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20 June 2019

Dear Pallamallawa Owner/Resident

Northern Levee Design Review - Community Meeting Minutes

On Tuesday, 9 April Council's Project and Development Manager Lila Fisher, and Project Engineer Leonard Maharaj, presented to the Pallamallawa Community to explain the detail and the salient points of the 'Pallamallawa Northern Levee Design Review December 2018 Report' undertaken by WRM Water & Environment. The presentation was well attended by community members and Floodplain Risk Management Committee members. The minutes of the meeting are available on request, as is a copy of the report. Alternately, the report and minutes can be downloaded from Council's website, or a copy of this letter and the minutes have been left at the Pallamallawa Post Office for your convenience.

The focus of the presentation was the three (3) recommendations made in the report.

Recommendation number 1: *Reducing the length of Northern Levee*

This recommendation is significant, as this has the potential to reduce the cost to build the northern levee which could improve the time it takes to source funds for its construction. It is recommended to reduce the length of the northern levee by not constructing the levee between North Street and Stanester Road.

The recommendation notes that this approach would still result in properties west of North Street being inundated in a flood event (with the levee in place). However, it should be noted that such properties would not be inundated above floor level for the 5% and 1% AEP (Annual Exceedance Probability) events under existing and post-levee conditions.

Recommendation number 2: *Lowering the height of the overflow weir and bund west of Stanester Road*

This was raised however, it received little response in the meeting. This recommendation could be investigated, and heights modelled, however works do not have to proceed if there is not an overwhelming benefit. The blocks east of North Street would have the greatest benefit with reduced water in their yards.

Recommendation number 3: *Mitigate flooding from the east of Pallamallawa*

This was the most discussed item at our April meeting. There was significant interest from the community members present who all agreed that further modelling work is definitely required east of the current modelling boundaries, with the aim to model the two flood ways (gullies or flood runners) one east and one west of the landfill (tip) and forest.

From the meeting, Council staff have heard clearly that the local community would like to pursue recommendation number 3 which, will therefore go as a recommendation to the Committee meeting for endorsement. Recommendations number 1 and 2 did not receive the same level of discussion or consensus.

In respect to stopping the levee short (recommendation number 1), there was a question from the floor at our meeting *“Is that right that there would be very little change from the existing levee? So this is going to (be) the same as it was if we remove the end of the levee.”* Lila’s response at the meeting was *“Yes. Correct”*. That is to say, this is correct according to the report commissioned from WRM Water & Environment.

Next Steps for Pallamallawa Community Members

1. Do you consider that recommendation number 1 (reducing the length of the northern levee) is worth investigating further? If we can save significant construction costs by reducing the length, do we want to include this in a future model run, to confirm that this change is practical and to check for any other drainage works that may be required on North Street as part of this design modification?
2. Do you consider that recommendation number 2 (lowering the height of the overflow weir and bund west of Stanester Road) is worth investigating further?
3. If you have any comments, queries or concerns please ring, write or email Council on the numbers listed at the top of this letter or contact any Councillor or Pallamallawa Floodplain Risk Management Committee member by Friday 28 June 2019. (The Pallamallawa Floodplain Risk Management Committee members are Rob Long and Greg Hartman; however there were six additional Committee members in attendance at the meeting; their names are listed in the minutes.)

Thank you for your interest and time given to this very important community matter. In the coming months, Council will be in touch again to advise of the final outcome of these recommendations and commence the preparation work for the southern levee discussions.

If you require further information please contact myself or Lila Fisher via email or phone, as indicated above.

Yours sincerely



Ian Dinham
DIRECTOR OF ENGINEERING SERVICES

**MINUTES OF THE FLOODPLAIN RISK MANAGEMENT COMMUNITY MEETING
PALLAMALLAWA HALL, PALLAMALLAWA
TUESDAY, 9 APRIL 2019
CONVENOR – MRS LILA FISHER**

Meeting commenced: 7:00pm

PRESENT: Councillor John Tramby OAM, Lila Fisher, Chris Hartin, Bruce Monie, Neville Mitchell, Sonia Rowe, Val Clowes, Richard Clowes, Kath Walker, Denverd Halliger, Heather Cuming, Rod Torran, Kim Weir, Wal Weir, Peter Farrell, Sharnie Farrell, Olive Wells, Carol Goater, Peter Koschmann, Allan McLachlan, Julie McLachlan, Kay Van Vegchel, Belinda Schoupp, Katreana Byers, Daniel Taunton, Chris Hartin, Michael Murphy, Joshua Dowell, Gary Taunton, Rob Long and Leonard Maharaj (Council).

APOLOGIES: Kelly James, Craig Ronan, Katrina Makim, Councillor Katrina Humphries, Dominique Hodgkinson, Jamie Davis, Heath Stimson, Vivianne Fouracre, Chris Maunder, Jill Walker, Claude John, Greg Hartman, and Martin Van Vegchel.

Lila gave a background briefing about the Floodplain Risk Management Committee (**Committee**). The Committee is tasked to review shire-wide flood issues. Committee education included a bus tour in June 2018 to tour potentially affected areas in Pallamallawa. At this meeting, the Committee is represented by seven (7) members. .

Community members attending this meeting were encouraged to carefully consider the issues raised in the report and to provide feedback; either that they agree with the recommendations, want to prioritise the recommendations or make additional comments not covered. It was emphasised that this meeting was to consider the Pallamallawa Northern Levee Design Review by *WRM water + environment (the report)* ; the Southern Levee will be the subject of a further meeting

The Northern Levee is designed for a 1 in 20 year event. As it is a parallel levee, there is significant backwater that comes in behind it. Therefore, the levee west of North Street will have little to no effect, leading to Recommendation 1 in the report - "Reduce the Length of the Northern Levee."

Meeting closed: 8:00pm

**QUESTIONS AND ANSWERS FROM THE FLOODPLAIN RISK MANAGEMENT COMMUNITY MEETING
TUESDAY, 9 APRIL 2019**

Question from the floor: Why isn't the consultant here to challenge the documents, or to get a full appreciation of the issues he raised and as the report is recommending earth works?

Response from Lila: This document is a \$10,000 review of the design drawings, if we want to ask for any other modelling then we have to make that a new project. The consultants' recommendations are very similar to what the community has requested.

Lila then went on to explain calling a flood event as being a 1 in 20 year flood event is the same as saying it is a 5% event. In Pallamallawa with a 5% levee there will still need to be floor level planning controls to be built - if you build in the bottom end of Pally where the flood water goes.

Question from the floor: The Bus tour identified that water comes from across Mosquito Creek Road and travels down Back Pally Road.

Answer from Lila: At the 1% design event no houses benefit from the levee as the levee being discussed is only for 1 in 20 year event. For the 1 in 20 year event there are houses that have no water due to the levee, but there is a recommendation number 3 in the report, to look at the intersection of Macey Street and to remove water from coming into town.

Can the parallel levees give 1% protection as The BG&E report said 'no'. The parallel levee cannot give 1% protection as the water backs up due to downstream restrictions. Old timers will tell you that Pally will not flood as the back water will not come into town.

Comment from the floor – The 1955 Flood did back up in the town, and the 1972? Flood was a longer duration flood which did have water in the town.

Recommendation No. 2 – *'Based on Contour Consulting's design plans, it is proposed to lower the crest of the existing private bunds west of Stanester Road and construct an overflow weir immediately west of the Northern Levee. Based on the current design plans, the maximum design height of the private bunds west of Stanester Road and the design invert level of the overflow weir is 230 mAHD. The model results show that water detained behind the Northern Levee would drain across Stanester Road into the existing irrigation channel west of Stanester Road and then overflow to the cotton fields to the west via the overflow weir and over the bunds. However, some water in the irrigation channel would flow south along the channel and overflow to the east, flooding the property east of Stanester Road. If the currently proposed Northern Levee Extent is adopted, it is recommended to lower the invert of the overflow weir and the height of the existing bund immediately west of the overflow weir to ground level.*

This would allow more water behind the Northern Levee to flow to the west towards the cotton fields west of Stanester Road, and potentially reduce backwater flooding at the properties between North Street and Stanester Road.'

Comment from Lila: If we want to explore this further we can examine if the widening of the channel would get more water away. Would cutting off the corner of the block perhaps help in addition to the lowering of the farm levee? The report says *'Based on the property survey data, none of the properties potentially affected by flooding would be inundated above floor level under both existing and post-levee conditions.'*, on page 5 (fifth dot point), therefore the extra work to get water out of the town might not be worth the benefit as it has a marginal benefit to the community.

Question from Lila: Did the house at the western end of Paramellowa Street get water inside?

Answer from the floor: The water was sloshing up through the floor boards if they were trodden on, in the previous flood event.

Comment from Lila: Recommendation no. 1 is a really interesting recommendation. As Council had no involvement on the negotiations for the final alignment of the western end for the northern levee, it was between the OEH and the land owner of the lot west of North Street and north of Back Pally Road. These negotiations, I assume, were to have an increased advantage of flood protection on this lot, however this is not achievable as there is the backwater coming around and therefore the levee west of North Street serves no beneficial purpose.

Recommendation No. 1 - *'The model results indicate that the proposed Northern Levee would prevent flooding at properties located at the northern part of town (north of Paramellowa Street) for the 5% AEP event, while significantly reducing flood levels and extents at these properties for the 1% AEP event. However, the proposed Northern Levee has limited benefits for the following properties: Properties west of North Street and north of Paramellowa Street would still be flooded due to water overflowing from the proposed Stanester Road Swale and from the existing irrigation channel west of Stanester Road. These overflows would back up towards North Street.*

Properties west of North Street and south of Paramellowa Street would still be flooded due to local catchment flows backing up from Back Pally Road and Stanester Road towards North Street and Warialda Street.

Based on the model results and the property survey data, none of the surveyed properties would be inundated above floor level for the 5% and 1% AEP events under existing and post-levee conditions.

It is recommended to reduce the length of the northern levee to between Mosquito Creek Road and North Street (i.e. not constructing the levee between North Street and Stanester Road). This would have the effect of reducing flooding at the properties north of Paramellowa Street (as shown in the current results) without the added cost of constructing the levee between North Street and Stanester Road. Note that for this shortened levee configuration, flows from the northern catchment would overtop the existing levee west of North Street and flood the properties to the west of North Street as per existing conditions.'

Question from the floor: Is that right that there would be very little change from the existing levee? So this is the same as it was if we remove the end of the levee?

Answer: Yes, correct

Comment from Lila: The third recommendation has the ability to do further modelling of this northern catchment that feeds into Pallamallawa and confirms the extent of water that comes in.

Question from the floor: Why can't we stop all the water from getting there? There is another gully the other side of the tip that can take the majority of the water through a second flood runner east of the forest and take the water to the river through the two flood runners.

Question from Lila: So to answer your question do we need to extend the modelling back to east of the forest?

Response from the floor: Yes, near the "Bethlee" turn off.

Comment from Lila: For smaller events it will work and for the larger events everything is full anyway – to remove the water from the town for the smaller events is a great advantage to the town, the nuisance flooding is removed.

Comment from the floor: Mosquito Creek will not worry Pally.

Question from Lila: Do we need to model up to the Mosquito Creek Catchment?

Response from the floor: Yes.

(The next part of the meeting was taken up with discussion on the way the water travels on the eastern side of Pallamallawa)

Lila: The detailed modelling did not go far enough east to pick up the flood runners and gullies that the community has identified. However, are the catchment boundaries on Page 9 correct regarding the water that does affect Pallamallawa?

Answer: Yes.

Comment from the floor: There is also a box culvert that is bottle necking the water and stopping it getting in to the river. The box culvert can't handle 25mm of rain.

Comment from the floor: There is a gully at Mrs Jardine's that needs defining and modelling to allow it to take maximum flows, the gully actually comes out of O'Neils' place and there were big lagoons in the area that used to take a fair amount of the water.

Comment from the floor: This is what we looked at on the bus trip with the Committee.

Lila then explained that for the security of the town, the floodway needs to be modelled and registered to give Council the power to maintain it, serve clean up notices etc.

It is up to the community to decide if they want another meeting, and speak with the committee members or endorse the recommendations if they are happy.

Question from the floor: You keep saying about getting more data?

Answer: Lila explained that there is improved modelling data with LIDAR and possible ground survey of the flood ways which will give accurate modelling of where the water is going to go and help in modelling the width of the floodway. Add in the flood heights of liveable dwellings and other obstructions and model for the 5% and the 1% and tweak the scenarios to ensure that the water does not adversely affect existing properties.

Question from the floor: This is ok, but what happens if it keeps raining? The levee can't protect for the big event.

Answer: There are large rainfall events, but they still have an upper limit for this area. Yes, we can get big events, but they are going to be isolated events. To get the big event you have to have everything come at once.

Comment from the floor: What would Council prefer?

Answer from Lila: Council does not have a preferred stance.

Lila's personal comment: My dream is to have two parallel levees. Council has no fixed position on this as yet.

Question from the floor: So we are not getting a ring levee with pumps, as we would have to have pumps on the inside and I live right on the left there.

Answer: The only levee option is the parallel design because that is what the community has wanted. Boggabilla is exactly the same, they didn't want a levee because they didn't want to maintain the water-in water out issue.

Question from the floor: Why is Mungindi not considered a levee? What guarantee is there if we get the levee that it will be recognised as one, and we can build a house on the inside?

Answer from Lila: Council will have to demonstrate that they will maintain and inspect it regularly and provide funds to ensure the ongoing integrity of the levee. If they do all this then yes, it is a recognised levee.

Question from the floor: Is that a great idea? They said it wasn't a 1 in 100 year flood level and that the 1 in 100 flood is a different height? What's to say that in 20 years' time there's a new 1 in 100 flood level and it goes over the top, and you let them build on the ground at Mungindi.

Answer from Lila: A flood bigger than a 1% will go over. The levee is not going to protect from 'Noah's Flood'.

Question from the floor (same person): Why don't they just build up high so if the flood water goes over they will still be safe?

Answer from Lila: Because they don't want to build that high. Ramps and stairs are not good for elderly. Ramps or mounds have amenity issues. There isn't the room for them to build up high. They have some warning time; 2 weeks for Mungindi, Moree has three days, Pally has 24 hours notice generally.

We can't build above the Noah's Ark flood (PMF), but our big flood (PMF) is only approx. 1m above the 1% flood and we model this so that we can have the option to put electrical sub stations and sewerage pump stations above the Noah's Ark flood.

Comment from the floor: About the levee shape?

Answer from Councillor Tramby: Your Risk Management Plan says that it is parallel levees.

Lila: The process going forward may be to choose to have all three looked at (recommendations). Or we can prioritise, or we can come out to another community meeting or write into me. I will write to you all to say that we are going forward with the process that has been chosen by the community. If there are strong concerns I will come back to you for another meeting.

Step 1 Endorse this (the report) as an accurate representation of the concerns –these concerns are the concerns of the community as well.

Step 2 Sign off this document

There is no pressure to model Recommendation 2, but a project can model it and then depending on the benefit, that might only be a marginal benefit for the town but detrimental to farmers.

Question from the floor: Is there any chance that they can do a model on the Mosquito Creek Road catchment? Can they model that and then we have another meeting? Because not everyone likes to write letters.

Answer from Lila: I am going to write back to every resident and owner.

In February next year I can ask for more funds, then engage a consultant which means we will come back to you late next year.

Question from Floor: How did you expect people to find out about this - people did not get any notice?

Answer from Lila: Lila explained that she did not write to absent landowners but gave 100 flyers to the Post Office and put notices up at the Pub, the Post Office and the Store. Please add an email or other form of contact to the attendance sheet if you want to be notified a different way.

Answer from Julie: Notices were also put on the front counter and every letter box received the flyer.

Comment from the floor: Any reason why there is not a firm idea of what you want? Why there was not a map of what needs to be done with the modelling showing the changes?

Answer from Lila: We want the community to agree on the ideas prior, the Committee to endorse them, the Council to sign off on them and an application made to the OEH for the funds to do the extra modelling.

Lila explained that if the recommendations are agreed and more funds requested and approved then the model results will be available in December 2020. The reason we wait for a State Government Grant to undertake this work is that they are responsible for floodplain management. They pay for 6/7 of the costs and they should pay for the modelling and construction so we are required to wait for them, the State Government to approve the project.

I will now write to everyone with the summary of your concerns, refer to the document recommendations and gain consensus that I have captured all of your concerns.

ⁱ What is the AEP or Annual Exceedance Probability?

The Annual Exceedance Probability is the chance of a flood of a given or larger size occurring in any one year, usually expressed as a percentage. The 1% AEP is also known as the 1 in 100 year flood event. This is a large flood that has a 1% chance of occurring in a given year. This does not mean that a flood of this size will only occur once every 100 years. If you have experienced a 1 in 100 year flood, it would be unwise to think you will need to wait another 99 years before the next flood of that size occurs. Floods do not happen like that; some parts of Australia have received multiple 1 in 100 year floods within a single decade.