



HINCHINBROOK SHIRE COUNCIL

HERBERT RIVER FLOOD MAPPING UPDATE 2015

COMMUNITY CONSULTATION REPORT

24 JULY – 5 SEPTEMBER 2017

**THIS REPORT HAS BEEN PREPARED AND PUBLISHED IN TERMS OF THE
MINISTER'S GUIDELINES AND RULES JULY 2017**

PART 1 – PLANNING SCHEME POLICY (PSP) SECTION 3.4

1.0 REPORT STRUCTURE

Structure of this Report:-

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2.0 SUMMARY

In January 2017, Council approved the Communication and Consultation Strategy for the consultation of the *Herbert River Flood Mapping Update 2015* and the *Draft Hinchinbrook Shire Planning Scheme 2017*.

The Community Consultation process commenced on 24 July 2017 and concluded on 05 September 2017 for a period of 32 business days.

During the consultation period a total of 57 community members attended the community consultation office at the Hinchinbrook Shire Council Main Office, 25 Lannercost Street, Ingham in regards to the *Herbert River Flood Mapping Update 2015*. Three (3) properly made submissions were received on the *Herbert River Flood Mapping Update 2015*. One (1) not properly made submission was received.

The submissions did not challenge or affect the basis of the flood modelling and the *Herbert River Flood Mapping Update 2015* is recommended for adoption and implementation as from 01 October 2017.

3.0 BACKGROUND

In 2003 WBM Oceanics Australia completed the Herbert River Flood Study for the Herbert River Improvement Trust. A deliverable of this study was the production of flood level, depth and hazard mapping. Since the completion of this study more data has become available to improve the accuracy of the model.

In December 2015, BMT WBM in association with Venant Solutions Pty Ltd undertook an update to Council's Flood Model. The Herbert River hydrological and hydraulic modelling is based on data collected over 15 years ago and has not been calibrated to reflect the availability of new and revised data sets, new development and climate change studies. Following discussions with consultant hydrologist Dr Mark Jempson in July 2014; review of State Government resilience reports on inland flooding and legal advice from King and Co Solicitors there were sufficient grounds to update the modelling to incorporate:

- Completed ground survey of river levee banks
- Addition of recorded Herbert River flows from 2002 -2013 at Abergowrie gauge
- Updating ground level data from 1999 photogrammetry to the more accurate 2010 LiDAR data
- Completed finer resolution computational grid (10m grid compared to 40m grid) along the river and immediate floodplains as per the recent Halifax levee modelling exercise
- Completed finer resolution computational grid (10m grid compared to 40m grid) over Ingham
- Extension of the model to Grasso's Road
- Factoring a 20% increase in rainfall intensity for the 1% (Q100) flood events, as supported by the Queensland State Government and LGAQ (Appendix A)
- Factoring a sea level rise of 0.8m by 2100 (with 10% increase in wind intensity), as recommended by King and Company Solicitors (Appendix B)

The revised model did not significantly change flood levels from the 2005 flood modelling. The updated model is being used to issue 100 Year Flood Level Certificates.

The updated flood modelling and mapping are not reflected in the mapping as included in the current *Hinchinbrook Shire Planning Scheme 2005* but have formed the basis for the flood mapping of the *Draft Hinchinbrook Shire Planning Scheme 2017*.

4.0 PUBLIC CONSULTATION ACTIVITIES

In January 2017, Council approved the Communication and Consultation Strategy for the consultation of the *Herbert River Flood Mapping Update 2015* and the *Draft Hinchinbrook Shire Planning Scheme 2017*.

The Community Consultation process commenced on 24 July 2017 and concluded on 05 September 2017 for a period of 32 business days. Staff for both projects namely the *Herbert River Flood Mapping Update 2015* and the *Draft Hinchinbrook Shire Planning Scheme 2017*, were available from 8:30am to 5:00pm each day during the consultation period at a dedicated office at the Hinchinbrook shire Council Main Office at 25 Lannercost Street, Ingham.

The period included a week of Open Days (3 days) with public Council Meetings scheduled for each of the three nights from 5:30pm to 6:15pm allowing the public to discuss the relevant documentation with:

- The Consultants (Milford Planning Consultants Pty Ltd and Venant Solutions Pty Ltd) who drafted the relevant documentation;
- Elected Councillors; and
- Property and Insurance Industry representatives

The Community Consultation was widely advertised through:

- A public notice in the local newspaper (22 July 2017)
- Letters to all property owners, mailed on 19 July 2017
- On Councils website from 22 July 2017
- On Councils Facebook page
- Media release by the Mayor
- Notice on the footpath in front of the Hinchinbrook Shire Council Main Office
- Notices at the two Council Libraries (Ingham [TYTO] and Halifax)
- Personal invitations to members of the community by staff and councillors

An effort was also made to involve the indigenous and islander communities. As result some indigenous and islander community members did visit the community consultation venue at the Hinchinbrook Shire Council Main Office.

Submission options available to the Community were:

- Hardcopies of the submission form were available at the two Council Libraries and the Main Office
- Hardcopies could be mailed or submitted at the Hinchinbrook Shire Council Main Office in person
- Hardcopies could be scanned and mailed to the dedicated planningscheme@hinchinbrook.qld.gov.au or the council@hinchinbrook.qld.gov.au email addresses
- Web based submission forms were available on the Hinchinbrook Shire Council website

Staff was available to help complete the submission forms at the Hinchinbrook Shire Council Main Office for those members of the community that required assistance.

5.0 INTEREST IN THE CONSULTATION ACTIVITIES

The Community Consultation process was generally well attended as reflected in the table hereunder.

Community Consultation					
	Visitations	Visitations in regards to	% Population (10,880)	% Property Ownership (7,000)	Daily Average
	76	Hinchinbrook Shire Planning Scheme 2017	0.70	1.09	2.37
	57	Herbert River Flood Mapping 2015	0.52	0.81	1.78
TOTAL	133		1.22	1.90	4.1

6.0 SUBMISSIONS ON THE HERBERT RIVER FLOOD MAPPING UPDATE 2015

The following table provides a snapshot of the submissions received during the community consultation process. Hardcopies of all the submissions was provided to each Councillor and Executive. Please refer to **Attachment A**.

	Properly made submissions	Not-properly made submissions	Late submissions
Number	4	1	0
Percentage	80.0	20.0	0.0

The key and relevant issue/s raised through the submission is categorised / summarised and discussed hereunder in short. A full response spreadsheet (refer: **Attachment B**) was discussed at a special briefing session of Council on 20 September 2017.-

Issue raised	Technical response	Council Decision
Properly Made Submissions		
Mr Torrasi suggests that a channel be created from western side of Townsville Rd, near TYTO, through vacant land next to Ingham Motel, cutting Cooper Street corner to sandy water hole. The channel should be 60m wide 2m deep (approx.) Bridges need to be built along Townsville Rd, Davidson Street and Cooper Street to accommodate the culvert. This will allow water to flow from TYTO to sandy water hole and through lottery creek to Gonano bridge. However the rock cages for the cane line will need to be removed and cane line on bridge to allow water flow. Mr Torrasi believes that this will remove all flood water issues from the Ingham Township. The water builds up through town because it cannot escape through the narrow channel at Gonano Bridge area it clogs and then backfills into town.	The submitter proposes a floodplain management idea. The 2015 flood study was an update to flood mapping of the existing floodplain and did not investigate floodplain management options. Floodplain management options were investigated as part of the WBM Oceanics 2003 study and the SMEC 2014 study. A similar concept to that of the submitter was investigated in the SMEC 2014 study. The submitter included a copy of a photograph of Lannercost Street in the 1927 flood. There is very little information available on this flood so it is suggested that Council obtain a copy of the photograph and attempt to derive a flood level from the photograph.	The submitter entered a similar submission during the Floodplain Management study. It is noted that the submission was tested during the process with limited flood relief. The Council however will in future similar studies revisit the issues raised.
I have been living on the Herbert River at Bemerside in the same spot for 79 years. I am writing about the changes I have seen over my lifetime. For many of those years I have had a gauge in the river recording river heights. Only in major floods did we have flood water around our house until minor levee banks started to happen along the river. The most noticeable rises in flood levels were recorded after flood gates (causing damming) were put in Caterina and Ripple Creeks as well as partial	The submitter is generally correct in that the construction of levees has altered flood characteristics in the lower floodplain, raising flood levels in some areas and reducing flood levels in other areas. A 2013 BMT WBM report to the HRIT found that the construction of levees along the river had significantly increased flood levels in the Lower Herbert. Since changes to legislation in 2014 levees cannot be built without Council approval so future	The Council takes note of the submission and has reconfirmed the control and enforcement of Levees. The Council also commented on the silt buildup in the Herbert River and recommend that this situation be brought to the notice of the Minister.

Issue raised	Technical response	Council Decision
<p>damming and a rock groin in the Anna Branch. These were constructed by Council and River Trust. These three systems are major overflows of the river allowing water to get away. These so called improvements have forced farmers and Council to put in higher and higher levee banks in Halifax and Cordelia area. The build-up of vegetation in the rivers and the overflows such as Palm, Cattle and Trebonne creeks are restricting the flow of water exacerbating the flooding in the lower Herbert. Sand should only be removed from the lower reaches of the river. The build up of levee banks along the river and the many man made changes have made me fearful that my home may be flooded in future floods. i have been told by Council that they will not protect us with a levee bank and only with their approval can we build our own. i am only a pensioner and cannot afford to build it. They should also raise the QR line up on bridge after sandy creek waterhole area to allow water to flow to Lottery Creek/ Gonano Bridge.</p>	<p>changes in flooding characteristics should only result from the natural variability in flooding and changes to the river system caused by floods. Currently Council does not have a mechanism for managing cumulative impacts as any permit application can only be considered in isolation. To manage the cumulative impacts would require the development of a regional strategy, which is beyond the scope of the 2015 study. Removal of levees constructed prior to the 2014 legislation changes would be difficult without owners' consent and would need to be studied in detail as part of regional strategy to understand the changes in flood level that the removal would cause more broadly across the floodplain. The HRIT owns the Ripple Ck and Catherina Ck flood gates. Removal of these floodgates was investigated by the 2003 flood study. The study found that the removal of the floodgates did not significantly impact on the 100 year ARI flood levels (because the gates are overtopped) but in smaller events the impacts (increased and decreased flood levels) would be larger. The study found that the area of land that would be negatively impacted increased flood level) would be approximately equal to the area of land on which flood levels are reduced and hence there would not be a significant benefit in their removal. The submitter also comments on vegetation, sand removal and the QR line. These are floodplain management ideas. The 2015 flood study was an update to flood mapping of the existing floodplain and did not investigate floodplain management options. Floodplain management options were investigated as part of the WBM Oceanics 2003 study and the SMEC 2014 study.</p>	
<p>1 Forgan Street was purchased in 1938 by my parents Brian and Mary. This home was built and parents moved in December 1939. My brother was taken from hospital in December 1939 where he had lived until his death in April 2016. Edward, my sister Eleanor born 1947 and</p>	<p>The Council surveyed flood marks nearby to 1 Forgan following the 1967 flood. The surveyed flood levels were 11.59 and 11.62 m AHD. The ground levels along the Clay Street frontage are typically in the range 11.3 to 11.4 m AHD which indicates there was likely to</p>	<p>Council note the submission. The Herbert River Flood Study was calculated on a 1 and 100 year flood study. Council advises that the shire has only experienced a 1 and 40 year flood in 1967.</p>

Issue raised	Technical response	Council Decision
<p>myself born 1943 all lived at the above address and never once did we see any flood water enter the property. My mother often spoken as to why she purchased 1 Forgan Street which in 1939 was a long way from town and no decent roads and she always said she knew the area very well and knew the area as "flood free". She had experienced the 1927 flood where her home was flooded and vowed she would never live in flooded area again. I strongly object to the fact your Council shows that 1 Forgan Street has experienced 1 metre water during floods. As an example the second highest flood in Ingham which occurred in 1967 (& i was living in 1 Forgan Street) not a single drop of flood water entered the yard, alone under the house. Please be advised that 1 Forgan Street is represented wrongly within your flood plan and prospective buyers are turning elsewhere to purchase. Please look into this further and amend your records accordingly.</p>	<p>have been shallow flooding onto some the lot during 1967. However, the LiDAR shows the ground level over much of the lot is above 11.6 m AHD, so much of the lot would have been flood free in 1967 as indicated by the submitter. The 1967 flood is estimated to have been about a 1 in 40 AEP event in this area. The current planning scheme mapping is for the larger 1 in 100 AEP (1%) event, including an allowance for increased rainfall due to climate change effects. The LiDAR data indicates that generally the ground levels on the lot are in the range 11.5 to 11.7 m AHD, with some areas lower and some higher. The 1 in 100 AEP flood level is 12.37 m AHD which means depth of flooding generally in the range 0.5 m to 0.8 m on the lot. The allowance increased rainfall due to climate change added about 0.3 m to the flood level and depths at this location. It is considered that the model is providing a best estimate for the 1 in 100 AEP flood level at this location and no revision to the mapping is required.</p>	
<p>1. Building floor levels determined and made available in the Rates Records 2. Flood data + floor heights should be made available on line in an interactive mapping tool</p>	<p>1. Floor levels of structures is currently available if requested in a Building Record Search + Flood height for the property is available through a Flood Certificate. 2. An interactive Web Instrument is being developed through Innovation Funding that was allocated to HSC. This instrument is a basic type of instrument and should be available late 2018.</p>	<p>Council is aware of the Innovation and Improvement funding that was allocated to commence with a Web based Application to assist the community in determining development probability on a lot. It is also aware of the Innovation and Improvement funding opportunity that will be available later in 2017 and will apply for further funding to assist in the development of relevant information and systems.</p>
Not Properly Made Submission		
<p>I have lived at this address, 4 Abergowrie Rd, Trebonne, for approx. 30 years and in that time the Ingham district has had many floods. In the 30 years I have never had flood water in my yard, it runs around the headland and paddock beside/behind my house and across the road at the low point 100m east of me. the deepest the water has been on the road is 10 inches (250mm) as it runs away across Skinners drain to Stallans Lane, back to the Main Rd and down to Boundary Creek. I hope this helps when formulating your updated Flood Plan.</p>	<p>The LiDAR data indicates that the ground level at this lot is typically around 16.7 to 16.8 m AHD. The Council surveyed flood marks nearby following the 1967 and 1977 floods. The flood levels were 18.14 and 17.8 m AHD respectively. The flood model indicates the flood level is typically about 0.15 m lower at this lot compared with the location of the surveyed flood marks. Therefore it is estimated that the flood level at this lot in 1967 and 1977 would have been about 18.0 and 17.65 m AHD respectively. Therefore in 1967 there would have been of the order of 1.2 m depth of flooding</p>	<p>Council note the submission. The Herbert River Flood Study was calculated on a 1 and 100 year flood study. Council advises that the shire has only experienced a 1 and 40 year flood in 1967.</p>

Issue raised	Technical response	Council Decision
	across the lot. The 1967 flood is estimated to have been about a 1 in 40 AEP event in this area. The current planning scheme mapping is for the larger 1 in 100 AEP (1%) event, including an allowance for increased rainfall due to climate change effects. The 1 in 100 AEP flood level with climate change allowance is 19.8 m AHD. the allowance increased rainfall due to climate change added about 0.7 m to the flood level and depths at this location. It is considered that the model is providing a best estimate for the 1 in 100 AEP flood level at this location and no revision to the mapping is required.	

7.0 GENERAL

7.1 LEGISLATION LINK - ACT, CORPORATE PLAN, OPERATIONAL PLAN:

Council is required to assess the Submission received and decide on the submission received in terms of relevant legislation and taking into consideration local instruments and plans.

Legislation	Local Planning instrument	Hinchinbrook Shire Council Corporate Plan	Hinchinbrook Shire Council Operational Plan
<i>Sustainable Planning Act 2009;</i>	Hinchinbrook Shire Planning Scheme 2005	Strategic Direction Two: Responsive and Responsible Management of Land 2.1 Delivery of a robust and meaningful Town Planning Scheme 2.2 Provision of reliable flood data and intelligence.	Strategic Direction Two: Responsive and Responsible Management of Land 2.1.1 Commence public consultation for the Draft Hinchinbrook Shire Planning Scheme in 2017 2.1.2 Adoption of final Hinchinbrook Shire Planning Scheme in 2017 2.2.1 Public consultation of the Herbert River Flood and Inundation Study 2015, during 2017. Undertake affordable flood reduction

7.2 CONSULTATION WITH INTERNAL DEPARTMENTS

Infrastructure Services Delivery

8.0 COUNCIL DECISION

Council Decision **260917-29**:

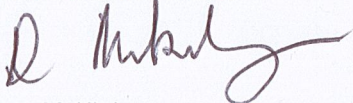
- thank the community for the interest that was shown in the process during the consultation period
- accept and acknowledge the submissions as submitted by the community;
- approve the **Submissions Response Spreadsheet - Herbert River Flood Mapping 2015 Vs 1.0**
- approve the response **Column N** of the **Submissions Response Spreadsheet - Herbert River Flood Mapping 2015 Vs 1.0**

- approve the Herbert River Flood Mapping Update 2015
- set the implementation date for the Herbert River Flood Mapping Update 2015 as from 01 October 2017.

Reason(s)

- The Community Consultation process undertaken was extensive and thorough; and
- The community response in the form of **4 properly made submission** only is an indication for the public support of the *Herbert River Flood Mapping 2015*

Chief Executive Officer



Dan McKinlay

Chief Executive Officer

Hinchinbrook Shire Council

5 October 2017