

SECOND STATEMENT OF CARL CHRISTIAN WULFF

This written statement is provided in response to a Requirement, dated 10 August 2011, to provide a written statement, under oath or affirmation, to the Queensland Floods Commission of Inquiry pursuant to section 5(1)(d) of the *Commissions of Inquiry Act 1950* (Qld).

I, Carl Christian Wulff, Chief Executive Officer of the Ipswich City Council (variously described throughout this statement as "ICC" or "Council"), 45 Roderick Street, Ipswich in the State of Queensland, affirm as follows:

Queensland Floods Commission of Inquiry - Interim Report - ICC Response to Recommendations

1. This statement is supplementary to my first statement dated 2 September 2011. At paragraphs 19-24 of my first statement I referred to the preparation by Council of an operational matrix or spreadsheet which identified each of the recommendations contained in the Commission of Inquiry's Interim Report relevant to Council and to the City. This actions register identifies, for each recommendation, the relevant ICC action, relevant responsibilities for the action and the current status.
2. Attached to my statement and marked CCW-12 is a copy of the updated actions register as at 12 October 2011.

ICC On-line Flood Mapping System - Introduction

3. At paragraph 26 of my first statement I noted that ICC was considering implementing recommendation 4.13 of the Commission of Inquiry's Interim Report through introducing a free of charge on-line flood mapping service publicly available on the Council's website. I noted that this service was a work in progress currently under development and that I expected to be in a position to provide the Commission with a supplementary statement setting out details of this service prior to the Commission's sittings in Ipswich on 18/19 October 2011.
4. Council is preparing to "go- live" with this service on Thursday, 13 October 2011. The service will be made available through the ICC website. ICC will publish a tile on the home page on the internet site which will link through to the search functionality, thereby enabling a member of the public to access the search information.
5. The availability of this service will be notified to the public by a range of means including by placing a relevant insert outlining the service in Council's next round of rate notices. These rate notices will commence issuing from around 17 October 2011.
6. The following paragraphs provide an overview of the ICC on-line mapping system.




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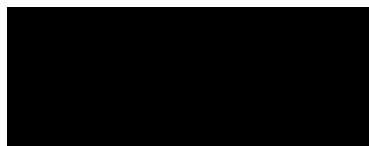
7. This will be a publicly available user friendly service which will enable every resident, business and property owner in the City on-line access to historical flood data and maps based on the 1974 and 2011 flood events. This service will be provided free of charge.
8. The mapping service will provide public access to two primary sets of data:
 - (a) firstly, maps showing the impact of the 1974 and 2011 events. These maps will be accessible on a whole of city basis, but also then broken down into 51 separate suburbs/localities; and
 - (b) secondly, maps and data showing the impact of the 1974 and 2011 events as those events relate to each individual property across the Ipswich Local Government area.
9. Access to this historical flood information will assist property owners, residents and business in making informed decisions in the case of a future flood event. Details of this new service are explained in the following paragraphs of my statement.

Background

10. There are approximately 75,000 properties within the Ipswich Local Government area. Not all properties were impacted by the 1974 and 2011 flood events. Available data indicates that approximately 10,000 properties were flood effected and 65,000 properties were unaffected by the floods.
11. Council is establishing a free of charge on-line service to provide the public access to historical flood data and maps. The on-line service will be user friendly for members of the public who are not "map-savvy". The information will be accessible via the Council internet site.

Flood Maps

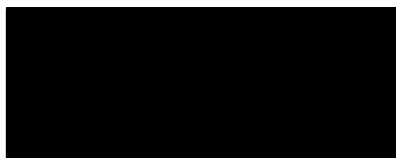
12. Members of the public will be able to search:
 - (a) a "high level" map showing the historic 1974 and 2011 flood extents for the Ipswich Local Government area, or broken down into 51 different localities within the ICC area boundaries; and
 - (b) for flood information as it relates to a specific street address or lot/plan number.
13. The historical flood information will comprise PDF flood extent maps. As mentioned above, these can be searched and accessed for the whole Council area, or for any one of 51 different Council area localities. The result of the search will be displayed and a copy can be printed out and/or saved onto a customer's PC.



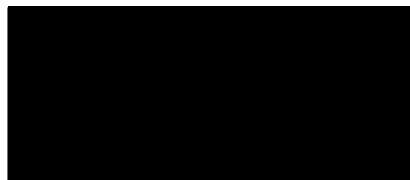
14. A "mock up" of how this search response would appear for one of the locality areas (map 50) is shown on the map attached to my statement and marked CCW-13.
15. For the selected locality, the map shows the extent of the 1974 flood line marked in blue, the extent of the 2011 flood line marked in green, and areas inundated by flood water in both the 1974 and 2011 events are shown as a "hatched" area. The flood lines shown on the map are based on the available flood record data and depict the extent to which the flood line extended in each of these major events.

Property Specific Search

16. The second form of search which can be undertaken is a property specific search. This search can be undertaken based on 2 sets of criteria:
 - (a) firstly, by reference to a specific address, where the person conducting the search will select a suburb, then a street, and then enter a specific house number; or
 - (b) secondly, by reference to cadastral details, where the searcher enters a lot number and then a plan number.
17. Once again for this search the results will be displayed and can be printed out and/or saved onto a customer's PC.
18. For the approximately 10,000 known flood affected properties, a PDF document including a map and interpretative data will be produced in response to the search criteria. The map will identify for the individual property the subject of the search the flood extent line for the 1974 and 2011 flood events.
19. As with the previously described locality search, flood polygons will be shaded differently for each of the 1974 and 2011 flood data sets.
20. In addition to producing a flood map specific to the subject property, a report will be produced which identifies for the designated search property (by reference to Australia Height Datum-AHD) the minimum and maximum ground heights for the property, the 1974 and 2011 flood event levels referable to the property, and the indicative eave height for the property (generally accurate to +/- 150mm). The eave height data is current as of 2009.
21. The eave level is the level in metres (AHD) of the overhanging lower edge of the main roof. These levels have been identified by ICC through the commissioning by Council of a technology called Orthophotographic Representation which uses a high resolution camera mounted to an aircraft.



22. The highest and lowest ground levels for the property are based on ground level information derived by Digital Terrain Modelling (DTM) of the ground surface, and the 1974 and 2011 flood event extent lines are defined by reference to various sources of data available to Council in relation to those events.
23. Council has determined to express the property specific data by reference to AHD flood levels, as AHD is the commonly used measure by which the relevant authorities express predicted flood levels.
24. To illustrate these search results I have attached to my statement and marked CCW-14 a "mock up" of the documents that a hypothetical resident at [REDACTED] Bergin Street, North Booval would receive when searching for their property report.
25. The first document in Annexure CCW-14 is the flood map for the property at [REDACTED] Bergin Street, North Booval. It shows that the whole of the property was inundated in both the 1974 and 2011 flood events.
26. The second document within Annexure CCW-14 is the flood report for the property. It shows that the flood peak experienced at that property in the 1974 event was 20.7m AHD and in the 2011 event the flood peak was 17.1m AHD. For the [REDACTED] Bergin Street property, the maximum property level is 19.2m AHD, the minimum property level is 15.4m AHD and the eave level is 19.2m AHD. Based on this search information the property owner or occupier at [REDACTED] Bergin Street will know that in a future flood event of similar proportion to that experienced in January 2011, the property will be totally inundated to around the level of the eaves.
27. By way of another illustration, I have attached to my statement and marked CCW-15 a "mock-up" of the documents that a hypothetical resident at [REDACTED] Rosewood Laidley Road, Lanefield would receive when searching for their property report.
28. The flood map shows that the 1974 flood information is not available for this property, as it is located within the former Moreton Shire Council boundary. For property located within the former Moreton Shire Council boundary, only 2011 flood event levels will be available from the on-line search. The flood map shows that the property sustained relatively minor inundation in the January 2011 flood event.
29. The flood report for the [REDACTED] Rosewood Laidley Road property shows that the flood peak experienced at that property in January 2011 was 48.1m, the maximum property level is 50.6m AHD, the minimum property level is 47.9m AHD and the eave level for the property is at 52.5m AHD. Based on this information the owner or occupier of the [REDACTED] Rosewood Laidley



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Road property will be better able to assess the potential impact on their property of a future flood event.

30. The property specific map and interpretative data will provide important property specific information sufficient to enable residents and businesses to make informed decisions in relation to evacuation and disaster management should another major flood event occur.

Report Available to Unaffected Properties

31. If a member of the public conducts a search on one of the approximately 65,000 properties unaffected by the 1974 and 2011 floods, they will receive a brief generic report which states:

"You have requested data for an area not known to be flood affected by the 1974 or 2011 floods".

32. There will be no individual property flood map or flood height information included with this search report. However, the resident will still be able to search the locality of the subject address and obtain and print off the flood event map for the locale of that address.

33. Attached to my statement and marked **CCW-16** is a "mock up" of how the response to the search of a non-flood affected property will appear.

34. For those properties located within the former Moreton Shire Council boundary the report will state:

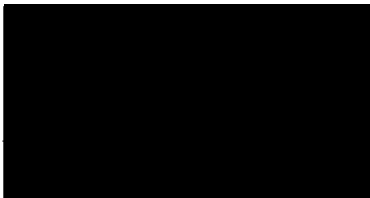
"You have requested data for a property not known to the affected by the 2011 flood.

There is no data available in this report for the 1974 flood".

35. Attached to my statement and marked **CCW-17** is a "mock-up" of how the response to the search of a non 2011 flood affected property located within the former Moreton Shire will appear.

Go-Live and Council Call Centre

36. As noted earlier, this search capability is proposed to go live on 13 October 2011, in advance of the next wet season. A campaign will be undertaken to ensure that residents and businesses are aware of the service, and that help services are made available to assist those who have queries as to undertaking the search or interpreting the results data.

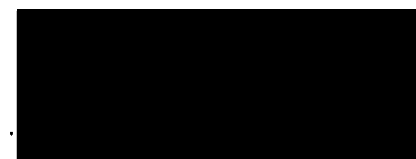


37. In addition to residents and businesses being able to conduct their own searches in the manner I have described, this search capability will also be available to ICC Call Centre operators. This will enable Call Centre operators to quickly ascertain property specific information and to respond and give guidance to callers as to the potential impact to their property during a future flood event.
38. Another aspect of this service is that its availability is not limited to residents within the Ipswich area. One practical issue is that some residents may have difficulty accessing the service in the event of a local power outage. However, the service will be accessible by people outside of the affected area, and, indeed, by people with internet access anywhere in the world.
39. The experience during the January 2011 flood event was that some residents were reluctant to respond to requests by Council officers or emergency services personnel to evacuate their properties, but responded more readily to approaches by relatives and friends. The on-line flood mapping service will be accessible, for example, to someone in Melbourne, who could then contact a relative or friend within the Ipswich area and alert that person to the pending event and its potential impact on the person's property.


Future Enhancement of the Flood Mapping System

40. The property search service to go live in October 2011 produces maps based on historical 1974 and 2011 data. An enhancement to this service will be the capability to overlay across the maps the predicted impact of an actual flood event, and to then update the overlay as the event develops and information about the event is updated. This will then provide residents and businesses with the "real time" predicted impact on their specific property of a developing flood event as the event unfolds. The ability to overlay such information "on-line" as an event develops is cutting edge technology.
41. The Ipswich Enterprise Business Solutions Branch (**EBSB**), which has been responsible for development of the software for the flood mapping system is investigating this enhancement as phase figure 2 of the system, and Council expects that it will be in a position to roll out this additional "real time" functionality in 2012.

Affirmed this *13th* day of October 2011 at Ipswich in the State of Queensland in the presence of:



Carl Christian Wulff (Deponent)



Witness *Ross Perrett - Solicitor*