Statement of

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QFCI

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I, **PAUL BELZ**, state:

Role and Position

1. I am the General Manager for Planning for Queensland Urban Utilities (**QUU**). I am responsible for strategy and planning of water and waste water systems, environmental compliance, reporting, treatment plant design and land use planning and development assessments for QUU. Within QUU's emergency framework, I am an emergency manager. I was the emergency management team leader during the flood event.

2. This statement is in response to the Requirement to Provide Statement to Commission of Inquiry (**Requirement**) received by Blake Dawson Lawyers (solicitors for QUU) from the Queensland Floods Commission of Inquiry (**Commission**) dated 18 October 2011.

Question 1(a) - Any knowledge Queensland Urban Utilities (QUU) has of sewerage flooding/backflow at Ferry Road, West End, including, but not limited to such flooding/backflow at the Aura Apartments and the Arriva Apartments, on or about 12 January 2011.

3. At the time of the flood event, QUU did not have any knowledge regarding sewerage flooding/backflow at the specific location of Ferry Road, West End. QUU was aware from general information, including media coverage and reports from work crews on the ground in the vicinity, that the area was inundated by 2-3 metres of floodwaters.

4. QUU's work crews were not able to investigate further, as police road blocks prevented access to the area.

5. QUU first became aware of reported sewerage flooding/backflow at the specific site of Aura Apartments (42 Ferry Road, West End) through evidence given at the Commission and correspondence received by QUU from the Commission.

6. QUU have been unable to locate any record of contact from property owners, the body corporate or residents in respect of the Aura Apartments, the Arriva Apartments and Ferry Road generally, including records of reported sewerage flooding/backflow at these sites, on or about 12 January 2011.

Question 1(b) - Any investigations into the causes of that sewerage flooding/backflow and the results of those investigations, including any action taken by QUU in consequence of the results.

7. Please see my response at paragraph 3 - 6 generally. Further, as QUU was not aware of any sewerage flooding/backflow at Ferry Road, West End, it has not as yet investigated it.

Question 2 - In respect of those instances of sewerage flooding/backflow in the January 2011 floods at which QUU attended to perform on site clean-up:

(a) The total number of such instances.

8. As I understand it, there were approximately 110 recorded instances where QUU attended locations to perform on site clean-up between 11 January 2011 and 25 January 2011. I am unable to ascertain with any certainty whether these clean-ups were required as a result of sewerage flooding/backflow or other reasons.

9. Given the magnitude of the flood event, QUU's first priority was to initiate clean-up and asset recovery. QUU's crews on the ground were not able to analyse causal factors at the same time as attending to clean-up and asset recovery. QUU's focus at this time was on assisting customers, rather than on identifying the cause of flood damage.

(b) The categories of causes of the sewerage flooding/backflow and the number of instances within each category.

10. As I understand it, the cause of instances of sewerage flooding/backflow were varied. Generally, the causes of sewerage flooding/backflow included the following:

    - The large volume of rain experienced;
    - Flooding from flood waters; and
    - The failure of critical assets (sewerage pumping stations and waste water treatment plants) within the system, due to flood inundation and loss of electricity supply.

11. It is possible that stormwater entering the wastewater system through illegal storm water connections may have contributed to sewerage flooding/backflow in some areas.

12. QUU does not have actual knowledge of stormwater entering the wastewater system during the flood event, as no investigations were carried out at the time. However, QUU believes, based on prior experience, that illegal stormwater connections are a significant source of stormwater infiltration into QUU's wastewater system.

13. I am unable to provide exact numbers of instances for each category of cause. Further, the causes described at paragraph 10 were consequential in nature, in that the large volume of rain experienced caused flooding, which in turn caused the failure of critical assets.

(c) The nature of immediate remedial operations undertaken.

14. Generally, where an issue was reported to QUU or observed by QUU staff on the ground, QUU would assess and prioritise its response.

15. For example, the following immediate remedial operations were undertaken:

    - Site clean-up and ensuring the safety of sites;
    - Clearing of debris and/or blockages of any infrastructure in the area; and
    - Where possible, reinstating critical assets in the area and, where this was not possible, initiating interim measures.

Question 3. Any standards, policies, guidelines or working practices of QUU with respect to:

(a) identifying places at risk of sewerage flooding/backflow in flood prone areas; and

(b) addressing such risk.

16. QUU has a sewer overflow mitigation strategy (the **Strategy**). I annex a copy of the Strategy (**Appendix A**).

17. The Strategy is just one part of QUU's overall Strategic Asset Management Plan. It forms part of the Water Netserv Plan referred to in Robin Lewis' further statement at paragraphs 10 and 11.

18. The content of the Strategy is developed with reference to guidelines, which include the Department of Environment and Resource Management (**DERM**) Water and Sewerage Planning Guidelines. QUU has also utilised literature concerning industry best practice and the combined experience of relevant staff to ascertain the best strategy to implement in QUU's area of operation.

19. Part of the Strategy aims to identify areas that are at risk of sewerage flooding/backflow, so that QUU can take steps to address issues arising from this.

20. The Strategy is reviewed on a regular basis and is updated annually.

21. QUU is currently implementing the following initiatives, in line with the Strategy:

- a trial for households in parts of Rosewood of overflow relief gully caps, designed to prevent stormwater entering and potentially overloading the local wastewater network;
- improvements to the identification and tracking of sewage overflows;
- identification of "at risk" properties and contributing catchments to enable more targeted investigation and maintenance programs;
- a "case management" approach to prioritised properties;
- investigation and improvements at a number of pump stations to increase wet weather performance; and
- a targeted community education campaign under the banner of "Think at the Sink" that provides households with tips on how to improve the overall health of sewers by reducing both stormwater inflow into the wastewater network and sewer blockages.

22. Generally, QUU:

- works with local councils to generate solutions;
- is part of the Healthy Waterways Group. The Healthy Waterways Group is an independent body which is funded by DERM, local councils, local catchment groups and water utility providers. The aim of the group is to investigate and improve water quality in waterways;
- works with customer and consumer reference groups. For example, QUU has its own customer and consumer reference group (**CCRG**). The CCRG consists of bodies such as the Australian Pensioner's League, stakeholder groups, environment groups and representatives from industry. The CCRG meets every two months, facilitated by QUU's Executive Director Retail, and provides feedback to the relevant business units within QUU, including Planning, on customer issues.

Question 4. Whether QUU have investigated measures which could mitigate and/or prevent sewerage flooding/backflow during times of flooding in:

(a) new waste water infrastructure; and

(b) existing waste water infrastructure.

And, if so, the results of those investigations, and, if the investigations revealed recommendations for implementation of such measures, whether, when and how QUU will implement those measures.

23. As part of the Strategy and in light of the flood event, QUU is currently undertaking a number of reviews incorporating an investigation of measures which could mitigate sewerage flooding/backflow during times of flooding.

24. In respect of existing waste water infrastructure, as mentioned in Robin Lewis' further statement at paragraph 54, QUU has commissioned AECOM Australia Pty Ltd, consulting engineers (**AECOM**) to undertake a business resilience study of its affected infrastructure, which will include consideration of the issue of sewerage flooding/backflow. This review

will include a high level strategy on flood risk mitigation options and indicative costs for making key assets more flood resilient.

25. AECOM's study is ongoing and the latest of several draft reports has now been provided to QUU. However, the draft report will be the subject of internal discussion and consultation. It is currently anticipated that the assessment will be concluded prior to the end of the calendar year.

26. In respect of new waste water infrastructure and the design of new assets, QUU is taking into account knowledge gained from the 2011 floods. For example, QUU has carried out post-flood reassessments of its Fernvale and Lockyer Valley wastewater treatment plants. The new designs of these wastewater treatment plants incorporate recommendations from the post-flood reassessment, such as new flood levels.

27. Timeframes for the implementation of some of these measures are detailed in the Strategy. QUU appreciates that the timeframes in the Strategy for certain actions are ambitious, but QUU is making every effort to achieve them.

Signed and solemnly, sincerely and truly affirmed and declared by Paul Belz, of Queensland Urban Utilities at Brisbane, Queensland, this 21st day of October 2011.

[redacted] ..... [redacted] 21/10/11

Witness Signature **Signature**

[redacted]

Print name

APPENDIX A – SEWER OVERFLOW MITIGATION STRATEGY

Function	Key Strategy	Tactics	Deliverables	Timeline
Program Marketing and Communication	Education and Awareness	• WWOF info on QUU public newsletter • Direct mail to hot spot areas • Related industry and media campaigns • Public notification of overflows on QUU website • customer brochure to clarify owners responsibilities and QUU's responsibilities to ensure field crews all deliver the same message to customers • 1800 number reporting	• Informed customers • Customers understand maintenance of household sewers is their responsibility • Overflow reporting and information on QUU website	Concepts in August Publication and printing in September Pre-wet season distribution in October 200 properties and upstream catchments
Identification and tracking of sewage overflows	• Databases are developed and maintained of reported property overflows • Records of SPS failures are kept • KPI's are developed and reported for management to track progress	• QUU wide database developed and maintained on intranet	• Up to date information for all QUU functions including report to EWOQ (Energy and Water Ombudsman Queensland) • Via Ellipse std job = Wet weather overflow investigation	Updated spreadsheet of known customer complaints 31 August Ellipse WWOF investigation std job to record process 31 August
Identification of properties at risk	Historical overflows clean-up data reviewed to identify and target areas and properties at most risk	• Properties and areas with chronic overflows identified • Target properties with 5 or more clean-ups in the past 5 years	• Ranked list of properties for case management	Complete for SDE SDW info by 31 August 2011
Targeted operation and maintenance programs for priority areas	Existing system operated to maximum potential capacity	• Rolling program of inspection and maintenance in place for "hot spot" areas to include; - pre wet season inspection of overflow structures - MH inspection and rehab program	• A targeted operation and maintenance plan for hot spot areas • Rolling source control program of smoke testing, dye testing etc for 12,000 properties/yr	Source control program March 2012 MH Inspections 1 November 2011 Emergency Relief Overflow Structures Trunk cleaning 1 October 2011
Fit-for-purpose household sewers	Engage property owners to ensure their household sewers are fit for purpose	• Develop and market a subsidised voluntary household sewer inspection retrofit program • Program to be developed jointly with councils and Master Plumbers' Association of Queensland • Implementation by Master Plumbers at request of householders	Proactive retrofit program offered to customers impacted by sewer overflows	Scaled back to be installation of overflow relief caps only, inspection can come later with smoke testing as we have no powers of enforcement if defects are found, targeting properties within overland flow paths upstream of identified properties
Improved system performance in wet weather	Investigate and implement measures to improve key pump stations performance at Rosewood, Oxley and Wynnum	• Audit pump stations operation and recommend improvements	Pump Station Audit/Report	Oxley & Wynnum TOR developed, sent out to 3 nominated tenderers this week, consultant awarded end of august 12 week project Rosewood – Network only
Impact of sewer overflow on public health and the environment	Contribution to regional Healthy Waterways ecosystem health monitoring program	• Contribution to regional funding • Coordination and cooperation with Healthy Waterways to manage public perception and calls for greater controls	• Agreed protocol for partnership – how to deal with incidents • Regional partnering to manage overflow impacts	Delivery action plan by July 2011

Function	Key Strategy	Tactics	Deliverables	Timeline
Case management of prioritised properties at risk	• Operating procedures are in place to ensure prompt response to incidents • Overflow cause and mitigation options investigated for properties with chronic overflows • MH lids that are known to 'pop' on a frequent basis are made safe	• Short-term response measures - incident notification initiates standardised response procedures - routine clean-up at "hot spots" to manage customer expectation - incidents are investigated in wet to determine local drivers – stormwater overland flow paths, sewer system configuration, low dt's etc - records of SPS failures resulting in overflows are kept - records of access chamber overflows are maintained - crews are able to respond to chokes etc quickly at short notice - post overflow clean-up procedures/ contingency plans in place - staff receive ongoing training in response procedures - environmental monitoring / sampling / reporting in place • Long-term response developed - local asset operational improvement / maintenance - wider system operational improvements and capacity increase recommendations - last resort – make recommendations for property acquisition - Local hydraulic problems identified and options to mitigate recommended - Rosewood and Woolloongabba priority	• Customer interface managed • Local system issues and capacity constraints identified • Proactive maintenance and works recommended to mitigate overflows • Mitigation options to include - manhole raising/sealing - sewer / manhole spot repairs - fit for purpose on-property plumbing - increased local sewer cleaning of known trouble spots - Assist Master Plumbers in installing non return valves to prevent QUU sewer back-up	Drainers Contract 31 August 2011 MH lid safety Ongoing Retrospectively 1 April 2012