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02/03/2011

To whom it may concern

In response to the invitation made to weatherzone forum members to make submissions to the Qld Floods Commission of Enquiry

[http://forum.weatherzone.com.au/ubbthreads.php/topics/966908/Queensland Floods Commission o#Post966908](http://forum.weatherzone.com.au/ubbthreads.php/topics/966908/Queensland_Floods_Commission_o#Post966908)

I am submitting all relevant posts that I made during the flood crisis in early January, in particular those that relate to the disaster that unfolded in the Lockyer valley on the afternoon of the 10th of January, 2011. If you wish to read these posts in context then just follow the link at the top of each one. Alternatively if you wish to view all of my posts together online then just search on weatherzone for my username which is buster.

My name is Neil Pennell. I am a 47 year old medical sonographer with no formal qualifications or training in meteorology or hydrology, although I have to some degree educated myself in these areas through the internet because they interest me. I live with my family in the small rural community of Kalbar and commute to work in Ipswich each working day except Mondays when I work in Gatton. I have lived in the Fassifern valley most of my life and because it is not dissimilar to the Lockyer Valley so far as climate, topography and hydrology are concerned I have a keen interest in and understanding of how particular weather events can effect these valleys. I can really offer no formal evidence of my grasp of these issues except the posts which I have made on weatherzone, in particular this post which I made at 1.10pm on the 10th of January.

"Anthony, do you think the BOM's on the case with that cell. If not you probably know who should be told about it. Those rain rates between Esk, Crows Nest and Toowoomba are truly frightening. I fear that there could be a dangerous flash flood very soon, particularly in Grantham. Am I overreacting?"

Half an hour later I suggested that, *"I live in an area that is equally not used to being so saturated and equally not used to falls of that nature (as opposed to say Springbrook). I just know that 56mm in an hour right now here would produce a flood of frightening proportions and one likely to put lives at risk. Falls higher than this in the immediate area are likely. I repeat my question....Does someone in Esk, Grantham, Toogoolawah need to know what's possible. Who do we tell?"*

The first of these posts was, by my reckoning, close to 3 hours before the flash flood destroyed Grantham. I did not make these posts on a whim. I made them because I was very concerned about what I saw on the radar. My experience told me that a dangerous situation had arisen. These posts, along with some others by weatherzone forum members have been quoted numerous times in the

media since the event. This brings me no pleasure. Indeed it draws attention to my own failure to act in the situation. I have carried considerable guilt that I took my concerns no further than the weatherzone forum. Should I have rung the BOM myself? Yes, but I didn't. Should I have rung the police in Helidon (as was my first instinct)? Again yes, but I thought they would think I was crazy. Instead I watched in horror as the event unfolded. Could I have made a difference? Possibly, but I guess we will never know. I would rather that I had never said these things on the forum and remained a pretty ordinary weather tragic on weatherzone. While some weatherzone forum members are well-educated regarding meteorology and are happy to speak to the media I have not sought nor will I seek the media's attention. However, the fact that someone with my limited formal meteorology/hydrology experience could be made to sound like Nostradamus while the Bureau of Meteorology remained silent about the impending danger in the Lockyer Valley does need to be thoroughly investigated.

As I said straight after the event on the forum, I am not trying to line anyone up at the BOM. I think generally they do a fantastic job and I am sure they feel bad enough. Well, I hope they do. I have certainly lost plenty of sleep about it. My feeling is that they were probably incredibly stretched manpower-wise during this whole period. It's likely that no-one in particular is to blame but that doesn't excuse the failure of the system.

However, the Bureau's media responses immediately after the event did nothing to reassure me that there would be a full and open exposition of why there was such an obvious failure of the warning system. A fair bit of mumbling about incredible (and unsubstantiated) rainfall figures (like 200mm+) and plying the Premier with "freak of nature" quotes was completely inappropriate in the tragic circumstances. I thought she did a tremendous job during the flood incidentally. However, I would have thought, "We are not sure why the warning system was inadequate. We are shocked and dismayed that so many people have lost their lives and we are determined to find out exactly what went wrong" would have been more fitting in the circumstances. My concern is that the commission of enquiry will be populated by many high-powered and well-credentialed people, meteorologists and scientists quoting lots of numbers that prove that it was indeed a "freak of nature".

However, my belief is that while the flood was exceptional, the local rainfall event (the infamous "rainstorm") itself was really not that exceptional. Yes it was large. Yes it was slow-moving but I have seen far more impressive and intense cells on radar many times. So far, despite the 200mm+ numbers quoted by the Director of the Bureau, I have not seen a single firm piece of evidence that anyone in the upper Lockyer/ Toowoomba area received more than 80mm in an hour from that cell. Indeed, I think that 50-60mm in an hour over the entire upper Lockyer catchment is probably closer to the mark. I am not saying that falls over 80mm in an hour didn't happen. It is certainly possible but the evidence is lacking. This is a crucial point that needs to be considered by the commission and a systematic collection of rainfall data from landowners in the area is vital. If such an incredible flood event is possible from localised rainfall of 50-60mm in an hour then the people of Toowoomba and the upper Lockyer need to know that. We do not need to turn it into a super storm or a "freak of nature". That would be unhelpful. Everyone needs to come to an understanding that in the circumstances that prevailed in the upper Lockyer that day, it doesn't take that much rain to cause a disaster. This should be the number one lesson from this tragedy.

I suspect that the key reason for the failure of the bureau to identify the initial danger (as I and some others did) was exactly that. It didn't look that exceptional. Indeed, Jim Davidson indicated exactly that at the press conference with the Premier on the morning of the 11th January. However, the prevailing circumstances were exceptional i.e. absolutely saturated catchment and upper Lockyer creek already at minor flood levels. Additionally it needs to be remembered that this was the normally quite dry Lockyer valley not the Numinbah valley or Tweed Valley, areas that frequently face such circumstances and where the terrain, soil structure and waterways have evolved to cope with such conditions. I think that the BOM's failure to identify the severe flash flood at Helidon initially stemmed from the fact that they had not identified the initial danger signs on the radar but was more due to a lack of insight into the nature of the catchment where that rain was falling. Following on from that, their inaction in issuing advice to local authorities to evacuate downstream areas like Grantham immediately after the massive flood broke the gauge on Lockyer creek at Helidon was inexplicable.

I have said somewhere in the forums that my initial comment on the day expressing my concern for Grantham was really a fluke. It gives me shudders to read it. But I was actually a bit off the mark. I thought Sandy Creek was going to be the problem but I had misjudged the position of the cell relative to the Sandy creek catchment. Little did I know that the water that decimated Grantham would come from Lockyer creek itself. The point is.....there was clearly going to be major danger in that valley for someone. I and some others saw it. Unfortunately, those who needed to see it didn't.

Anyway, after recently taking my first drive through the devastation of the valley I decided to contact the commission. You can read about how that drive made me feel in the posts below. I think it is really important that "the amateurs" side of the story is presented to the commission. The tragic loss of life in the Lockyer valley should be the commission's number one concern. Wivenhoe's instruction manual should be a distant second, and this is coming from someone whose house at Rocklea was badly damaged by the Brisbane River flood. I'd be more than happy to appear before the commission if required, although I'm not thinking that's likely.

My desired outcomes from the enquiry are numerous. They include that in future, in circumstances where the catchments of SEQ are saturated that there is always someone at the BOM with a sound understanding of the different SEQ catchments whose primary job it is to watch the radar. If this is already the case then the Bureau really does need to explain its inaction on the day of the event. Additionally it would be really helpful if the relationship between the Bureau and special interest groups like the weatherzone forum are formalised so that in future folk like me are certain about who they should contact when they have concerns. Of course this would only be of value if there is some effective system in place to warn people in a timely manner. I'm guessing that an SMS system would probably be the most effective way of achieving this, although knowing how frequently country folk don't have their mobiles with them, you have to wonder if, in a small town like Grantham, a great big "head for the hills" siren wouldn't be a better option.

In reading my real time posts below, please bear in mind that like many in SEQ I was under considerable stress during the flood and the weatherzone forum became something of a personal forum for my grief, sadness and anger. While I don't resile from anything I have posted, I am now clearly better informed about what actually occurred in the Lockyer than I was just after the event. The posts reflect this. My own property at Rocklea where my daughter and niece live was flooded

and badly damaged and the whole process of trying to organise their evacuation while we were ourselves flooded and isolated here at Kalbar took its toll. Subsequently of course there was the cleanup to deal with. As I said earlier, this all came on top of my carrying a burden for the shattered lives in the Lockyer. Despite their present predicament I am certain that with an open and honest enquiry into what occurred on January 10th, I'm certain we can all do better for them next time.

Yours sincerely

Neil Pennell

http://forum.weatherzone.com.au/ubbthreads.php/topics/924702/Re_SE_QLD_NE_NSW_FLOOD_D_ISASTE#Post924702

10/01/2011 4.51am

Just woke up and thought I'd check the situation. My suspicion, and hope, all along for this event has been that by the time the real rainfall got to the Bremer catchment it would have completely departed the Wivenhoe catchment. Well, the moment has arrived and I'm still not sure. Certainly it will only need about 25-50mm here in the Warrill catchment for there to be a major flood. We have had less than 10mm since 9am yesterday and our local creek is already over the causeway. The Bremer near Rosewood is already at significant height. So it's sort of make or break time. Wivenhoe, as in 1999 has already part done its job. If heavy rain returns to the upper Brisbane catchment then it will struggle to complete the task that's for sure. I'll go out on a limb and say that Brisbane should dodge a bullet this time. I pray I'm not wrong. However, I think that the policy of keeping Wivenhoe at 100% capacity approaching a La Nina season with an already wet catchment will come under serious review by SEQ water. Better a 4 minute shower forever than a house full of water. Ask the folks in Emerald which they'd prefer. Those who in September were crowing about using some of Wivenhoe's flood storage for increasing Brisbane's water supply should take careful note of what is going on. This isn't even close to a 1 in 100 year event.....yet.

http://forum.weatherzone.com.au/ubbthreads.php/topics/924722/Re_SE_QLD_NE_NSW_FLOOD_D_ISASTE#Post924722

10/01/2011 6.13 am

Hey Locke. I would really appreciate knowing where you got the info about the previous record flood height for Gatton. Have been searching on the net for that one myself this morning. Lockyer creek could indeed play a big part in this scenario because, as you point out it is already in major flood. Additionally like the Bremer it is virtually uncontrolled and it has an area 2890 square km versus only 2030 square km for the Bremer. Thus far, like the Bremer and Warrill, Lockyer Creek's big southern tributaries MaMa Creek, Tenthill creek and Laidley creek upstream of Laidley have contributed little to the event. By the look of the radar that could change in the next few hours.

[http://forum.weatherzone.com.au/ubbthreads.php/topics/925065/Re SE QLD NE NSW FLOOD D I SASTE#Post925065](http://forum.weatherzone.com.au/ubbthreads.php/topics/925065/Re_SE_QLD_NE_NSW_FLOOD_D_I_SASTE#Post925065)

10/01/2011 1.10 pm

Originally Posted By: Anthony Cornelius

Concerning for the Gatton-Grantham area right now with that very large storm/rain area moving towards it with no doubt, torrential rainfall! Sandy Creek (in Grantham) has caught quite a few people by surprise and I hope they're prepared for it, but sadly I think most won't know until the water starts lapping up at their homes due to our insufficient warning system.

Event is definitely not over - the dry slot is there, but the moist air in front of it is the danger zone which is what's passing through/moving towards Southeast Queensland right now! Not to mention the instability - and **radar** is certainly showing a clear picture of the instability right now.

AC

Anthony, do you think the BOM's on the case with that cell. If not you probably know who should be told about it. Those rain rates between Esk, Crows Nest and Toowoomba are truly frightening. I fear that there could be a dangerous flash flood very soon, particularly in Grantham. Am I overreacting?

[http://forum.weatherzone.com.au/ubbthreads.php/topics/925069/Re SE QLD NE NSW FLOOD D I SASTE#Post925069](http://forum.weatherzone.com.au/ubbthreads.php/topics/925069/Re_SE_QLD_NE_NSW_FLOOD_D_I_SASTE#Post925069)

10/01/2011 1.14 pm

Cressbrook dam 54mm in the last hour. Maybe Toogoolawah should be my concern.

[http://forum.weatherzone.com.au/ubbthreads.php/topics/925097/Re SE QLD NE NSW FLOOD D I SASTE#Post925097](http://forum.weatherzone.com.au/ubbthreads.php/topics/925097/Re_SE_QLD_NE_NSW_FLOOD_D_I_SASTE#Post925097)

10/01/2011 1.42 pm

Originally Posted By: Dave-Wx

Originally Posted By: buster

Anthony, do you think the BOM's on the case with that cell. If not you probably know who should be told about it. Those rain rates between Esk, Crows Nest and Toowoomba are truly frightening. I fear that there could be a dangerous flash flood very soon, particularly in Grantham. Am I overreacting?

No you're not overreacting Neil!!! We've just been chatting about it here...111mm at Redbank Creek alert (1/3 of the way between Esk and Toowoomba, under that stormy blob) since 9am now!

Dave, I live in an area that is equally not used to being so saturated and equally not used to falls of that nature (as opposed to say Springbrook). I just know that 56mm in an hour right now here would produce a flood of frightening proportions and one likely to put lives at risk. Falls higher than this in the immediate area are likely. I repeat my question....Does someone in Esk, Grantham, Toogoolawah need to know what's possible. Who do we tell?

[http://forum.weatherzone.com.au/ubbthreads.php/topics/925283/Re_SE_QLD_NE_NSW_FLOOD DISASTE#Post925283](http://forum.weatherzone.com.au/ubbthreads.php/topics/925283/Re_SE_QLD_NE_NSW_FLOOD_DISASTE#Post925283)

10/01/2011 3.49 pm

That cell has caused more than problems at Toowoomba. I hope and pray that this is a mistake or the whole Lockyer valley is heading for an unmitigated disaster. If I lived near Lockyer creek further down the valley from Helidon I would be heading for high ground....now.

<http://www.bom.gov.au/fwo/IDQ65389/IDQ65389.540143.plt.shtml>

[http://forum.weatherzone.com.au/ubbthreads.php/topics/925813/Re_SE_QLD_NE_NSW_FLOOD DISASTE#Post925813](http://forum.weatherzone.com.au/ubbthreads.php/topics/925813/Re_SE_QLD_NE_NSW_FLOOD_DISASTE#Post925813)

10/01/2011 10.08 pm

Originally Posted By: Hinezy

Amazing how high the Dew Points are at the moment! This morning's sounding looks extremely unstable and moisture loaded as well! That could well be a recipe for some very heavy flash flooding type storms to pop up at any time around the place... especially within this break in the rain bands we're seeing at the moment. If the sun comes out that might not necessarily be a good thing because it could make way for some explosive convective activity which would have the potential to unleash torrential amounts of rain in a short amount of time.

It feels so muggy when it's not raining. The next couple of hours could be interesting while this next rainband is making its way to the coast. It will be interesting to see what fires up in between!

*I feel sick. I read this post of Hinezy's just after midday today and shortly afterward I and a number of others on this forum made comment about "that" cell. A little later there was even some discussion about how we could warn people of the potential for flash flooding.....even with my untrained amateur eyes I could see it....absolutely saturated catchment, large slow moving solid yellow-orange cell. I was just going by the **radar** and what I know of how that sort of terrain/catchment responds to that sort of rain, simply because it's a similar area to*

where I live. I'm nothing special. I know very little about meteorology but I had a very bad feeling in my gut.

AC, Dave and others with plenty of experience could see it to. You can all read it. It's there in black and white. What to do? Do I ring the BOM and say, "Holy crap guys, what are you doing. Tell everyone to head for high ground" But I'm just a weatherzone lurker who doesn't know much so I let it go. I'm feelin' pretty bad right now but in my heart I know that any of my efforts would probably have been in vain. It was simply way bigger an event than any of us could have anticipated. What I want to know is. With the catchments so waterlogged did someone at the BOM have the job of constantly inspecting the [radar](#)? Did they have the same discussion with their colleagues as we did about the potential of "that" cell? My suspicion is that they are probably stretched way beyond their means and have been for some time. Probably plotting potential flood heights for the port office in [Brisbane](#).

I'm not pointing fingers...but maybe there needs to be some formal way for the amateurs to assist the pros in these exceptional circumstances.....perhaps through some relationship between the mods of these forums and the BOM. There is so much experience and knowledge about severe weather events built up in these forums. Maybe a formal relationship between the ASWA and the BOM. Perhaps such a thing already exists. I simply didn't know what to do. I even thought of ringing the police in Helidon and saying what I thought. "I'm looking at the [radar](#) on the internet. There's a big yellow storm up on the range behind you. I'd advise evacuation". It's not hard to imagine what the response would've been. When I saw the plot of the creek height a little while later I felt ill. Maybe I should've called anyway. I might have felt a bit better now. All I know is those people clinging to the roof of that car deserved a better warning than the one they got today. I fear what tomorrow's news will tell us about today's events.

Keep safe all
Neil

http://forum.weatherzone.com.au/ubbthreads.php/topics/926368/Re_SE_QLD_NE_NSW_FL_OOD_DISASTE#Post926368

11/01/2011 9.23 am

Cannot believe the rainfall rates around Marburg, Rosewood, Tallegalla etc. Please people on this forum.....if you know or love someone who lives in a low lying area near a creek or river in SEQ, then ask them to move to friends on a hill.....now. Particularly in the Ipswich, West Moreton area. Not kidding guys.....think of who they might be, and phone them right now. Keep safe all, Neil

http://forum.weatherzone.com.au/ubbthreads.php/topics/930252/Re_SE_QLD_Flood_Crisis_05_01_2#Post930252

16/01/2011 2.15pm

Hi All,

I'm sorry I haven't contributed to this particular thread before now. I've been dealing with my own (comparatively minor) crisis of owning a fairly wet house in Rocklea and concern for loved ones (daughter and niece) who live in it, both evacuating them and now the aftermath. I guess in another time that might seem a big deal. I'm so over mud but hey after last Monday I'm actually feeling pretty fortunate. This discussion so needs to happen and it absolutely needs to be forwarded to the coroner at the appropriate time. By the way, who should be responsible for that happening Mods? I think it is way too important a matter to let lie. I am so hoping that when the inquest does arrive that it doesn't become a snow job that is only informed by scientists and professional meteorologists.

You have all read my earlier posts including my 2 cents worth in the discussion with AC, Dave and others as the event unfolded. I agree with many of you, once that sequence of [radar](#) images appeared a significant flash flood could definitely be foreseen. I just happened to be online looking at the [radar](#) and on the weatherzone forum at that time. I believe there are many who frequent these forums who would have been as concerned as I. I am far less informed about meteorology than most who contribute but I do live in a similar area to that affected which probably informed my opinion somewhat. Predicting the actual rainfall event, the aforementioned "cell" is a different matter. I guess it was about as predictable as the >120mm in 2 hours that occurred in the Marburg area the next morning but I will leave that up to you more bookish fellows (and girls) to talk about.

I'm a 47 year old boy from the bush who has lived close (well, about as close as Grantham) to the Great Dividing Range for my whole life. I am nothing special but a look at those [radar](#) images and an understanding of the terrain and the propensity for flash flooding in Grantham gave me a very bad feeling which I simply expressed. I work in Gatton once a week and one of my most enjoyable lunchtime drives is out through Grantham, buy a burger at the cafe in Helidon and park beside the creek to eat it. It is, or was, a beautiful spot. Mind you, it is almost unrecognisable as the same place in the photos posted earlier. So I know that area pretty well and I know that on Tuesday morning when there were equally disturbing big slow-moving yellow blobs floating up our valley from the Marburg area I was concerned enough to phone everybody who I know who lives next to Warrill creek to tell them to stay with a friend on a hill for the day. It didn't happen because they lost intensity as they approached us here but it could have, very easily.

As for the totals that were required to produce the Lockyer event. I am not saying that it wasn't possible that some places had 150mm in an hour, but I'd like to see firm on the ground evidence of that. There would be a lot of rain gauges in that area. I hope they ask the local folk. My opinion is that it is quite possible that 50-80mm in an hour on that absolutely saturated catchment could easily have produced that event. In early July 1988 here at Kalbar we had one of the biggest local creek floods I've seen after 50-60mm of rain. But that wasn't in an hour it was over about 8 hours. The reason was an absolutely soaked catchment. When it's full, it's full. Every drop runs off. Additionally, the soil in the Lockyer, particularly close to the range is a little lighter and sandier than the heavier black soils in our valley and I believe this contributed to the severity of the event. In some of the video it really does look like a mudslide from Central America. As for how the whole event made me feel well I best expressed it the day after it happened. You can read it. I don't resile from any of the opinions I expressed. <http://forum.weatherzone.com.au/ubbthrea...ASTE#Post925813>

Keep safe All
Neil

http://forum.weatherzone.com.au/ubbthreads.php/topics/930574/Re_SE_QLD_Flood_Crisis_05_01_2#Post930574

16/01/2011 11.38 pm

I will just make further comment regarding the hydrology of the flash flood at Grantham and surrounds. I'm no hydrologist. This is just my humble opinion. With regards the tragic loss of life there were 2 epicentres to this disaster. The first epicentre was in the Toowoomba/Murphy's creek area. I place Toowoomba and Murphy's creek together because it's my opinion that once the rain arrived in these 2 areas then the event became one for which a warning that a severe flash flood was imminent (i.e. a flood warning) would probably have arrived too late anyway. I am not talking about a severe storm warning for possible flash flooding. That should definitely have been in place by the time AC made his first comment on the WZ forums at 12.16pm. It is likely that in these places the flood occurred within 30-45 minutes of the heavy rain commencing, indeed it may have been as little as 15-20 minutes in Toowoomba.

Most people would have been way too busy dealing with the immediate situation to be looking at the [radar](#) or chatting on the WZ forums (only us obsessed types do that anyway). It also needs to be remembered that this was an embedded storm. There was no visual clue for people. There was no "gee that looks like a cracker of a storm coming, I better check the [radar](#)" to warn people. I'm guessing just a few loud rumbles of thunder on an already very rainy day and then suddenly a deluge. A bit of blocked gutter-clearing and mop and bucket-finding later and the flood would have been upon them.

Sadly, no policeman tearing toward Murphy's Creek road from Helidon to tell people to evacuate would have made a scrap of difference. He would barely have made the turnoff from the highway and if he did he would probably have also been lost. I'm sure that there will be investigation into a specific SMS alert system with multiple flood gauges for the upper Lockyer above Helidon in future. I'd love to see it. Technically it would certainly be possible but I doubt it will ever be implemented, because at the heart of it, everyone knows that events such as this could happen anywhere along the eastern seaboard in Qld or NSW. While obviously not on the same scale as this disaster there have been a number of similar flash floods in Queensland in my time some with tragic loss of life.

*Cooyar in 1988 http://www.bom.gov.au/hydro/flood/qld/fld_reports/cooyar_feb1988.pdf
Boonah in 1991 http://210.8.186.60/hydro/flood/qld/fld_reports/logan_warrill_feb1991.pdf
Lower Lockyer /Bremer in 2008 http://www.bom.gov.au/hydro/flood/qld/fl...vember_2008.pdf
Kin Kin in 2009 http://www.bom.gov.au/hydro/flood/qld/fl..._april_2009.pdf*

Indeed it was fortunate that no-one lost their life in Wide Bay Creek around Woolooga the night before this Lockyer valley storm. The position of these tragedies is quite random. So if we had one in the Lockyer Valley this year is it any more likely there next year than in say, the Samford valley or the Fassifern Valley? I guess any bit of extra warning has the potential to save lives but every bit of extra warning costs money and governments only have so much of that, particularly in present circumstances. It will be interesting to see the outcomes of the enquiries.

Finally, and this is the point that I most wish to make, I believe that the people who died further down the valley around Grantham and between there and Gatton were poorly served by the existing BOM warning network. This may seem obvious, indeed it may have already been discussed but there is a critical issue that may not be understood by people who haven't visited the area. I find it very hard to believe that the huge wall of water that tore Grantham apart came from Sandy Creek. It simply doesn't have a big enough catchment and that catchment was only right at the Eastern edge of the heaviest part of the cell. If it did then we can all rest a bit easier because the situation for these people would have been as for those at Toowoomba and Murphy's creek. That is, almost impossible. However, my belief is that the water that hit Grantham was probably from Lockyer creek itself. I don't know this for certain but when I get back to work I'll try to confirm this.

While Grantham is on the opposite side of the valley to Lockyer creek I believe it is probably at significantly lower elevation than the banks of the creek. In other words, when the creek breaks it's banks upstream the water heads across the valley toward the Grantham side. A similar situation exists here on the Warrill. At our house the Warrill is 2 km away on the western side of the valley. Twice this season the water has poured directly across the valley toward us on the Eastern side at great pace. My farmer friends on the other side of the valley recently had a new cement slab for a big shed laid. When the surveyor came he took a level across to our side of the valley and discovered that the floor of their shed, right beside the 4m levee bank of the Warrill was level with the top of my next door neighbours tanks and his house is situated well above the floor of the valley. I believe the same situation exists at Grantham.

If you look closely at a Google map of the area then you can see that just west of Grantham at Carpendale along the Gatton-Helidon Road the Lockyer does a rapid u-turn first north toward and then south away from the main road. I am guessing that most of that huge wall of water seen at Helidon came out of the Lockyer at this spot and probably sailed directly east down the "low" side of the valley along the Gatton-Helidon Road and the railway line. It may even have crossed the railway line and entered Sandy creek at this spot well upstream of Grantham. Either way, I think that this was the same wall of water that caused that massive spike on the gauge at Helidon at @1.30pm (based on the graph). It will be interesting to find out what time it actually arrived at Grantham. If it struck Grantham at or before 1.30pm then indeed it was a Sandy creek flood. If it was between 2 and 2.30pm or even later then the people of Grantham have good reason to feel very let down. As I said in an earlier thread, they deserved better.

[http://forum.weatherzone.com.au/ubbthreads.php/topics/930611/Re SE QLD Flood Crisis 05 01_2#Post930611](http://forum.weatherzone.com.au/ubbthreads.php/topics/930611/Re_SE_QLD_Flood_Crisis_05_01_2#Post930611)

17/01/2011 7.41 am

Originally Posted By: Dave-Wx

Neil, as you can see by Andy's timeline (<http://megzys.com.au/wordpress/wp-content/uploads/2010/12/QLDFloods-5th-Jan1.jpg>), the spike at Helidon occurred at around 3pm or just after (believe me I was refreshing that flood graph every 5-10 mins!)

I too am confident that it was the Lockyer Creek surge that did the damage, though there would've been some sort of flow coming down Sandy Creek as well (which as we know is the creek that runs through the middle of the town). Given that there were countless car bodies buried under the railway

bridge that also houses Sandy Creek...I think we can reasonably assume that your idea on Lockyer creek spreading out into some sort of 'inland sea' in the Carpendale area is a good one. It's good that you have come up with this idea, knowing the area a lot better than I as I've been doing a bit of Google map hunting and was wondering similar.

Also looking at the brilliant (but incredibly sad) images from the pics that Bodie's mate uploaded I was thinking that idea too.

My bad Dave. I'll be honest and say I actually have only read a few of the posts in this thread because I am too tired to think at the moment. I really do need to leave my contributions until my house is all sorted at Rocklea. We're trying to head to the coast for a night or 2 (it was supposed to be all of last week...oh well!) because our street is so stacked that there is no room to put anything else out. Anyone with a big truck and a drot. Please send it our way. Darnley Street. No sign of council pickup in our street yet. Maybe after a couple of surfs then I'll make more sense. I have so carried a burden about those poor sods at Grantham. I just need to let it go. I'm afraid your pointing this out doesn't make me feel any better about it. So are you telling me it's likely that water only hit Grantham at like 4-4.30pm? Jeepers, I didn't need to ring the Helidon policeman. I could've driven there and back myself in that amount of time

[http://forum.weatherzone.com.au/ubbthreads.php/topics/932405/Re SE QLD Flood Crisis 05 01_2#Post932405](http://forum.weatherzone.com.au/ubbthreads.php/topics/932405/Re_SE_QLD_Flood_Crisis_05_01_2#Post932405)

19/01/2011 21.50 pm

Interesting to read the various opinions, as we all try to piece together the bits of more solid evidence regarding what actually happened at Grantham. While I have no doubt that there was already some significant water that came from the Sandy creek catchment in the main street prior to the devastating surge (and the gauges for Sandy Creek show that) , I don't believe there is any doubt now that the massive flood seen at the Warrego Highway crossing of Lockyer Creek in this video posted earlier in this thread by Adam Ant <http://www.youtube.com/watch?v=cuC0pbOE8IU> is what caused the sudden surge to metres deep that resulted in the tragic loss of life at Grantham. There was just simply nowhere for that volume of water to go downstream except over land to the lowest part of the valley i.e. Grantham. Foehn Correspondent's post above confirms the suspicion I raised in my earlier post that after surging out of Lockyer creek in the Carpendale area upstream of Ditchman's Road the water basically filled the whole northern side of the valley along the Gatton-Helidon Road and indeed overtopped the railway line embankment to fill Sandy Creek just upstream of Grantham. The various descriptions of eyewitnesses of water coming from all directions would be in keeping with this scenario. I heard a radio interview of a local man who was one of those caught on top of the railway bridge in Grantham. He quite specifically said that the water was flowing from the South to the North at the bridge when he was trying to escape it. I don't think he would have mentioned direction of flow at all if he didn't know what he was talking about. For those unfamiliar with the area this is the opposite direction to the normal flow of Sandy Creek. The cause of loss of life was not Sandy Creek, nor water backing up into Sandy creek from its downstream junction with the Lockyer but the Lockyer itself so completely overtopped that it chose a new course on the wrong side of the valley. Sadly this was straight through the heart of Grantham.

[http://forum.weatherzone.com.au/ubbthreads.php/topics/932992/Re SE QLD Flood Crisis 05 01_2#Post932992](http://forum.weatherzone.com.au/ubbthreads.php/topics/932992/Re_SE_QLD_Flood_Crisis_05_01_2#Post932992)

21/01/2011 1.47 am

Originally Posted By: core puncher

Originally Posted By: buster

I don't believe there is any doubt now that the massive flood seen at the Warrego Highway crossing of Lockyer Creek in this video posted earlier in this thread by Adam Ant

<http://www.youtube.com/watch?v=cuC0pbOE8IU> is what caused the sudden surge to metres deep that resulted in the tragic loss of life at Grantham.

May I ask if it is known, the Poor family upon that 4wd what is known of their fate? I myself was horribly saddened by that footage alone and my mind would rest a little more knowing.
thank you.

Core puncher, as Bunyaglen has explained, this is perhaps one of the saddest chapters of this whole sorry tale. I am sorry that I failed to warn you of it's distressing nature. The helicopter news footage of these people was devastating. It is tragic enough when people end up in this position out of stupidity. These poor folk were probably just driving along a perfectly good road. My heart goes out to them and their loved ones.

By the way Bunyaglen, you seem to have taken it upon yourself to disprove "The Carpendale Theory". Firstly, I didn't call it that. Seriously, I'm not that clever. Just expressing an opinion about what I think happened. I could be totally off. I'm observing from a distance and trying to recall how everything is situated from the last time I was there. But I do note a couple of things. Firstly, I think that the Sandy creek gauge readings(unless there was a serious malfunction) prove that the water that destroyed Grantham to a large extent did not arise from the Sandy creek catchment. Otherwise, why were there not similar reports from Grantham the next day when the peaks were significantly higher. There are 2 crossings of Sandy creek on Sandy creek road. I'm not sure which one has the gauge but I suspect it is at the northernmost crossing.

When the rain event was unfolding I made a comment about the risk of severe flash flooding occurring, particularly in Grantham. The Courier mail even quoted me on Tuesday, making me sound prophetic, but choosing the town of Grantham was just a fluke. I just knew that someone somewhere was in trouble. At the time I thought Sandy creek catchment was coping it but a review of the [radar](#) suggests to me that the heaviest rain scooted just to the NW of the Sandy Creek Catchment. Secondly, I think the first two of these photos prove that a huge volume of water left Lockyer creek on the southward arm of the uturn that the Lockyer takes at Carpendale (I only called it that because that is what Google maps calls it) just upstream of Grantham. The other photos show the utter devastation this water caused as it tore through the houses on the northern side of Gatton-Helidon road just West of the town of Grantham proper. The photos are taken looking south and south east some show Lockyer creek in the distance at the other side of the valley.

<http://www.abovephotography.com.au/maps/brisbane/BN-0184623.jpg>

<http://www.abovephotography.com.au/maps/brisbane/BN-0184625.jpg>

<http://www.abovephotography.com.au/maps/brisbane/BN-0184634.jpg>

<http://www.abovephotography.com.au/maps/brisbane/BN-0184642.jpg>
<http://www.abovephotography.com.au/maps/brisbane/BN-0184646.jpg>

As I and Foehn correspondent have suggested it appears that a significant amount of water overtopped the railway embankment behind these houses and so it is likely that there was water coming down both sides of the railway line. As for it not being possible for water to be flowing against the normal direction of Sandy creek at the railway bridge, I disagree. The land is very flat with barely an "uphill" in the Sandy creek flats above Grantham. It would depend of course on there being a huge volume of water on the southern side of the railway. I think these photos prove that to be the case. My suggestion is that the water just kept right on going over the portion of Sandy creek between the railway bridge and the Gatton-Helidon road and smacked straight into the SW corner of the pub before heading across the main street. Again, I could be wrong but that's just what I think happened. One day, well after the people of Grantham have started to pick up the pieces of their lives I will pay the town a visit again. Keep safe.

http://forum.weatherzone.com.au/ubbthreads.php/topics/933055/Re_SE_QLD_Flood_Crisis_05_01_2#Post933055

21/01/2011 9.12 am

Bunyanglen, I take no offence in your playing devil's advocate. Indeed, I like the way you think. Your suggestion that, "any early warning system has more ability to provide value if it is able to consider the widest possible scenario" is so important. I just hope that when an official enquiry actually gets up and running that those who sit in judgement are equally, "not dismissing anything".

It would be interesting to revisit all of the 1 hr interval rainfall totals for that afternoon for all of the automatic stations in the area, particularly upper Sandy creek alert. That might help with our deliberations, although I'm not sure they are easily found well after the event. Perhaps someone has them. If so please post them for us.

There may be those who think we may have pushed this discussion as far as it can go and perhaps it should be left for a while. I must say I am a bit weary of talking about it but like you, I am intrigued that the event was even possible. I have driven beside those decimated houses on the right as you head out of Grantham to Helidon many times. To see them with people sitting on their rooves on the news rocked me to my core, particularly given the earlier WZ discussion of the possibilities. I simply could not believe my eyes. Where did all that water come from? I am not so full of myself to presume that my opinion is really going to matter at the end of the day. I do medical ultrasound for a living. Really I'm pretty clueless about meteorology or hydrology. But the people of that area do deserve an enquiry that explores every possibility, every opinion.

One of the most valuable resources should be the anecdotal evidence of the people of the area themselves. I hope it doesn't become a figure fest which leaves the locals out in the cold. Local knowledge is crucial, like your insight into the nature of the Sandy creek catchment. They deserve a better chance in the future. The way I felt, indeed the way the whole world felt when it saw those images, is just a drop in the bucket compared to the sense of loss in that community right now. I think we can do better for them.

http://forum.weatherzone.com.au/ubbthreads.php/topics/961653/Re_SE_QLD_Flood_Crisis_05_01_2#Post961653

16/02/2011 1.41 pm

I agree with everything you say here Phil. I had a good discussion with Bunyaglen earlier in this thread about the need for the authorities to really get to the bottom of what occurred in the upper Lockyer valley. While at the time his and my opinions differed regarding the role of Sandy creek in the event, we agreed on the need for them to leave no stone unturned, to exclude no possibility, if they are to avoid a repeat of the tragic loss of life. This has to include the verbal and photo/video evidence of the locals as well as a systematic collection of their rainfall data. I hope that the commission doesn't leave it's evidence collecting for too long because the evidence is fast disappearing. With every week it will be harder to identify the path of the overland flows in the valley. Right now it is still plain to see.

Since the flood I have read and heard lots of talk suggesting that there would have had to have been phenomenal falls (up to 150-200mm in an hour) on the escarpment to produce the floods we saw in Toowoomba and at Helidon and yet have not seen a single shred of firm evidence that backs this up. The boss of the BOM was one of those who quoted 200mm. Mostly I think this has happened because it makes it easier for people to say that it was an "impossible to predict" event and for the public to accept it as such. It makes me cranky because it to some extent absolves people from responsibility for failing to warn. It's the old "Act of God" defence. Well I'm sorry if I offend anyone when I say this. The radar doesn't suggest those sorts of falls. The rainfall data I have seen (and I mean "in the gauge" data) do not back that up. I'm not saying it's impossible. Indeed I think it's quite likely there were some falls of 80mm in an hour and more than 100mm in 2 hours but I have yet to see firm evidence of this. I have said all along that people simply do not seem to be able to grasp what 50-60mm in an hour can do on top of an absolutely saturated catchment, particularly a catchment that so rarely sees such circumstances. At Springbrook it would have created a significant downstream flood. In the upper Lockyer it was always going to have disastrous consequences. As Dave pointed out earlier in this thread it was a very big cell, slow-moving and virtually covered the entire Lockyer catchment upstream of Helidon. The fan-shaped nature of the catchment meant that all that water arrived at Helidon at once. The reason why it created the biggest Lockyer flood since European settlement is because it was a truly extraordinary event. I just don't think we need to make it more extraordinary than it was. For people in authority to throw such numbers around without firm evidence is unhelpful at best and butt-covering at worst. While it's fine to extrapolate rainfall data from other data why not go into every house that is still standing in that part of the world and ask them for their rainfall figures for that day. I know what those people are like. They nearly all have a rain gauge. There would be hundreds of them. Throw out all the outliers in the dataset and then we might actually have a better idea of what actually occurred.

Having been prompted by the 60 minutes story on Sunday night, I finally took the heartbreaking drive from Gatton via Grantham to Helidon and return at lunchtime on Monday. I just stuck to the main road. I was not interested in prying into the lives of those so wounded by this event. Understandably they are keen to retain their privacy. I just needed to take that drive for my own sake. After my contribution to the weatherzone forum on the day of the event I have carried a fair bit of burden for those poor folk, indeed some guilt, thinking perhaps I could have done more myself to try to warn them. I can only imagine how bad those who really had the capacity to warn must now feel. Everyone charged with the responsibility of making decisions regarding the outcomes of the commission of enquiry, that is politicians and bureaucrats should watch the sixty minutes story
<http://sixtyminutes.ninemsn.com.au/article.aspx?id=8209653>

The devastating interview with the Keep family from Grantham includes the following:

MICHAEL USHER: In the heart-breaking aftermath, Matt and Stacey are left to wonder how different things could have been if they'd been warned of the coming danger. Why weren't there warnings?

MATTHEW KEEP: That's something we will find out, Michael. That's something that does need to be answered. They evacuated people out of town Sunday night before this, hey? No-one come to evacuate anyone this day.

MICHAEL USHER: If you'd had just a few minutes warning?

MATTHEW KEEP: Five minutes would have been enough.

MICHAEL USHER: Five?

MATTHEW KEEP: Oh, probably two. Two.

MICHAEL USHER: A matter of minutes. Lost minutes that cost a young family so dearly.

My drive on Monday convinced me that we could have given them at least 45 minutes perhaps even longer, because it convinced me that the water that shattered their lives was, as Phil has suggested, virtually all water from the tributaries of Lockyer Creek on the northern side of the Warrego Hwy upstream of Helidon. In other words, it was the same water that smashed the gauge at Helidon. I don't know how long it took the water to get to Grantham from Helidon. But however long it took is how much warning they should have had. As I suggested earlier in this thread the volume of water in the creek was so great that it simply failed to negotiate the u-turn bend in the Lockyer creek at Carpendale and poured overland down the lowest side of the valley along the Gatton-Helidon road into Grantham. Driving further west of this bend in the creek toward Helidon there is virtually no sign of a flood because it is the high side of the valley.

Once the water left the creek a number of factors conspired against the folk of Grantham. First among these is that as I suspected the town is situated on land that is perhaps a couple of metres lower in elevation than the land on the southern side of the valley where the actual creek is situated. Secondly, the valley is reasonably narrow at this point with small hills on both the northern and southern side of the valley serving to funnel the water. Indeed the hill that the northern half of the town itself sits on was a contributing factor. So although virtually the whole valley was submerged at Grantham the water was significantly deeper on the Northern side of the valley, right in the main street. Finally, even though it was overtopped, the railway line embankment clearly acted as a dam causing water on its southern side between the railway and the Gatton-Helidon road to be even deeper. This is clearly in evidence in the 60 minutes clip at 5:22. This corresponds to the area of greatest devastation in the town.

I'm not sure what inspired this rant today. Could have been my drive. Could have been the 60 minutes story. Could have been the look on Matthew Keep's face. All I know is we've gotta be able to do better next time.

*Keep safe All
Neil*