


IN THE QUEENSLAND FLOODS COMMISSION OF INQUIRY
COMMISSIONS OF INQUIRY ORDER (No.1) 2011

STATEMENT OF KEVIN JOHN FLANAGAN

I, **KEVIN JOHN FLANAGAN**, care of Toowoomba Regional Council at 153 Herries Street, Toowoomba in the State of Queensland, General Manager of the Water and Waste Services Group of Toowoomba Regional Council, can say as follows:

1. I make this sworn statement pursuant to the requirement to provide a written statement to the Queensland Floods Commission of Inquiry dated 23 September 2011 ("Requirement").
2. I am the General Manager, Water and Waste Services Group. At the time that this statement was required to be prepared, I was serving as the Acting Chief Executive Officer of Toowoomba Regional Council. My qualifications and experience are set out in my previous statement to the Commission dated 30 March 2011. My previous statement to the Commission dated 30 March 2011 is **Exhibit 217**.
3. In addressing those matters raised in the Requirement, I am required to provide commentary and opinions on the appropriateness of particular actions and decisions of the Toowoomba Regional Council. In addressing those matters raised and as contemplated by the Commission in its correspondence, I will also comment on suggestions and proposals made in the submissions to the Commission by Mr Peter Sheridan; D. Stack; and Mr Frank Ondrus, President of Householders' Options to Protect the Environment Inc.
4. I will refer to and rely on my previous statement dated 30 March 2011 (**Exhibit 271**). In this present statement, I will also refer to **Exhibit 67** namely "Hydrological Advice to the QFCI" by Dr Phillip Jordan, and **Exhibit 75** namely "Technical Report of the Toowoomba Flood of 10 January 2011" prepared by Neil Collins, April 2011. Within this statement, I also refer to the documents that were previously provided to the Commission on or about 18 March 2011. I list those documents below in the order in which I refer to them in this statement, and by reference to the item numbers by which they are identified in the document provided to the Commission.

PAGE 1


Kevin John Flanagan


A Justice of the Peace (Commissioner for Declarations)

Statement of Kevin John Flanagan
Filed on behalf of:
Toowoomba Regional Council


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- A. Gowrie Creek Catchment Management Strategy by WBM Oceanics Australia and Hassell dated November 1998 Item 355
- B. Council Decision 13.10.1998 (Planning Committee 07.10.1998 Item 12 Entitled Gowrie Creek Catchment Management Strategy – Additional Issues) Item 363
- C. Council Decisions, Minutes of Council Meetings and other documents in response to the Gowrie Creek Flood Study 1998 Items 358 to 401
- D. Capital Budgets in response to the Gowrie Creek Flood Study 1998 Items 402 to 410
- E. Gowrie Creek System Flood Risk Management Study Volume 1: Main Report Final Report June 2007 Item 1
- F. Gowrie Creek System Flood Risk and Mapping Study Volume 2 – A3 Drawing Addendum June 2007 Item 2
- G. Gowrie Creek System Flood Risk and Mapping Study – Appendices Gowrie Creek System Flood Risk and Mapping Study 2007 Item 3
- H. Council Decision 24.07.2007 (Committee of the Council - 17-18.07.2007 - Item 7) and Confidential Report dated 12.07.2007 of Engineer Infrastructure Planning (Cordelia De Kievit) Item 126
- I. Council Decision 28.08.2007 (Committee of the Council – 21-22.08.2007 – Item 7) and Confidential Report dated 12.07.2007 and Confidential Addendum dated 07.08.2007 of Engineer Infrastructure Planning (Cordelia De Kievit) Item 127
- J. Gowrie Creek System Flood Risk Management Study Documents Items 83-99
- K. Toowoomba Waterways – Flood Mitigation Works (East Creek, West Creek, Black Gully and Gowrie Creek) dated 25 June.2011 Item 417
- L. East Creek Detention Basin Preliminary Information for Meeting with Stakeholders on 7 September 2009 Item 411
- M. Minutes of Meeting held on 7 September 2009 re: East Creek Detention Basins (Ballin Drive and Garnett Lehmann Parks) Item 412
- N. Concept Plan for East Creek Basins within Ballin Drive Park and Garnett Lehman Park dated April 2010 Item 413
- O. Project Proposal for Garnett Lehmann Park and Ballin Drive Park Detention Basins (Discussed at Meeting 23 February 2011) Item 414
- P. Minutes of Meeting held 23 February 2011 re: East Creek Detention Basins (Ballin Drive and Garnet Lehmann) Item 415

Matter 1 of the Requirement: The need or capacity for detention basins or other creek works to reduce the flood risk from East Creek, West Creek, and Gowrie Creek as assessed by the Toowoomba City Council, including by provision of and reference to:

- a. **the most recent studies, investigations and reports commissioned or undertaken by the Toowoomba City Council prior to amalgamation; and**
 - b. **any relevant Toowoomba City Council meeting minutes or reports since 2001.**
5. The former Toowoomba City Council in its preparation, adoption and implementation of the Gowrie Creek Catchment Management Strategy recognised the need for detention basins and other works to reduce flood risk from East Creek, West Creek and Gowrie Creek. Refer to **item 355** for a copy of the Gowrie Creek Catchment Management Strategy by WBM Oceanics Australia and Hassell dated November 1998. The Gowrie Creek Catchment Management Strategy defined goals including minimising flooding and unnatural erosion in the catchment and recommended a range of management actions to achieve these goals. The management actions identified included structural measures such as detention basins, channel re-profiling and realignment, and non-structural measures such as town planning controls. In identifying the range of management actions available for consideration, the Gowrie Creek Catchment Management Strategy calculated anticipated flows under existing and ultimate development conditions in the catchments and discussed the impact of flows in various parts of the Catchments with and without the aforementioned management actions.
 6. Following community consultation on the rationale, goals and proposed works/outcomes of the Draft of the Gowrie Creek Catchment Management Strategy, the Gowrie Creek Catchment Management Strategy was adopted by Council on 13 October 1998. Refer to **item 363** for a copy of the Council Decision 13.10.1998 (Planning Committee 07.10.1998 Item 12 Entitled Gowrie Creek Catchment Management Strategy – Additional Issues).
 7. Implementation of the Gowrie Creek Catchment Management Strategy was proposed over 20 to 25 years and was to follow the Maximum Community Benefit Option set out in the Strategy, providing for \$36 million of works, including \$6.5 million for land acquisition. Funding for the implementation of works commenced in Council's 1998/1999 Capital Works Plans. Refer to **items 358 to 363** for copies of the Council Decisions in relation to the development of the Gowrie Creek Catchment Management Strategy.
 8. The Gowrie Creek Catchment Management Strategy adopted by Council set the goals and directions to underpin progressive, and more detailed hydraulic and engineering analysis, and planning of works in East Creek, West Creek and Gowrie Creek. Initially works proposed in the high level Strategy included up to 22 detention basins, 10.5 km of channel improvements, 53 pool/riffle structures and 75 ha/18km of revegetation to provide a flood immunity for a 1% Annual Exceedance Probability, that is, a 1 in 100 year flood event.
 9. Subsequent in-house and specialist engineering and landscaping studies and investigations coupled with detailed project specific design plans and reports to Council resulted in fewer but larger detention basins being proposed. Refer to **items 364 to 410** for copies of the

PAGE 3


Kevin John Flanagan


A Justice of the Peace (Commissioner for Declarations)

Council Decisions, Minutes of Council meetings, and Council's Capital Budgets and other documents in response to the Gowrie Creek Flood Study. The proposed number of detention basins for West Creek and East was reduced to 6 and 3 respectively, whilst still providing flood immunity for a 1 in 100 year flood event in the CBD. To date, implementation of the Strategy has concentrated on works along West Creek in particular, and East Creek with over \$22 million expended to date. Works have included six detention basins (five along West Creek and one along East Creek), sedimentation basins and wetlands for water quality and amenity improvement, channel improvements and extensive landscaping.

10. The construction of the detention basins has been undertaken in a sequential manner commencing from the top of the West Creek Catchment and working downstream so that a mitigation effect on CBD flooding would progressively accrue as works progressed downstream towards the CBD. The first basin was built upstream of Spring Street, followed by works between Spring Street and Stenner Street, followed by works between Stenner and Alderley Street, followed by works at Wilf Gowlett Oval between South Street and Long Street. Major channel profiling and lining works in West creek from Herries Street to Russell Street was completed in late 2006.
11. The last detention basin proposed in the West Creek catchment is at Clewley Park between James Street and Stephen Street. The first stage of works to create the Clewley Park detention basin has been completed as part of park development project which was opened in 2005. However, completion of works in Stage 2 to create a functional detention basin is dependent on Council regaining control of the land on the eastern side of the creek currently held under private leases. Those leases are due to expire around March 2012 and in Council's forward planning, it has been planned to complete that detention basin after those leases expire and the land reverts to Council.
12. In January 2005, Council engaged WBM Engineering and Environmental Consultants to undertake the Gowrie Creek System Flood Risk and Mapping Study. The final report and related documents were provided to Council in June 2007 and are included at **items 1, 2 and 3**. The Gowrie Creek System Flood Risk and Mapping Study:
 - (a) Builds on the modelling developed as part of the investigations and detailed planning as referred to in paragraph 9 above, as Council progressed the implementation of the Gowrie Creek Catchment Management Strategy;
 - (b) Maps on a property by property basis, the extent of flooding including a 100 year Average Recurrence Interval ("ARI"), a 500 year ARI and a Probable Maximum Flood for each catchment;
 - (c) Uses resultant flood mapping to assess the level of flood immunity of key infrastructure such as road crossings and accesses to critical facilities; and
 - (d) Discusses flood mitigation options such as on-site detention controls for new development, detention basins, channel re-profiling and realignment, road crossing upgrades and planning controls.

13. The Gowrie Creek System Flood Risk and Mapping Study 2007 reviewed the detention basins and channel/waterway improvements in existence at the time of the study that had been constructed in line with capital works plans informed by the Gowrie Creek Catchment Management Strategy adopted by Council in October 1998. This review, together with assessment of the effectiveness of the yet to be built detention basins on the reduction of properties, particularly in East Creek catchment that would be affected, confirmed that detention basins were required to reduce the number of properties potentially affected by a 1 in 100 year flood event.
14. The Gowrie Creek System Flood Risk and Mapping Study 2007 recommended the construction of two major detention basins along East Creek one at Ballin Drive and the other at Garnett Lehmann Park and improved channel capacities downstream of James Street. Refer to **items 126 and 127** for a copy of the Council Decisions in relation to the consideration and adoption of the Gowrie Creek System Flood Risk and Mapping Study 2007.
15. With the completion of the major channel profiling and lining works in West Creek from Herries Street to Russell Street in late 2006 as described in paragraph 11 above and the need for further investigative work coming out of the Gowrie Creek System Flood Risk and Mapping Study 2007 particularly in East Creek, the 2007/2008 Ten Year Capital Works Plan adopted by Council on 9 October 2007 and the last by the former Toowoomba City Council reflected a period of reduced spending on construction over ensuing years. Refer to **item 410** for a copy of the Ten Year Capital Works Plan. At that time, the flood capacity of West Creek was approaching the ultimate catchment development design goal of containing a 1 in 100 year flood event. The 2007/2008 Capital Works Plan did not allocate any funding in the financial years 2008/2009, 2009/2010 and 2010/2011 for the construction of detention basins in the Gowrie Creek Catchment including for any planned works along East Creek upstream of James Street.

Matter 2 of the Requirement: The need or capacity for detention basins or other creek works to reduce the flood risk from East Creek, West Creek, and Gowrie Creek as assessed by the Toowoomba Regional Council, including by provision of and reference to:

- a. **Any studies, investigations and reports commissioned or undertaken by the Toowoomba Regional Council since 15 March 2008; and**
 - b. **any relevant Toowoomba Regional Council meeting minutes or reports since 15 March 2008.**
16. The Toowoomba Regional Council was established on 15 March 2008 and continued with the various strategies, plans and implementation programmes of the former Toowoomba City Council. As has been the case since the former Toowoomba City Council adopted the Gowrie Creek Management Strategy in 1998, implementation timeframes have been subject to modification due to further studies and detailed planning.

17. For example, after the completion of the Gowrie Creek System Flood Risk and Mapping Study 2007, further investigative work was carried out in 2008 and 2009, including surveying of properties and refinement of the hydraulic model to determine the extent of building inundation under the 1 in 100 year flood event. Refer to **Items 83-99** for copies of the Gowrie Creek System Flood Risk Management Study Documents.
18. Since the completion of the West Creek channel works between Herries Street and Russell Street in 2006, and prior to the 10 January 2011 event, no flooding occurred as a result of stormwater overflowing from West Creek into Dent Street, Margaret Street, Victoria Street and Russell Street. Flood mitigation works upstream comprising detention basins and channel improvements have provided significant improvement to the stormwater capacity of West Creek, including the section between Herries Street and Russell Street. The flood capacity of West Creek is approaching the ultimate catchment development design goal of containing a 1 in 100 year flood event.
19. The modelling work undertaken suggests that the detention basins in the upper reaches of West Creek had effectively reduced the peak flow during the 10 January 2011 flooding. If the detention basins installed since 1998 had not been in place, the flow would have been greater than what occurred in West Creek on 10 January 2011. As stated on pages 22 to 23 of the document entitled "Hydrological Advice to the QFCI" by Dr Phillip Jordan (**Exhibit 67**) and pages 5-2 to 5-3 and 9-1 of the document entitled "Technical Report of the Toowoomba Flood" prepared by Mr Neil Collins (**Exhibit 75**), the flood event experienced on 10 January 2011 was well in excess of the 1 in 100 year event.

Matter 3 of the Requirement: any measures the Toowoomba Regional Council proposes to take to reduce the risk of flooding by East Creek, West Creek, or Gowrie Creek to the Toowoomba Central Business District area.

20. Council's proposed measures to reduce flood risks incorporate the Gowrie Creek Catchment Management Strategy which is to be implemented over a 20 to 25 year period, and commenced in the 1998/1999 year. Works proposed under the Gowrie Creek Catchment Management Strategy and refined under subsequent studies are aimed at an ultimate catchment development design goal of containing a 1 in 100 year flood event.
21. Council has in place an ongoing program of flood mitigation works. Further work is planned within the East and West Creek catchments to fully implement the Gowrie Creek Catchment Management Strategy to provide the flood immunity envisaged by this Strategy. Refer to Page 2 of the document at **item 417** entitled "Toowoomba Waterways – Flood Mitigation Works (East Creek, West Creek, Black Gully and Gowrie Creek)".
22. As stated in paragraph 11 above, work on Stage 2 of the Clewley Park detention basin is due to start after the expiry of leases in 2012. Council's current 2011/12 year budget has provided \$500,000, and drafts of the 10 year Forward Capital Works Plan due for adoption later this year includes a further \$2,700,000 to complete Stage 2 works.
23. Detailed planning has continued for the East Creek Basins with \$50,000 in the 2011/12 budget allocated to progress designs for basins at Ballin Drive and Garnett Lehmann Park.

Refer to **items 411 to 415** for copies of documents including minutes of meetings, Concept Plan and details of the project proposed for detention basins. Council is currently preparing its 10 Year Forward Capital Works Plan, and is proposing, as part of its Plan, to allocate \$1,750,000 to construct the Ballin Drive Basin and \$1,700,000 to construct the Garnett Lehmann Park Basin in the 2014/2015 year. The timing and implementation of works planned under the Gowrie Creek Catchment Management Strategy for elements of East Creek and West Creek immediately upstream and downstream of their confluence will be influenced by road corridor planning through the underutilised portion of the Queensland Rail Land adjacent to the creek system.

24. As contemplated by the Commission in its correspondence and to assist the Commission, I will address the relevant issues in the submissions to the Inquiry made by Mr Peter Sheridan; D. Stack; and Mr Frank Ondrus President of Householders' Options to Protect the Environment Inc.

25. The rainfall event that caused the flash flooding on 10 January 2010 in Toowoomba was extreme. This extreme rainfall on an already saturated catchment overwhelmed the city's drainage systems including even those that had been upgraded to the current ARI 100 year standards. Both the document entitled "Hydrological Advice to the QFCI" by Dr Phillip Jordan (**Exhibit 67**) and the document entitled "Technical Report of the Toowoomba flood" of 10 January 2011 prepared by Neil Collins, April 2011 (**Exhibit 75**) comment on the extreme event and its flooding consequences. Mr Collins found that flooding and the consequences of the flooding on 10 January 2011 would have been significantly worse had flood mitigation works above the CBD had not been constructed. Mr Collins also stated,

"Even if all mitigation works had been complete, because of the magnitude of the rainfall event and associated flood being at almost twice the size of the ARI 100 year design event, there would have still been significant overtopping of crossings and property damage"

26. Mr Sheridan, in his submission, appears to agree with the aims and directions of the Gowrie Creek Catchment Management Strategy. However, he states in his submission:

"When the City Council was dissolved in favour of the Regional Council, the new council, in their newfound knowledge, realized that Toowoomba did not require such stupid extravagance and, as a result, substantial damage was done to various parts of the city close to the Creeks in the last floods. Three years of detention basins have been omitted and, unfortunately, two persons lost their lives in the floods and many residents believe that they would almost certainly have not been swept away if these detention basins had been constructed".

Mr Sheridan's comment is a bare assertion made without analysis or awareness of the facts. It is factually incorrect to suggest that the new Council put implementation of detention basins into abeyance and that this is the cause of the tragic deaths in Toowoomba.

27. Firstly, the last 10 year Capital Works Plan adopted by the former Toowoomba City Council in October 2007 did not allocate any funding in the financial years 2008/2009, 2009/2010 and 2010/2011 for the construction of detention basins in the Gowrie Creek Catchment

including any planned works along East Creek upstream of James Street. The Toowoomba City Council did not allocate funds in these years because the implementation phase had reached a point where we had built the bulk of the basins in West Creek and one in East Creek. The Toowoomba City Council was unable to build any more for a number of years due to not having the land available for Clewley park stage 2 as referred to in paragraph 11 above and there needed to be further significant investigations in East Creek before the Toowoomba City Council could build the basins in Ballin Drive and Garnett Lehmann Park. The forecasted funding in the 10 year Capital Works Plan was correct and was inline with the Strategy plan of implementing over 20 to 25 years. Refer to the copy of the document entitled "Toowoomba Waterways – Flood Mitigation Works (East Creek, West Creek, Black Gully and Gowrie Creek) dated 25 June.2011" at **item 417**.

28. Secondly, Mr Sheridan fails to consider that on 10 January 2011, the heavy rainfall on a saturated catchment resulted in a flood event in excess of 1 in 100 years, which overwhelmed drainage systems across the city, including sections that have been upgraded to contain the 1 in 100 year event. Mr Sheridan's comment that after amalgamation of the Toowoomba Regional Council, "three years of detention basins have been omitted" is not supported by the facts.
29. In relation to Mr Sheridan's comments regarding the operation of Cooby Dam and the flooding of Oakey, my statement dated 30 March 2011 (**Exhibit 217**) and the statement of Council's Alan Charles Kleinschmidt dated 15 April 2011 (**Exhibit 189**) address this issue.
30. The submission by D Stack refers to a number of the overland flow events that occurred on 10 January 2011 as a result of undersized or nonexistent drainage unable to cope with the high intensity rainfall. The stormwater systems in the older sections of the Toowoomba city were built in accordance with the standards of the day. Over the past couple of decades new development has had to comply with modern stormwater standards. Council has developed stormwater management plans for catchments and sub-catchments in the Toowoomba city. These plans are used to determine trunk drainage to service ongoing development and to identify upgrades in the older areas. While Council recognises the need to upgrade stormwater drainage in parts of the Toowoomba city, the extent and timeframes of upgrades/improvements have to be prioritised with the many competing demands on Council's forward budgets.
31. Mr Ondrus states that he is "*appalled at the lack of Flood mitigation works undertaken by the former Councils*" and "*Most of the existing 'flood mitigation' works have been more to do with beautification than anything else*". Mr Ondrus's comments are not supported by the documented facts, as a well developed strategy and implementation program is evidenced by the extent of works referred to above that have been carried out to date and are planned for the future by the former and current Councils. These works address:
 - flooding/erosion
 - water quality
 - ecology/habitat
 - open space, recreation and aesthetics
 - land use

- education and awareness
- finance, and the community's ability to fund works.

Matter 4 of the Requirement: Other topics relevant to the Terms of Reference of the Commission in the statement.

32. The flood mitigation works to date has been carried out with the support of the State and Federal Governments in the amount of \$6,026,388. Following the 2011 floods, the Council made a funding application to the Federal Government under the Regional Development Australia Fund. This application was unsuccessful and the current adopted program as outlined above has exhausted Council's internal financial capacity to accelerate the program.
33. Council's internal financial capacity is exhausted with the current committed schedule, in order for the program to be brought forward or expanded, external financial assistance will be required.
34. I do not have anything else to add to my previous statement to the Commission and to the statements of other representatives of Toowoomba Regional Council that address other topics relevant to the Commission's Terms of Reference.

All the facts sworn in this statement are true to my knowledge and belief except as stated otherwise.

SWORN by KEVIN JOHN FLANAGAN at)
 Toowoomba this twenty first day of October)
 2011 Before me:)



A Justice of the Peace (Commissioner for Declarations)