (Technical Officer);</li> <li>• [REDACTED] (overseer); and</li> </ul>

	<ul style="list-style-type: none"> <li>• [REDACTED] (Roads Supervisor).</li> </ul> <p>(b) Four Council employees (being the Chief Executive Officer, Director Technical Services, Deputy Local Controller and St George Group Leader) and three Councillors (being the Mayor, Deputy Mayor and Councillor Fuhrmeister) attended the EMQ workshop – “Enhance your preparedness for the storm and flood season” in St George on 09 September 2010. Presentations were given by EMQ, the Bureau of Meteorology and the Department of Environment and Resource Management.</p> <p>(c) Both events were useful with updated information being presented and any queries being addressed.</p>
4	<p><b>Local participation, or otherwise, in EMQ’s 2010 Consultation Sessions concerning the proposed changes to the <i>Disaster Management Act 2003 (Qld)</i>, including an assessment of the local assistance gained thereby.</b></p> <p>(a) On 4 August 2010, the Mayor, Deputy Local Controller and I attended EMQ’s 2010 Consultation Session concerning the proposed changes to the <i>Disaster Management Act 2003</i> in Roma. In my view, the knowledge obtained about the legislation changes was valuable.</p> <p>(b) I also attended the Queensland Local Government Managers Association – South West Queensland Branch Annual Conference in Goondiwindi on 19 and 20 August 2010, which included discussions about flood preparedness. EMQ participated in this discussion.</p> <p>(c) I am aware that Cr Donna Stewart (Mayor) made representations to the Premier’s meeting of Mayors after the March 2010 event in relation to the tasking of aircraft. The changes to the <i>Disaster Management Act 2003</i> addressed the issue and, as a result, the tasking of aircraft was more effective during the December 2010 – January 2011 flood events.</p>
5	<p><b>Any measures taken to train and/or equip the local State Emergency Service (SES), including an assessment of the adequacy and timelines thereof.</b></p> <p>(a) The local SES is mostly funded by EMQ, which provides items such as tarps, flood boats and a vehicle for the Thallon SES unit.</p> <p>(b) The LDMG has an annual budget of approximately \$3,500.00, which is used to fund materials and the renewal and maintenance of equipment to help support the local SES. Items include:</p> <ul style="list-style-type: none"> <li>o Shirts;</li> <li>o Fridges for the depots;</li> <li>o Sheds – these are subject to further funding applications, and there are currently three provided by Council;</li> <li>o The provision of a vehicle in St George, which also doubles as an officer vehicle; and</li> <li>o Maintenance of vehicles.</li> </ul> <p><u>St George SES members</u></p> <p>(c) There are 12 SES members in St George, five of which are Council employees.</p> <p>(d) The SES experience of the SES Executive Officers is generally as follows:</p> <ul style="list-style-type: none"> <li>o Local Controller - 35 years;</li> <li>o Deputy Local Controller – 9 years; and</li> <li>o St George Group Leader – 14 years.</li> </ul> <p>(e) The SES qualifications relevant to the 2010/2011 flood for the SES group members include certificates in the following for a majority of the members (training was conducted by EMQ / SES):</p> <ul style="list-style-type: none"> <li>o Traffic Control;</li> <li>o Risk Management ;</li> <li>o Communications;</li> <li>o Storm Damage;</li> <li>o Working at heights;</li> <li>o Flood Boat Operators – 8 (including 1 trainer/assessor);</li> <li>o Working in an Emergency Operations Centre – 5; and</li> </ul>

	<ul style="list-style-type: none"> <li>○ Introduction to Evacuation Centre Operations – 2.</li> <li>(f) Of the five Council employees, the roles in which they ordinarily perform are: <ul style="list-style-type: none"> <li>○ Local Controller - Director of Health, Planning &amp; Environment (qualified Building &amp; Plumbing Inspector);</li> <li>○ Deputy Local Controller – Human Resource &amp; Office Team Leader, Workplace Rehabilitation &amp; Return to Work Co-ordinator, NDRRA Claims Officer, Provisional Auditor in Occupational Health and Safety Scheme;</li> <li>○ St George Group Leader - Workplace Health &amp; Safety Officer, Airport Manager, Level 4 Traffic Management Scheme Accreditation with the Department of Transport and Main Roads, Provisional Auditor in Occupational Health and Safety Scheme.</li> <li>○ Member – Accountant;</li> </ul> </li> <li>(g) In addition to this, three have SES qualification for Working in Emergency Operations Centre and three are qualified Flood Boat Operators (including 1 trainer/assessor). Training was delivered by EMQ. <u>Thallon SES members</u></li> <li>(h) Four of the members had experience with assisting with Cyclone Larry in north Queensland, while four members had experience in assisting with the storms at The Gap in Brisbane.</li> <li>(i) The team was adequately equipped, effective during the flood event, they were lead on the ground by their group leader and directed by the St George Control Centre.</li> </ul>
6	<p><b>The local actions undertaken in advance of and/or in respect of the 2010/2011 flood events in relation to resourcing, coordination and deployment of any personnel and equipment.</b></p>
	<p>(a) The local actions undertaken by Council included:</p> <ul style="list-style-type: none"> <li>○ The contracting of heavy machinery to Bollon, Thallon, Mungindi and Dirranbandi;</li> <li>○ The repositioning of a SES flood boat from Bollon to Dirranbandi;</li> <li>○ Holding a public meeting in Dirranbandi on resupply and advising residents on how to prepare;</li> <li>○ Locating high clearance vehicles for resupply work into Dirranbandi;</li> <li>○ Positioning road plant west of the Balonne River prior to the flood peak so it was available while the road access was unavailable – operators were then moved by flood boat;</li> <li>○ Positioning sand and sandbagging equipment for sand bagging prior to access being cut;</li> <li>○ Positioning a vehicle on the western side of the Balonne River at St George by Ergon for the purpose of responding to issues with the electricity supply; and</li> <li>○ Consultation with the Queensland Ambulance Service with regard to positioning a vehicle on the western side of the river, though alternative arrangements were eventually made.</li> </ul>
7	<p><b>The local actions undertaken in respect of the 2010/2011 flood events in relation to immediate management, response and recovery operations, including the coordination and deployment of personnel and equipment.</b></p>
	<p>(a) The LDMG operations are described in the agendas and minutes provided to the Commission as a part of dot-points 6, 8, 15, and 22 of the request for information. The first meeting was on 28 December 2010 and the last meeting was on 31 January 2011.</p> <p>(b) Council was also responsible for the establishment and operation of the SES Control Centre. The actions are described in the “requests for actions” and “Situation reports” provided to the Commission as a part of dot-point 23 of the request for information. In particular, the SES Control Centre was established on 31 December 2010. Its functions were subsequently incorporated into Council operations on 31 January 2011. The tasks of the Control Centre included:</p> <ul style="list-style-type: none"> <li>○ call centre operations;</li> <li>○ tasking air operations;</li> <li>○ flood boat operation, including a ferry service across the Balonne River for all of January 2011;</li> <li>○ door knocking for evacuations;</li> </ul>

	<ul style="list-style-type: none"> <li>o isolated property resupply;</li> <li>o town resupply; and</li> <li>o referrals to the evacuation centre.</li> </ul> <p>(c) An Evacuation Centre was established at the St George State School.</p> <p>(d) The Balonne Recovery Group was established 6<sup>th</sup> January 2011 and is ongoing. Its function is to deliver the recovery plan based on the Hinchinbrook Model.</p> <p>(e) Otherwise, SES's January 2011 Floods – Debrief Report reveals the following information:</p> <ul style="list-style-type: none"> <li>• The total Requests for Assistance for isolated properties and community resupply received by Council is 93.</li> <li>• The number of sandbags issued by Council (without sand) throughout the region is approximately 20,000.</li> <li>• The total SES personnel hours was 2,480.25, comprising: <ul style="list-style-type: none"> <li>St George - 1,757.00</li> <li>Thallon - 35.25</li> <li>Begonia - 175.50</li> <li>Charleville - 112.00</li> <li>Wallumbilla - 176.25</li> <li>Warwick - 191.25</li> <li>Augathella - 33.00</li> </ul> </li> <li>• The amount of boat fuel used for the flood events is 2,030 litres.</li> <li>• The number of people moved backwards and forwards across river is estimated to be 5,000; grape pickers, irrigators, shearers and Council workers being amongst the people moved. Some of the items transported by boat included but not limited to bread, milk, mail, courier parcels, pump fittings, machinery parts including tractor windows, tyres and radiators, dogs, white goods, mini-bulk container, personal groceries, medications and resupply for those west of the river.</li> </ul>
8	<p><b>Any local measures taken or requested to preserve vital infrastructure and to manage, maintain or reinstate the supply of essential services (water, food, power, transport, communications and or sewerage) during the 2010/2011 flood events.</b></p>
	<p>(a) The local measures taken included:</p> <ul style="list-style-type: none"> <li>• Emergency corrective action of the Dirranbandi water treatment plant;</li> <li>• Alternate local refuse collections in the towns of Thallon, Bollon and Dirranbandi;</li> <li>• Placing a diesel pump on standby for St George for raw water supply, which was subsequently relied upon;</li> <li>• Sandbagging sewerage pump stations at St George;</li> <li>• Blocking sewer entry points below the flood level to prevent backflow inundation at St George;</li> <li>• Placing water tankers on standby for fire fighting purposes during water supply interruptions at St George;</li> <li>• Deploying emergency response teams to pump storm water at various locations while storm water drainage was blocked in St George;</li> <li>• Sending emergency water treatment kits to isolated properties;</li> <li>• Ensuring bottled water was delivered to isolated properties;</li> <li>• Sandbagging the telephone exchange to prevent inundation;</li> <li>• Programming the disconnection of electricity by Ergon as water levels rose;</li> <li>• Facilitating the reconnection of electricity for cleanup activities;</li> <li>• Closing the Balonne river to boating traffic to maintain operating clearances for power lines over river;</li> <li>• Requesting generator sets through the District Disaster Management Group;</li> </ul>

	<ul style="list-style-type: none"> <li>• Implementing a generator at Beardmore Dam to operate the dam gates; and</li> <li>• Distributing emergency mobile phone sets supplied by Telstra, which facilitated free telephone access through public phone network.</li> </ul> <p>(b) Infrastructure flood inundation heights were available through the use of the height data gained by the aerial survey undertaken during the March 2010 floods. This information was also used to position temporary levees in various locations.</p>
9	<p><b>Any information received or obtained concerning weather and flood forecasts or warnings, and the steps taken to disseminate that information to the community before, during and immediately after the 2010/2011 flood events.</b></p> <p>(a) Information was received from the Department of Environment and Resource Management via its representative at the LDMG meeting and also from its website gauge readings.</p> <p>(b) Information was also received from the Bureau of Meteorology via its website, faxed warnings, phone briefings and teleconferences.</p> <p>(c) Information as disseminated by Council via:</p> <ol style="list-style-type: none"> <li>1. Council's website;</li> <li>2. Council's Facebook page;</li> <li>3. Public notice boards at St George, Dirranbandi, Hebel and Bollon;</li> <li>4. Group emails;</li> <li>5. Media – both radio and television; and</li> <li>6. Door knocking in evacuation areas.</li> </ol>
10	<p><b>In relation to item 6, an indication of the source/s, accuracy and timeliness of that information for local purposes. [Note – the Commission has since clarified that this is intended to be a reference to item 9]</b></p> <p>(a) In my view, the information on the timing of the floods was accurate. However, flood heights were initially overestimated and revised down as the peaks approached.</p> <p>(b) There are three particular issues I wish to bring to the attention of the Commission:</p> <ol style="list-style-type: none"> <li>1. The Bureau of Meteorology (BOM) was estimating flows at upstream gauging stations approximately 100,000 mega litres per day (40%) in excess of the instantaneous flow rates published on the Department of Environment and Resource Management (DERM) website. The BOM prediction of 340,000 mega litres per day was reported by DERM as only being 240,000 mega litres per day. This led to scepticism of the BOM predicted peak at St George. DERM later amended its rating tables to better reflect the BOM figure.</li> <li>2. The Barrackdale Choke had a significant influence on the height of the flood peak in the Balonne River below the Choke. The Choke was tested beyond its previous limits and BOM produced a range of "What ifs?" scenarios in the event the capacity of the Choke was exceeded. This was useful information that was incorporated into planning for the flood event. For instance, one scenario put the height of the Balonne River at 15.5 metres. However, the agreed planning height for the 2010/2011 event was 14.5 metres. This range of possible flood heights was considered and useful when establishing the evacuation height of 14.25 metres.</li> <li>3. Heavy rainfall around "The Deep", located on the Moonie River system, resulted in a flow through that system with which BOM was not familiar. As a result, the prediction was higher than the actual peaks.</li> </ol>
11	<p><b>Any local measures undertaken to protect life and private/public property in connection with the 2010/2011 flood events (such as road/bridge closures, evacuation arrangements, etc), and the steps taken to disseminate information about those measures to the community before, during and immediately after the 2010/2011 flood events.</b></p> <p>(a) The local measures taken by Council are generally set out in paragraphs 2, 6, 7, 8 and 12 of this</p>

	<p>statement. Some key measures included:</p> <ul style="list-style-type: none"> <li>• Establishing an evacuation centre in St George, which was run by the Red Cross;</li> <li>• Door knocking the inundated areas;</li> <li>• Carrying out extensive road closures, both local government and State roads, the details of which are contained in the information sheets provided to the Commission as a part of dot-point 23 of the request for information; and</li> <li>• Disseminating information via public notice boards, websites, email, phone inquiries lines (e.g. the 131940.gov.au website).</li> </ul>
12	<p><b>The circumstances of any rescues or evacuations performed in the local area in connection with the 2010/2011 flood events, including an assessment of the adequacy and timeliness thereof.</b></p> <p>(a) During the flood event, partial inundation of the town of St George led to an evacuation.</p> <p>(b) Patients of Mungindi Hospital and high care patients of St George Hospitals were evacuated by Queensland Health, with the LDMG being advised of the evacuation.</p> <p>(c) The Warrawee Aged Care facility in St George was also evacuated. Churches of Christ worked closely with the LDMG to assist in carrying this out.</p> <p>(d) Medical evacuations were carried out by the Royal Flying Doctors Service as per normal arrangements.</p> <p>(e) Evacuation by helicopter was also carried out, as detailed in the Requests for Assistance provided to the Commission as a part of dot-point 23 of the request for information.</p> <p>(f) In my opinion, all rescue and evacuation actions were done in a timely and adequate manner.</p>
13	<p><b>The circumstances of the establishment, and subsequent operation and performance, of any Evacuation Centre/s in the local area, including an assessment of any particular difficulties encountered.</b></p> <p>(a) An evacuation centre was established at the St George State School Multi Purpose Hall. The establishment and overseeing of the evacuation was delegated to Cr Robyn Fuhrmeister, who also chairs Council's Recovery Committee.</p> <p>(b) Once the evacuation centre was established, the Red Cross subsequently took over the running of the centre.</p> <p>(c) All evacuees were screened by the SES and Queensland Police Service, and I am not aware of any problems encountered at the centre.</p> <p>(d) An alternate evacuation site at the Wattleglen Meatworks was identified in the event water levels at St George reached the evacuation height of 14.25 metres. However, this was not used given that the river height at St George did not exceed the "whole of town evacuation point" of 14.25 metres.</p> <p>(e) A Recovery Centre was also established by the Department of Communities in the St George Cultural Centre. Outreach work to other towns and rural properties was based from this centre.</p>
14	<p><b>The circumstances of any flood-related human fatality within the region, including the measures taken to prevent and/or respond to any such fatality, during the 2010/2011 flood events.</b></p> <p>(a) No fatalities were recorded in the Balonne region as a result of the flood events.</p>
15	<p><b>Any involvement had with state or Federal agencies, including particularly the Queensland Police Service, in relation to the provision of emergency response measures, personnel, equipment, services or logistical support, together with an assessment of the adequacy and timeliness thereof, during the 2010/2011 flood events.</b></p> <p>(a) Council had involvement with the following State and Federal agencies during the flood event:</p> <ul style="list-style-type: none"> <li>• Australian Defence Force;</li> <li>• Queensland Police Service;</li> <li>• Department of Environment and Resource Management (Qld);</li> <li>• Department of Communities (Qld);</li> <li>• Department of Employment, Economic Development and Innovation (Qld);</li> </ul>

	<ul style="list-style-type: none"> <li>• Emergency Management Queensland;</li> <li>• Queensland Health;</li> <li>• Queensland Fire and Rescue Service;</li> <li>• Queensland Ambulance Service; and</li> <li>• Sunwater (Qld).</li> </ul> <p>(b) Council's involvement with these agencies is detailed in the LDMG minutes provided to the Commission as a part of dot-points 6, 8, 15 and 22 of the request for information.</p> <p>(c) All agencies attended the LDMG meetings on as needed basis. In my view, all agencies offered support and cooperation in a effective and timely manner.</p>
16	<p><b>The nature and timing of any communication within the disaster management hierarchy, including particularly any communications had with the District Disaster Coordinator (DDC), the State Disaster Coordinator or the state Recovery Coordinator, and whether any direction/s were given by the DDC and the nature of any such direction/s.</b></p>
	<p>(a) The LDMG provided the DDC with situation reports throughout the flood events, which have been provided to the Commission as a part of dot-point 23 of the request for information.</p> <p>(b) DCC personnel also attended LDMG meetings on various occasions.</p> <p>(c) There were numerous phone calls between the LDMG and DCC for information and advice during the flood event. For example, in relation to emergency powers to close the Balonne River to boating traffic and the response to a planned news years event at Nindigully that would attract a large crowd of people to the flood zone.</p> <p>(d) Requests for actions that were beyond the capacity and authority of the LDMG were forwarded to DDC. These have also been provided to the Commission as a part of dot-point 23 of the request for information.</p> <p>(e) No formal directions were ever given by the DDC to the LDMG. Generally, only advice and information was sought and received.</p> <p>(f) During the flood event, LDMG members participated in the mid-morning teleconferences conducted by the State Disaster Co-ordination Centre.</p>
17	<p><b>An assessment of the adequacy of equipment and communications system in the local area during the 2010/2011 flood events.</b></p>
	<p>(a) The forward placement of heavy machinery for the flood events proved very effective. Local tractors and flat bed trailers were able to be utilised as high clearance vehicles.</p> <p>(b) Refrigeration during transportation became problematic, but this was overcome by placing a portable cold room on the flat bed trailers.</p> <p>(c) Helicopters that were made available and were fit for its purpose.</p> <p>(d) A sandbagging machine was acquired from RoadTek (a commercial arm of the Department of Transport and Main Roads). However, Council found this machine difficult to use.</p> <p>(e) Another difficulty was flood boats with only one outboard engine, as in the event of engine failure there was a risk in fast flowing water.- this happened once, but fortunately it was close to shore.</p> <p>(f) Council otherwise assisted by providing vehicles to other agencies.</p> <p>(g) I found that military aircraft used for town resupply were of great assistance.</p> <p>(h) The only issue with the communication systems during the flood events was the very slow 3G network for data. With many people using the system during the floods, the network became slow and created problems for media and EMQ's networked computers.</p>
18	<p><b>An assessment of the adequacy of the community/s response in the local area during the 2010/2011 flood events.</b></p>
	<p>(a) As far as I am aware, Queensland Police reported very little trouble during the flood period.</p>



- (b) There was a good amount of cooperation from residents who had to evacuate. There was also a very high rate of volunteers to fill sandbags, assist in the evacuation Centre, and cook for flood workers etc.
- (c) Dirranbandi residents were isolated for approximately one month and, as far as I am aware, this went without any major instances.
- (d) There was some suspicion by residents of fraud taking place in relation to the flood relief payments. This caused some community unrest.
- (e) There was a small group of people including house holders and irrigators that were concerned about the effects of irrigation development on the flood plain below St George, this lead to some heated exchanges and there was one instance where the Police intervened.
- (f) As a general observation, all communities showed good spirit and resilience during the event.

**19 Any measures being proposed, planned or implemented to prepare for, mitigate or, manage future flood events (such as the installation of automatic river gauges, culvert management, levee construction and the like).**

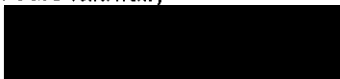
- (a) In Thallon, it is proposed to augment the current levee from its current alignment. The Natural Disaster Resilience Program (NDRP) funding for this augmentation has been approved.
- (b) In Dirranbandi, it is also proposed to augment the current levee from its current alignment. The NDRP funding has been approved.
- (c) In St George, Council proposes to engage consultants to carry out a hydrological study of the floodplain below St George. Funding is currently being sought for this project.
- (d) There is also a proposal to design and construct a levee for the western end of St George. Funding is also currently being sought for this proposal.
- (e) Council proposes to retain the emergency levels along the river front in St George where they do not interfere with roadways and private property. A Green Army project (a program to provide work experience and training to unemployed people) has been applied for to blend these levees into the landscaping.
- (f) For areas of St George where a levee is not practical, such as Albert Street and The Terrace Street, there is a proposal to raise houses to provide flood immunity. Funding is being sought for this proposal.
- (g) Council has received a request for assistance from some residents of Nindigully for flood mitigation. and considered these requests at the March 2011 meeting. It was resolved that given no buildings have been inundated at Nindigully and that temporary levees can be erected quickly using a Motor Grader, Council will assist as required as part of any future flood response.
- (h) In terms of town planning, a flood zone overlay is proposed for Council's next planning scheme, which will assist in locating development in appropriate areas as well as providing for appropriate flood mitigation measures for future development.
- (i) The Balonne Shire Disaster Risk Management Study is to be updated. The NDRP funding has been approved.

**20 Advice as to any special consideration that should be given the local area by reason of particular regional of geographic differences.**

- (a) The Balonne Shire is known as the "River Country", where four river systems converge before flowing south into the Murray Darling. They all have the potential to threaten villages/towns and many rural properties. The table below identifies the relevant towns/villages and the water ways that affect them.
- | Town/Village | Water Way     |
|--------------|---------------|
| Bollon       | Wallam Creek  |
| St George    | Balonne River |
| Thallon      | Moonie River  |

		Nindigully	Moonie River	
		Mungindi	Barwon River	
		Hebel	Bokhara River	
		Dirranbandi	Narran River	
	(b) As a result, this can mean that the LDMG can be monitoring four peaks moving through the Shire at one time.			
21	<b>Advice as to any feature of the disaster preparation and planning stages or the disaster response and recovery operations which presented particular difficulty or may require practical or legislative change to improve future disaster management in the local area.</b>			
	(a) Subject to the progression of the projects/proposal set out in paragraph 19 above, I have no advice on future measures at this stage.			

Yours faithfully



Scott Norman  
**CHIEF EXECUTIVE OFFICER**