

Note

This statement has been redacted to remove certain personal information and information that is not relevant to the land planning terms of reference.

QFCI

Date:

20/09/11

JM

Exhibit Number:

561

<i>Name of Witness</i>	Peita Louise McCULLOCH
<i>Date of Birth</i>	[REDACTED]
<i>Address and contact details</i>	[REDACTED] Auchenflower
<i>Occupation</i>	Town Planner
<i>Officer taking statement</i>	Detective Sergeant Stephen Platz
<i>Date taken</i>	12/09/2011

Peita Louise McCULLOCH states:

1. I am a qualified town planner and currently employed by the Queensland Government with the Urban Land Development Authority (ULDA). At the time of the 2011 floods I had just started my position with the ULDA. Prior to that I was employed by the Brisbane City Council (BCC). I provide this submission, however, in the capacity of a private resident and the issues I have identified in my area.
2. I am the part owner of a 1930s workers cottage (character home) with my fiancé at [REDACTED] Road, Auchenflower. The house is located within a Character Residential Area surrounded by similar homes with respect to age and style. The Brisbane River is located approximately one kilometre to our east. The house belonged to my fiancé's grandmother and I was aware that it had been flooded during the 1974 floods. In 2007 my fiancé undertook some minor internal renovations including restumping. At the time of restumping the original house was raised above what he believed was BCC's Q100 flood level. The habitable floor level of the house was raised to 5.92m AHD at this time. In 2009, when I became part owner, I conducted extensive research with regards to the type and extent of flooding the house was subject to before we committed to renovations. I confirmed that our property was subject to flooding from the Brisbane River only and our Q100 habitable floor flood level was 5.9m AHD. It was my belief following discussions with BCC Engineers that this Q100 level included a 600mm freeboard. We commissioned a qualified surveyor to quantify that the existing

[REDACTED]
 Witness Signature.....
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Signature of officer

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dwelling had indeed been raised above BCC's Q100 flood level. The survey plans confirmed that the house was raised to 5.92m AHD. In terms of our proposed renovations, there was no need to raise the existing house or extension areas any higher as they would already be above BCC's flood level.

3. In 2009 following a full town planning investigation, we commissioned an architect to prepare extensive renovation plans in accordance with BCC's Small Lot and Character Codes. The architectural plans also ensured compliance with BCC's habitable and non habitable floor levels for flooding from the Brisbane River. This meant that we moved the existing laundry and bathroom that were at ground level up to the 1st floor 5.92m AHD to ensure that both were 'legal'. For the purposes of this statement, the laundry and bathroom could have been located at 5.6m AHD as they are considered non habitable rooms; which has a 300mm lower flood level. We decided to act on the side of caution and moved the laundry and bathroom to 5.92m AHD so that there could be no chance of flooding.

4. The house was fully renovated from March 2010 – October 2010. The house is raised on wood and steel poles, which sit on top of a large concrete slab. The area between the concrete slab and the habitable floor remains unenclosed but is battened in accordance with BCC's preferred outcome for character houses. There are no habitable or non habitable rooms within this area. The renovations did include an enclosed internal stairwell that leads down to the ground level from the main dwelling. I received signoff from BCC for this stairwell.



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5. As a town planner my understanding of the Q100 level is that it is a designated level set for urban development that indicates safe building zones with respect to flood risk. This level takes into account the Wivenhoe Dam's flood mitigation ability and an extra 600mm freeboard above the calculated flood height. As we were now fully compliant with this level I was confident that our flood risk was minimal.

6. Just before Christmas 2010 I liaised with engineers from the BCC who told me to expect serious rain fall during the holidays and the possibility of flooding. No one was able to determine the extent of flooding, but the only part of my house that should be at risk was the stairwell. As I am aware of the flood history in my area I decided to err on the side of caution and obtained a quantity of sand bags for my home, for the purposes of sandbagging the stairwell.

7. On Monday the 10th of January 2011 I started my new job at the ULDA. Whilst at work I received information that Torwood Street, Auchenflower was starting to flood at the high tide. I am aware that this area often floods during king tides and heavy rain and is not far from my premises. At 2.00pm I left work and went home just to be sure the flooding wasn't significant. Thankfully the flooding at Torwood street went down after high tide and there was no flooding in our street. Later that day my fiancé and I used the sandbags we had already acquired to sandbag the outside of the internal stairwell. We also purchased supplies required to ride out a week of flooding with no power.

8. On Tuesday the 11th day of January 2011 I arrived at work around 8.00am. I was only at work for about 45 minutes when I received reports that there was flooding at Torwood Street. The rain was extremely heavy and my fiancé and I immediately went home and monitored the media reports. As a result of the information being broadcasted by the authorities and from a friend in the SES concerning flooding my fiancé and I realised that we did not have enough sandbags and we headed back to the SES headquarters to obtain more. Around midday we re-sandbagged the internal stairs, this time using a tarp as a base and placing the sandbags to approximately 1.5m high. We also taped up the doors internally for extra flood protection.

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9. By 1.00pm on Tuesday water had entered our rear street (Vincent Street) and was lapping at our driveway. The water was steadily increasing but despite this I was still confident that the house would be above the flood levels due to our clearance above the Q100 level. It had stopped raining by this time which assisted in our flood preparation. For the purposes of this statement our habitable floor is raised almost 3m above ground level. At this stage in the afternoon there was very little water in our yard.
10. By 2:00pm water had entered our yard. We decided to disconnect all of the power to the house as we have a rainwater tank pump that sits on the slab. We were worried that if this got wet it would blow the fuses.
11. At 3:45pm the flooding was in our yard but had not reached our concrete slab. It was halfway up our driveway. A photograph was taken at 3:45pm and has been submitted as part of this statement. At this time we packed up photos, important belongings and document along with computers and sent them to a family member's house in St Lucia just in case we did have to evacuate later.
12. At 5.00pm the flooding had increased and our neighbours to the rear of our house, who are significantly lower than ours, were evacuated by the Police. We assisted them getting as many belongings as they could. Water in the street was up to the top of our thighs. The neighbours evacuated to Beard Street which is [REDACTED] to the south of my home and at this time not inundated. Police took our details and encouraged us to leave, however our main access [REDACTED] Road at this time was in no danger of flooding. We advised the Police that we would keep an eye on it and if it looked like [REDACTED] Road would go under we would go so we could get our car out. Still not expecting the water to come near our floor boards, but erring on the side of caution, we packed up the majority of our clothes and other items to send to 2 x friend's houses in a neighbouring 'high' streets. The rain had stopped at this point.
13. At 10:40pm we found that water had entered the internal stairwell. It was just covering the tiles as indicated in a submitted photo but we assume much higher outside. It was dark out and no way of determining this but the water had clearly

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breached our sandbagging. Not knowing where it was coming from, we bucketed it out for an hour try to find the leak. Eventually we noticed the water bubbling through the pain and coming out of the power points. We gave up on the bucketing and decided to head back to the SES to get more sandbags to try and stop the water rising up the stairwell and into the house. In the hour that we bucketed the water it rose by approximately 40cm and was now up to the 4th stair.

14. By the time we arrived back from the SES around 1am the water was almost halfway up the stairwell; 1.5m above ground. We sandbagged to the top of the stairwell hoping to prevent as much damage as possible. We also turned our attention to doors and low windows on our floor level and masking taped all of the gaps to try and stop the water from entering. We took this opportunity to pack up the rest of the portable items we could and move them to our friend's house. We kept up with constant updated via ABC radio. There was still no water in Haig Road, however by the time we got back from the SES there was approximately 0.5m of water in our front yard. For the purposes of this statement our front yard is lower than [REDACTED] Road by 4 stairs.
15. Around midnight water started to cross Haig Road near Beard Street but was only 30cm or so.
16. At 2:30am we decided to evacuate to ensure we could get our car out. We had filled our car up again with as many items as we could. There was no rain. The high tide was expected to be around 3am, so we sat in the car on [REDACTED] Road on the other side of Beard Street with a Police officer until this time. We waded back in after 3am and the water was still over 1.5m (or so it seemed) off the floor boards. We decided to have a few hours rest, but I by this stage with 1 more day of flooding expected I was not convinced that we would escape. We decided to return at 6am to evacuate the rest of our belongings.
17. We arrived back at our house around 6:30am on Wednesday the 13th day of January 2011. We were shocked to see how much the water had risen in 3 hours especially since the tide should have receded to some extent. The water was now less than 1m off the floor boards. I was now convinced that we were not going to

[REDACTED] escape being flooded. In the few hours that followed we managed to evacuate as

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much as much of the contents of our home as possible. The only items left were electrical, bed and cabinets that could not be moved. Water at this stage was at least 1m on [REDACTED] Road and at shoulder height in our front yard and we had to wade in and out of our property through the flood waters to get our possessions to high ground. We were assisted in this evacuation by very kind neighbours from higher parts of [REDACTED] Road, Birdwood Terrace, family and friends. We left the house around 11am with belongings but returned around 2pm to wait and see how high the water rose with the high tide. Around 4pm a neighbour took me in a boat to inspect the flood heights. At this point is the water was approximately 40 – 50cm below the floor boards. [REDACTED]

[REDACTED]

18. We woke early on Thursday the 14th day of January 2011 to reports that the peak of the floods was not as high as expected; less than 1m. This instilled some hope that the house would have made it. Around 7:00am we managed to obtain a canoe and I paddled in while my fiancé swam with a friend. As I approached the house, the water was under the floor boards as evident in the submitted photo taken at 8:14am. Upon entering the house we realised that the water had inundated the floor boards by approximately 15 cm. This was a peak height of approximately 3.95 metres above natural ground level. The house was extremely hot and sweaty and I opened all windows and doors to allow it to cool; it was becoming a sauna due to water under the house and the sunny day. I wanted to prevent as much damage as possible. [REDACTED]

[REDACTED]

19. The water had damaged all the gyprock walls, cabinetry, the wooden floor boards were warped, fridges, beds, carpets, electrical wiring, baths and other miscellaneous items. [REDACTED]

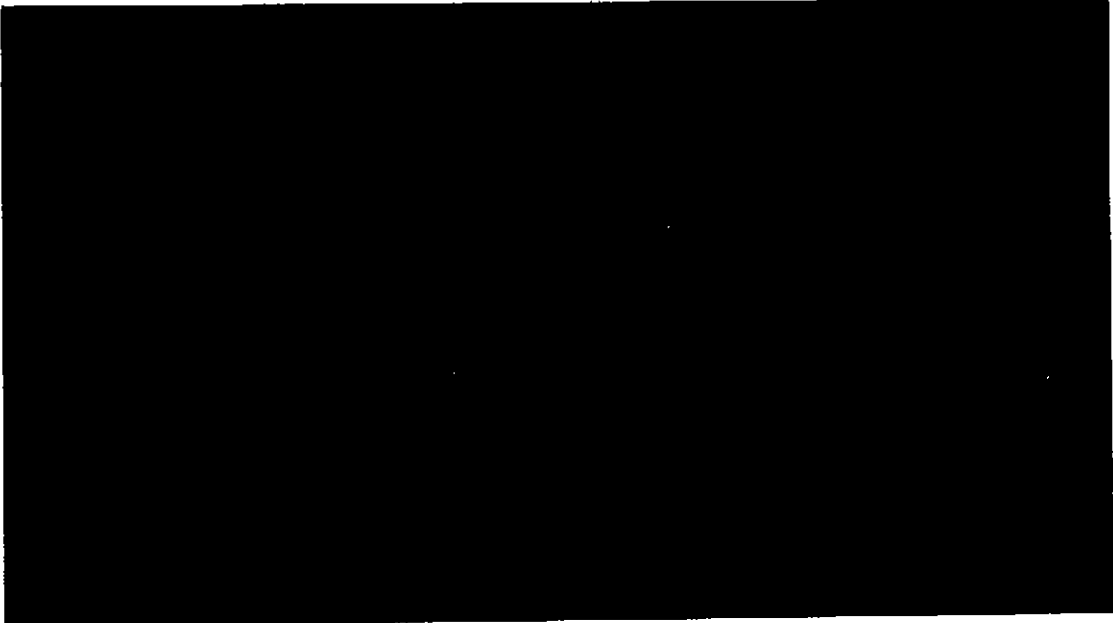
[REDACTED]

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[REDACTED]

[REDACTED]



21. The recovery process to initially evacuate and clean up, followed by the long task of repairing our house, not to mention the loss of personal property has been financially difficult, arduous and stressful and has also resulted in significant time off work for my fiancé and myself and my immediate family. Since the flood, our land values have dropped significantly and after debating and obtaining engineering costs to raise our renovated house higher, we simply could not afford to further increase the height of our home. Additionally weighing into this argument, was the question my architect and I debated; what height would we raise it to? We could spend an additional \$100,000 raising it again to BCC's new 1.0m above the 2011 flood level, but who knows what the levels could be next time. If circumstances had of been different in this flood, more like the 1974 floods, and it had continued to rain in our immediate catchment, it is very likely we would have seen at least 1m over what we had. This is obviously very concerning with regards to any future flooding, especially coming into a reportedly bad wet season where the dam levels are at a very comparable percentage to where they sat this time last year. We are also concerned that this now arbitrary flood level is a knee jerk reaction, one that is not validated by any

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actual flood modelling and one that results in our home no longer being flood compliant, which is of course a concern if we ever try and sell the property.

22. On the 4th of April 2011 I submitted a letter to the Queensland Floods Commission of Inquiry outlining my thoughts with regards to the failure of the Q100 flood level, closure of the Milton/Auchenflower drain culvert, the dam and dredging of the Brisbane River. I am able to produce this report.

Exhibit: Submission to the Queensland Floods Commission of Inquiry dated the 4th April 2011

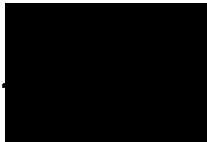
Marked Exhibit No/...

P.McCULLOCH

Justices Act 1886	
I acknowledge by virtue of section 110A(5)(e)(ii) of the Justices Act 1886 that:	
(1)	This written statement by me dated 12/09/2011 and contained in the pages numbered 1 to 8 is true to the best of my knowledge and belief; and
(2)	I make this statement knowing that, if it were admitted as evidence, I may be liable to prosecution for stating in it anything that I know is false.
Signature
Signed atBrisbane, this 15 th day ofSeptember,2011	



Witness Signature..... Signature of officer



Sian McGee

From: submissions@floodcommission.qld.gov.au
Sent: Monday, 4 April 2011 1:58 PM
To: Submissions Flood Commission
Subject: A submissions has been submitted
Attachments: Final-Flood-Enquiry-Submission-90-Haig-Road-Auchenflower.pdf

A written submission has been submitted via the website.

Personal Information

- Salutation: Miss
- Name: Peita McCulloch
- Position: Senior Planner
- Organisation: ULDA
- Address: [REDACTED] Auchenflower
- State: Qld
- Postcode: 4066
- Daytime phone: [REDACTED]
- Mobile phone: [REDACTED]
- Text Email address: [REDACTED]
- Email address: [REDACTED]

Submission

- To assist the inquiry, please indicate the issues addressed in your submission:: preparation and planning by federal, state and local governments, emergency services and the community, the response to the 2010/2011 flood events, particularly measures taken to inform the community and protect life, private and public property, measures to manage the supply of essential services, implementation of systems operation plans for dams, land use planning
- Please indicate if particular regions are addressed in your submission, or if it refers to statewide issues.: Failure of the Q100 flood levels; Closure of the Milton/Auchenflower open drain culvert; Use of the Wivenhoe Dam for water storage; Dredging of the Brisbane River
- Attach your submission: Final-Flood-Enquiry-Submission-90-Haig-Road-Auchenflower.pdf, type application/pdf, 242.5 KB

Form Information

Site Name Queensland Flood Commission
 Site Id 67
 Page Standard Name Submissions
 Page Standard Id 85
 Page Custom Form Name Online submission form
 Page Custom Form Id 610
 Url <http://www.floodcommission.qld.gov.au/submissions/submission-form>
 Submission Id 2222

Dear Sir/ Madam,

We wish to lodge a submission with regards to the January 2011 flood impacts on our property in [REDACTED] Auchenflower.

On January 12th 2011 our property was, as defined by the State Government's definition, 'inundated'. As you can imagine the event and the time that has followed the flood has been traumatic; firstly to be forced to evacuate your home, then to watch it go under, followed by the slow process to clean it out, and now the long wait while it is stripped and slowly rebuilt. What has made this time worse for us specifically is that in November 2010, we completed a 7 month long renovation of our pre-1946 home and therefore only managed to enjoy our brand new home for 2 months before it was taken away.

Whilst we understand the chain of events that lead to the Brisbane floods, what we cannot understand is the fact that our house was 'inundated'.

I am a qualified town planner and at the time of our renovations was actually employed by Brisbane City Council. As such, I can confirm that our house was built 100% compliant with the Brisbane City Plan 2000, including spending in the order of \$80,000 to raise the house to the Brisbane Q100 flood level, which included (or so we were informed) a 600mm freeboard. Whilst I was aware of the risk of renovating a house that was inundated in 1974, I was also confident that given that we had taken all of the necessary measures and expenses to build the house above the Q100 flood level, then even if the area did flood, the actual house and contents would not be at risk from flood damage. Given this knowledge, I am sure you can imagine the devastation we must have felt when at 3am Wednesday 12th January we were evacuated from our home when we realised it was going to go under.

The following outlines the content of our submission and focuses on the following topics:

- Failure of the Q100 flood level
- Closure of the Milton/ Auchenflower Open Drainage Culvert
- Use of Wivenhoe Dam for water storage
- Dredging of the Brisbane River

1. Failure of the Q100 Flood Level

At the time of our renovations, the Q100 flood level for habitable rooms on our property was 5.9m AHD, which included a 600mm freeboard. Not wanting to take any risks, our entire house was raised to 5.92m AHD including all non-habitable rooms. The house was raised prior to the extensive renovations. An approximate cost to raise the existing home including engineering certification, and all necessary water and sewer connections was approximately \$80,000. Whilst this is a significant sum of money to spend before even starting a renovation, it was a non-negotiable issue for us given that we knew the original house was inundated in 1974.

With the height of our new flood boards being approximately 3.8m above natural ground level, we were confident that if Brisbane did ever experience another flood, then the actual structure and contents of the house would be protected. Given the amount of work put into ensuring that our

house was consistent with all of Council's rules and regulations, it has been very hard for me to accept that the system has failed us. It is almost harder for me to accept what has happened from a professional stand point when I have been working and approving applications under the flood levels for a decade. I am now questioning how many other people have suffered even though they spent the money and 'did the right thing' and trusted that the information provided by the experts was accurate. We question how is it that the flood levels were so inaccurate? And if they weren't incorrect, why is it that they failed?

In the early hours of Thursday 13th January (the peak of the flood) we believe that the floor boards were inundated by approximately 15cm of water, which means that the Q100 flood level was inaccurate by approximately 750mm. What is scarier however is the reports that the flood levels reached on that morning were in fact 1.0m lower than what was originally predicted, and that the actual flood level did not even reach the 1974 flood levels. If these reports are correct then the Brisbane Q100 levels appear to be inaccurate by almost 2m.

It appears now that Council's easy fix is to relax the 8.5m height limit in flood affected areas so that people can raise their houses higher. I have concerns with this however from a town planning view point as tiny homes raised 5 – 7m above the ground with no requirement to address the under croft is likely to erode the very fabric that makes the inner city intrinsic; I have already seen some unacceptable applications lodged with Council for 13m high single storey dwellings that are unlikely to even be structurally sound in a strong wind. In addition I am concerned about what is the new 'correct' flood height? Do we all spend \$80,000 to raise our homes to have them flood again? Who will be liable if once houses are raised they flood again? Home owners pockets are only so deep and in the absence of flood relief assistance for most of those people with inner city mortgages as their 'salaries' are too high, how can they possibly afford to fix their homes, raise them to the new levels, have them flood again and then try and rebuild them again, all the whilst paying their large mortgages and feeding their families?

These questions directly relate to us. Given that we spent \$80,000 to raise our house (pre renovation; it will now cost the same or more to raise it again) and that we are not eligible for any of the flood relief money, how is the 'easy solution' to raise the house again reasonable for us? We did what Council requested, we spent the money and we put our trust in the system, now we are left out of pocket and unable to rectify the situation. Given that our renovations are less than 6 months old and were 100% compliant with Brisbane City Council's regulations, if the only way to solve the flooding problem (impact to dwellings) in Auchenflower is to raise our house again, we request that the cost be absorbed by Council as the fact that we were 'inundated' was due to incorrect Q100 flood levels. An alternative to this however, would be to find a substitute solution to stop the flooding i.e. closing the Milton culvert (see issue 2 below).

2. Closure of the Milton/ Auchenflower Open Drain Culvert

From lengthy discussions with both hydraulic and civil engineers it would appear that the major contributing factor to why the Auchenflower, Rosalie and Milton Business Park area flooded was a direct result of the Milton open drainage culvert that connects directly to the Brisbane River near Drift restaurant and terminates near the old Milton tennis court site.

This drain has always been a concern to the residents and businesses in the area due to the risk it poses to children when full of water (at high tide) and due to the fact that a few streets in the area including Torwood Street, Auchenflower are flood affected from it at every king tide. In such a highly urbanised 'progressive' inner city environment it seems perplexing that such a crude form of infrastructure can still be in existence when, even without major flood events, it floods a few streets up to 4 times a year. From the information I have obtained, the Brisbane River did not break its bank anywhere within proximity of the Milton business park area, the Rosalie Village, Milton State Primary and the residents of the area including Torwood Street, Vincent Street and Haig Road. This is also evident in the aerial images uploaded on Nearmap.com.

As such, it is easy to assume that the flooding in this isolated pocket is solely attributed to the fact that the open box culvert drain runs directly to the Brisbane River with no flood gate or flood mitigation devices where it connects to the river. This means that as the Brisbane River rises, so do the water levels in the culvert; if the Brisbane River floods, so does the area around the culvert. I have also received advice that this problem could likely have been rectified by \$160,000 of trunk infrastructure in the form of flood gates.

If all of the above advice is correct, we are appalled. Outside the impacts of a major flood event, if the residents of Torwood Street are subject to flooding at every King tide, how is it acceptable that nothing has been done to date to rectify the problem by either:

- Closing the culvert;
- Capping the culvert (covering it); or
- Converting it to an underground drain with flood gates so that water can exit the streets to the river but does not flow back up to the streets from the river flooding entire suburbs.

Flood gates are used in a number of regional and outback Councils and in other inner city areas such as Teneriffe. Why have they, or something similar not been delivered in this area? The 2011 flood damage bill to our private dwelling alone, which received minimal flooding in comparison to the balance of dwellings in the area, will be in excess of \$100,000. Most other homes in the area were completely inundated, their combined damage bill along with the millions of dollars of damage, loss of stock and trading that the floods caused to Rosalie Village, Milton State Primary School and the Milton business park area is likely to far exceed the cost for Council to rectify the flooding caused by the culvert. I can understand that assigning money to rectifying the issue may not be supported by people outside the immediate affected area. However if the only reason the area flooded was a result of the open drain culvert, and it can be rectified to ensure it never floods again, then the government has no choice but to action its rectification. The cost alone to repair the damaged Milton State Primary, Council's 2 local parks and damaged government's infrastructure in the area, will most likely exceed the bill to rectify the culvert flooding issues. Isn't it more cost effective to take preventive action now where it can be taken rather than waiting for the area to flood again and then trying to find money when it is already stretched thin? Where mitigation measures to stop or reduce flooding can be implemented, now is the time to do so. So that when Brisbane does experience another flood, available resources and finances can go to areas that simply can not be protected from flood waters.

Whilst we are angry that the culvert was not rectified prior to the 2011 flooding, if the only good thing to come out of the floods is that now the open culvert is closed or made 1 way to ensure the affected suburbs do not flood again, then the loss/ damage we have faced has not been in vain.

3. Use of Wivenhoe Dam for Water Storage

Whilst we don't claim to understand the complexities surrounding the water grid and dam management, we were of the understanding that Wivenhoe Dam was built after the 1974 floods to help mitigate future major flood events.

Given that (at the time of the floods) the dam was so full due to it being used for water storage, we understand that it had to be let out to avoid the dam wall's being breached, which would have been catastrophic for Brisbane. Whilst we do not question the actions undertaken, we do question the timing. It was clear well before Christmas that we were going to have a very wet season and it was also evident at this time that the dam was very close to full capacity; perhaps release of water before Christmas and the week leading up to the new year would have lessened the impacts on Brisbane.

Additionally, we also question the appropriateness of using a flood mitigation dam for water storage?

Perhaps the lesson learnt is that a flood mitigation dam can really only have 1 function; take away its capacity to hold excess flood water due to it being already full of drinking water, will only ever result in what was experienced in January 2011.

4. Dredging of the Brisbane River

In addition to the above issues raised, we question the appropriateness of dredging the Brisbane River. If dredging had continued the river would have been deeper, being less constrained by sediment build up and therefore the flood levels experienced would have likely been lower. Whilst we understand that dredging is controversial, we think this is something that should be restarted in a managed way; particularly now as the amount of sediment that would be clogging up the Brisbane River post the flood would have to be significantly higher than what it was before. At low tide, you can clearly see the amount of sediment and mud build up within the Milton open culvert. If we were to have another flood event now, the levels would be that much higher due to the reduced capacity of the culvert to hold water. Reducing the amount of water that the river and culvert can hold will only increase risk of major flooding again.

As such, the sediment build up in the Brisbane River, the Milton culvert and the City's drainage network needs to be reduced as a matter of urgency.

We are grateful for the opportunity to write this submission and we request that at the very least the Milton culvert be closed or fitted with flood gates to ensure that this area never has to go through this heartbreak again. We understand that we are only 1 suburb affected, however, if flooding impacts on suburbs can be reduced or stopped, i.e. if the flooding is not from the river breaking its banks, the authorities must undertake all necessary measures to ensure the protection of that suburb in future flood events.

Regards

Peita & Jake Swenson