

**Leanne Bond – Statement and attachments
dated 31 January 2012**

**IN THE MATTER OF
THE QUEENSLAND FLOODS COMMISSION OF INQUIRY 2011**

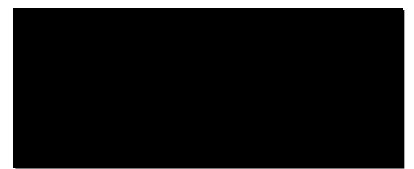
**A COMMISSION OF INQUIRY UNDER THE
COMMISSIONS OF INQUIRY ACT 1950**

**AND PURSUANT TO THE
COMMISSIONS OF INQUIRY ORDER (No. 1) 2011**

STATEMENT OF LEEANNE BOND

On the 31st day of January 2012, I, **Leeanne Bond**, of C/- 240 Margaret Street, Brisbane, state on oath:

1. I am a member of the Board of the Queensland Bulk Water Supply Authority ("Seqwater").
2. This statement is provided to the Queensland Floods Commission of Inquiry pursuant to a "Requirement to Provide Statement" issued by the Commission dated 27 January 2012 (the *Requirement*).
3. I have known Mr O'Brien for many years. I worked very closely with him for a number of years when we were both employees of Worley Parsons. We had a very positive working relationship. I regard him as a friend.
4. In the middle of the flood in January 2011, I received an email from Mr O'Brien regarding the management of Wivenhoe Dam. He suggested in the email that the people in charge of the dam "ought to go". This email is the first email in the bundle annexed to this statement as **Attachment LB1**. I recall feeling that the timing of Mr O'Brien's email was inappropriate given the flood was still in full swing and people were about to start the process of trying to clean up.
5. Over the next few days I exchanged a number of emails with Mr O'Brien. To the best of my recollection, all of these emails are included in **Attachment LB1**.
6. To the best of my recollection, I also spoke with Mr O'Brien regarding the matters referred to in the Requirement on three occasions. My best recollection of these discussions is as follows:





- (a) I spoke to Mr O'Brien by telephone on Friday 14 January 2011. I recall he said words to the effect that he was 'very angry about this', and felt the dam had been/was being mismanaged. He said something like 'no-one will ever accept an engineered solution now'.
 - (b) I spoke with Mr O'Brien by telephone on Monday 17 January 2011. Mr O'Brien asked me how 'mad are you at me', which was a reference to the fact that Mr O'Brien had gone to the press on Sunday and some articles had appeared referencing his views. I replied to the effect that how I felt did not matter but that his actions may hurt a lot of good people. This comment was in relation to the staff of Seqwater who had managed the flood event.
 - (c) I spoke with Mr O'Brien by telephone on or about Wednesday 19 January 2011. I said to him words to the effect that even if I could convince him he was wrong I could not talk to him because a commission had been called and lawyers were now involved.
7. I sent the exchange on to Mr Hennessy, the Chairman of Seqwater and spoke with him to ensure he had received it. I believe that all of my email exchanges with Mr Hennessy are included in the bundle shown in **Attachment LB1**. We discussed my exchanges with Mr O'Brien in subsequent Board meetings. We decided that it was not appropriate for me to continue corresponding with Mr O'Brien. I was comfortable with that decision as I expected, based on the perception I had formed of Mr O'Brien over a number years, that he would pursue the matter and he would raise it with the Commission of Inquiry and it would be considered as part of that process.
 8. I also sent the exchange to Mr Borrows, Seqwater's Chief Executive Officer, for him to have someone look into the technical aspects of Mr O'Brien's comments. As I understood Mr O'Brien's main issue, it was that not enough water had been released early in the event and then Seqwater panicked and released too much water. I received an initial response from Mr Borrows to this on 17 January 2011. This email is in the bundle shown as **Attachment LB1**.
 9. Following this, on 18 January 2011 Mr Hennessy sent out to the Board members a list of work that needed to be completed. I agreed with this as it involved the preparation of a technical response to the issues Mr O'Brien had raised and also the engagement of an independent expert to peer review the work of Seqwater in managing the flood. I was content to let the technical experts consider the matters and give us their views.
 10. On 3 February 2011, I sent an email to Mr Borrows attaching all of my earlier exchanges with Mr O'Brien. The email and the attachments, given their size, have been copied electronically

and are attached and marked **Attachment LB2**. I met with Mr Borrows later that day and indicated to him that I wanted him to have the matters raised by Mr O'Brien considered to see if there was any substance in what Mr O'Brien was saying.

11. In subsequent Board meetings, we discussed the ongoing press reports, the Commission of Inquiry and the work being performed by the technical experts. Much of that press, as I understood it, seemed to pick up Mr O'Brien's issue. I drew the Board's attention to the fact Mr O'Brien had communicated with me on a number of occasions. Whilst I cannot now recall the specifics of the discussions, I do recall that the substance of the Board's view was that Mr Borrows should have Seqwater's engineers and independent experts consider if there was any substance in what Mr O'Brien was saying.
12. At no time after my email exchanges with Mr O'Brien had ceased, up to 2 March 2011, did anyone communicate to me (in writing or orally), as far as I can recall, that there was a possibility that there had been non-compliance with the Manual.

SWORN by **Leeanne Bond** on 31 January 2012 at Brisbane in the presence of:


Deponent


Solicitor

David Anthony,
Solicitor & the
Supreme Court &
Queensland.

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**STATEMENT OF LEEANNE BOND
INDEX OF ANNEXURES**

Annexure No.	Document	Date
LB-1	Bundle of emails	Various
LB-2	Electronic copy of email from me to Mr Borrows	3 February 2011

r LBI u

Leeanne Bond

From: mick.obrien [REDACTED] on behalf of Mick O'Brien <mick.obrien [REDACTED]>
Sent: Thursday, 13 January 2011 8:26 PM
To: lbond [REDACTED]
Subject: SEQWater
Attachments: What went on in Brisbane.pdf

Leeanne, I think you should have trouble at SEQWater. The people in charge up until early Wednesday 12th ought to go.

Mick

What went on in Brisbane?

Was this a natural disaster or a manmade disaster?

First a bit of a disclaimer – I am new to some of this river data and may not have interpreted it all correctly.

First a bit of background: -

- Somerset Dam has a Water Storage capacity of 379,849ML with an additional 524,000ML for flood storage. The dam is rated as 100% full when all the water storage capacity is full. Therefore when both the water storage capacity and flood storage are fully utilised, the dam would be at 238%.
- Wivenhoe has a Water Storage capacity of 1,165,238ML with an additional 1,450,000ML for flood storage. Similarly when both the water storage capacity and flood storage are fully utilised, the dam would be at 224%.
- Somerset is upstream of Wivenhoe and flood flows from Somerset are discharged into Wivenhoe.
- There is a river height monitor at Wivenhoe Dam: -Station Number: 540177 Name: Brisbane R at Wivenhoe Dam Hw # Owner: SEQWCO:143822

SEQWater operate a web site which gives levels in all dams, including Somerset and Wivenhoe; but interestingly, levels for Wivenhoe and Somerset were not updated between 08:00 11th February and 09:00 13th February during the peak of the emergency. Historical data now shown for this period on the SEQWater web site does not show any peak during this period and so are obviously incorrect.

I have therefore used the Wivenhoe Dam river height monitor as a proxy for the dam level during this period. There are some interesting disconnects between the river level data and the reported water levels in Wivenhoe: -

Information from media reports had Wivenhoe at a peak of 191% overnight for the night of 11th/12th; but generally at 190% through most of the emergency period.

The river height shows a height of 73.77m at the time SEQWater were reporting a Wivenhoe capacity of 175.9%. The river experienced a minor peak of 74.51m commencing at 14:57m Tue 11th falling substantially (to 74.19m around 17:45 Tue 11th) until peaking again at 74.85m between 18:00 and 19:23 on Wed 12th (compared to a reported peak in Wivenhoe during the night of 11th/12th). The river level fell gradually, and has continued to fall, from this peak.

The sequence of events for the current flooding event seems to be: -

- 06:30 Tue 04th, Wivenhoe first went above 100% (i.e. using the flood storage capacity).
- Wivenhoe continued to rise, and on Mon 10th it was reported that “managers scrambled to increase the release from 116,000ML to 170,000ML per day.
- At 0800/0900 Tue 11th Wivenhoe was at 175.9%, Somerset at 160.8%; total available capacity for flood storage in both dams stood at 858,642ML. This is the last available data from SEQWater. At this stage the River height at the dam was 73.77m.
- The river (and by assumption the Wivenhoe dam) continued to rise over the next six hours and reached an interim peak of 74.51m at 14:57 Tue 11th.
- At this time the river level started to fall quickly to 74.19m around 17:45 Tue 11th

- Media reports indicate that the discharge from Wivenhoe was increased from 344,000ML/d through 490,000ML/d (both reported by the Courier Mail) to an overnight peak of 645,000ML/d (reported in a media release by the Queensland Police Service).
- SEQWater reported that at 0730 on Wed 12th the releases from Wivenhoe were reduced temporarily to 215,000ML/d to allow Lockyer Creek peak to enter Brisbane River and would subsequently be increased to maintain a maximum flow through Moggill of 301,000ML/d.

Some additional data: -

- SEQWater report that there is a delay of approximately 36 hours between a release at Wivenhoe and a peak at the Brisbane City Gauge.
- It is likely that the rapid drop in the river level at Wivenhoe commencing around 14:57 Tue 11th were due to a substantial increase in the discharge rate from Wivenhoe (645,000ML/d?).
- At around the same time, 16:03 on Tue 11th the Courier Mail reported that Wivenhoe was at 190% and Somerset at 176%, indicating a total capacity for additional flood storage of 636,000ML.
- 36 hours from 14:57 Tue 11th is 02:57 Thu 13th which corresponds almost identically with the peak of 4.46m experienced at the Brisbane City Gauge.

Now for an attempt at interpretation of this sequence: -

- SEQWater were very slow to respond to the initial increase in levels at Wivenhoe and took 6 days before there was any real increase in rate of release from Wivenhoe to return the dam to proper flood management levels. Even though there is apparently a legislated requirement to manage this over 7 days.
- SEQWater then substantially over responded during the afternoon of Tue 11th increasing the discharge to 645,000ML/d. This was at a much higher rate than the current water inflows, resulting in a substantial drop in the level in Wivenhoe. This was even though there was approximately 636,000ML of capacity available for additional flood storage in Wivenhoe and Somerset.
- This substantial increase in the discharge from Wivenhoe was the cause (sole cause?) of the peak in the Brisbane River.
- Early on Wed 12th (07:30), SEQWater recognised that this discharge rate was excessive and reduced it substantially to 215,000ML/d. This discharge rate has been sufficient to ensure that the river level at Wivenhoe (and presumably the dam) did not continue to increase and indeed has allowed the level to gradually fall.

The serious questions are: -

- Why did SEQWater not allow the total available flood storage capacity of Wivenhoe to be utilised during this period?
- What justification was there for the substantial increase in discharge from Wivenhoe to 645,000ML/d when a release rate of 215,000ML/d has been demonstrably sufficient to stop the levels in Wivenhoe rising and while there remained substantial capacity in Wivenhoe for additional flood storage?
- Was this increase to 645,000ML/d the sole reason for the significant flooding in Brisbane?
- Why did it initially take SEQWater 6 days to respond to the gradually increasing water levels in Wivenhoe which reduced its flood control capacity?

Mick O'Brien 13th January 2011

Leeanne Bond

From: mick.obrien [REDACTED] on behalf of Mick O'Brien [REDACTED]
Sent: Friday, 14 January 2011 7:25 AM
To: Leeanne Bond
Subject: Re: SEQWater

Leeanne, I am happy for you to give it to SEQWater; but you probably can't give me any response or additional data. And I would not want to be compromised in who I can send the data to anyway. If SEQWater did want to respond it would probably be better if I sent a copy directly to an SEQWater officer in which case you might want to direct me to the most appropriate guy.

Yes the dams (Somerset and Wivenhoe) were probably within 1.5 days of filling with no releases. But the apparently very high rate of release through Tuesday afternoon and night would have made little fundamental difference to the levels in the dams on Wednesday morning. I don't have the timings; but even if SEQWater released at the low 215,000ML, which is the rate it was reduced to at 07:30 Wed rather than a maximum rate of 645,000ML/d for the whole time from 14:57 on Tues it would have used only 306,000ML of the available free capacity in both dams of apparently 859,000ML.

I find it very difficult to come to any other conclusion other than SEQWater were very slow to respond over the weekend and then had a minor panic on Monday followed by a major panic Tuesday afternoon and then some cooler heads looked at it over Tuesday night.

I do have some suspicion that the maximum level in Wivenhoe of 191% apparently given to the media and then reported is low; because the timings do not quite tie up with the river height data. The SEQWater site temporarily stopped posting dam heights during this period so I have nothing to check it against. But even still, it does not look like Wivenhoe even got close to its maximum potential capacity of 224%.

If there was any potential issue for collapse of Wivenhoe (or Somerset as I have seen on some blogs) below this 224% level that would be a separate issue and just as significant.

Mick

On 13 January 2011 23:40, Leeanne Bond [REDACTED] wrote:
Hi Mick,

We will have a full review in due course but what I do know is that until Tuesday night we had significant inflows. I interpreted that it was reduced rainfall that enabled reduction in discharge on Tuesday night which certainly saved many houses. When I flew home from Perth I heard that ongoing rain for 1.5 days would fill the dam (i can't remember if that was the news or from Seqwater). The consequences of any structural breach of the dam are unimaginable.

Are you happy for me to ask Seqwater to respond to this or provide accurate figures to you? Or are you going to submit it yourself?

The flood operations centre has expertise from Seqwater, SunWater, the dam safety regulator, bureau of meteorology and others like emergency services and local government.

Sent from my iPad

On 13/01/2011, at 8:25 PM, "Mick O'Brien" [REDACTED] wrote:

> Leeanne, I think you should have trouble at SEQWater. The people in charge up until early Wednesday

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Thanks

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From: mick.obrien [REDACTED] on behalf of Mick O'Brien [REDACTED] >
Sent: Friday, 14 January 2011 10:40 AM
To: Leeanne Bond
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Thanks, I was looking at the SEQWater site; but I will also look at the watergrid site.

Yes the river height data came from BOM.

Obviously for Wivenhoe and Somerset the aim will be to get the levels down as quickly as possible without adding to the flooding in Brisbane and Ipswich. At least from the reporting around now it seems that the flooding is abating; but I can't tell if the dams are yet falling.

Mick

On 14 January 2011 11:03, Leeanne Bond [REDACTED] wrote:
I'm not aware of any structural concerns but of course it is a key component to ensure the dam doesn't overtop to prevent this and to keep some control over releases.

Which site are you referring to for info? If you haven't already, have a look at the water grid media releases which give you timings and flows. www.watergrid.com.au/media. There is an rss feed too. All water grid announcements go through here - Seqwater doesn't separately make announcements to make it simpler for the media. BOM would also have some public info I assume. I don't know how quickly the dam levels on the website are updated so I think the media releases might be the best reference.

I have every confidence in the flood control centre operations but of course will follow through with your concerns. My main concern right now is that we are prepared for any future weather patterns - any insight into that?

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On 14/01/2011, at 7:24 AM, "Mick O'Brien" [REDACTED] wrote:

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To: lbond [REDACTED]
Subject: Re: SEQWater

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Sent from my iPad

On 14/01/2011, at 7:24 AM, "Mick O'Brien" [REDACTED] wrote:

Leeanne, I am happy for you to give it to SEQWater; but you probably can't give me any response or additional data. And I would not want to be compromised in who I can send the data to anyway. If SEQWater did want to respond it would probably be better if I sent a copy directly to an SEQWater officer in which case you might want to direct me to the most appropriate guy.

Yes the dams (Somerset and Wivenhoe) were probably within 1.5 days of filling with no releases. But the apparently very high rate of release through Tuesday afternoon and night would have made little fundamental difference to the levels in the dams on Wednesday morning. I don't have the timings; but even if SEQWater released at the low 215,000ML, which is the rate it was reduced to at 07:30 Wed rather than a maximum rate of 645,000ML/d for the whole time from 14:57 on Tues it would have used only 306,000ML of the available free capacity in both dams of apparently 859,000ML.

I find it very difficult to come to any other conclusion other than SEQWater were very slow to respond over the weekend and then had a minor panic on Monday followed by a major panic Tuesday afternoon and then some cooler heads looked at it over Tuesday night.

I do have some suspicion that the maximum level in Wivenhoe of 191% apparently given to the media and then reported is low; because the timings do not quite tie up with the river height data. The SEQWater site temporarily stopped posting dam heights during this period so I have nothing to check it against. But even still, it does not look like Wivenhoe even got close to its maximum potential capacity of 224%.

If there was any potential issue for collapse of Wivenhoe (or Somerset as I have seen on some blogs) below this 224% level that would be a separate issue and just as significant.

Mick

On 13 January 2011 23:40, Leeanne Bond [REDACTED] wrote:

Hi Mick,

We will have a full review in due course but what I do know is that until Tuesday night we had significant inflows. I interpreted that it was reduced rainfall that enabled reduction in discharge on Tuesday night which certainly saved many houses. When I flew home from Perth I heard that ongoing rain for 1.5 days would fill the dam (i can't remember if that was the news or from Seqwater). The consequences of any structural breach of the dam are unimaginable.

Are you happy for me to ask Seqwater to respond to this or provide accurate figures to you? Or are you going to submit it yourself?

The flood operations centre has expertise from Seqwater, SunWater, the dam safety regulator, bureau of meteorology and others like emergency services and local government.

Sent from my iPad

On 13/01/2011, at 8:25 PM, "Mick O'Brien" [REDACTED] wrote:

> Leeanne, I think you should have trouble at SEQWater. The people in charge up until early Wednesday 12th ought to go.

>

>

> Mick

> <What went on in Brisbane.pdf>

--

Thanks

Mick

--

Thanks

Mick

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Leeanne Bond

From: Hennessy, Phil A [REDACTED]
Sent: Monday, 17 January 2011 8:55 AM
To: Leeanne Bond
Cc: Peter Borrows
Subject: Re: Seqwater status

Peter has a Ministerial briefing this morning and has forwarded to us the details making up that briefing. Apparently the Australian refers to your mate as the reporters source and to the fact he sent a report to a Seqwater director(I haven't seen it yet)Peter is unpacking the contents of that article. I have spoken to John Bradley and ensured we are on the same page as the Govt-at that stage we were Seqwater has email and access to premises I will speak to Peter post the Ministerial with a view to setting an appropriate time for a briefing Regards Phil

Phil Hennessy

On 17/01/2011, at 8:06 AM, "Leeanne Bond" [REDACTED] wrote:

- > Is there any update from Peter? Could we have a briefing?
- >
- > In particular, are they back on email? Do they have a temporary brisbane office? Is the pool next to our office putting our building at risk?
- >
- > Sent from my iPad

Leeanne Bond

From: Leeanne Bond [REDACTED]
Sent: Monday, 17 January 2011 8:32 AM
To: 'Peter Borrows'
Subject: did you receive my 3 emails?

Hi Peter

can you please confirm that you have received my 3 emails? I sent them from my iPad and hope they got to you.

1. one has the 1 page 'report' written by Mick and sent to me on Thursday night.
2. I replied on Friday and sent you the original email and my reply on Friday. I tried not to get defensive or to engage in a debate but to calm him down and point him to accurate information as he was making very big assumptions.
3. Then I sent another email to you after my last communication with Mick - I thought he was cooling down.

I called Phil on Friday morning and made sure he was aware of it as I figured he was in contact with you. I tried your mobile but could not get through due to congestion.

I'm happy to intercede with Mick if it helps. As background, I worked closely with him at WorleyParsons - he ran the pipelines group and I ran everything else. He is now the GM Operations for Metgasco (coal seam methane). He is a chemical engineer.

regards,

Leeanne Bond
Director
Breakthrough Energy Pty Ltd
PO Box 225, Wilston Qld 4051
Phone: [REDACTED]
mobile [REDACTED]

Leeanne Bond

From: mick.obrien [REDACTED] on behalf of Mick O'Brien [REDACTED]
Sent: Monday, 17 January 2011 10:22 AM
To: Leeanne Bond
Subject: Brisbane Flooding
Attachments: What went on in Brisbane - Rev 1A.pdf; Release.xlsx; What is happening in Brisbane - Rev 3.xlsx

Leeanne, attached is an updated version of the paper that I sent through to you - called Rev 1A - Hedley Thomas has this.

A spreadsheet called Release, which is the data I collated from the web sites on the weekend so that I could confirm the release rates that I had pulled from newspapers.

And then a third spreadsheet which contains all the data plus some workings.

Thanks

Mick

What went on in Brisbane?

Was this a natural disaster or a manmade disaster?

First a bit of a disclaimer – I am new to some of this river data and may not have interpreted it all correctly.

First a bit of background: -

- Somerset Dam has a Water Storage capacity of 379,849ML with an additional 524,000ML for flood storage. The dam is rated as 100% full when all the water storage capacity is full. Therefore when both the water storage capacity and flood storage are fully utilised, the dam would be at 238%.
- Wivenhoe has a Water Storage capacity of 1,165,238ML with an additional 1,450,000ML for flood storage. Similarly when both the water storage capacity and flood storage are fully utilised, the dam would be at 224%.
- Somerset is upstream of Wivenhoe and flood flows from Somerset are discharged into Wivenhoe.
- There is a river height monitor at Wivenhoe Dam: -Station Number: 540177 Name: Brisbane R at Wivenhoe Dam Hw # Owner: SEQWCO:143822

SEQWater operate a web site which gives levels in all dams, including Somerset and Wivenhoe; but interestingly, levels for Wivenhoe and Somerset were not updated between 08:00 11th February January and 09:00 13th February January during the peak of the emergency. Historical data now shown for this period on the SEQWater web site does not show any peak during this period and so are obviously incorrect.

I have therefore used the Wivenhoe Dam river height monitor as a proxy for the dam level during this period. There are some interesting disconnects between the river level data and the reported water levels in Wivenhoe: -

Information from media reports had Wivenhoe at a peak of 191% overnight for the night of 11th/12th; but generally at 190% through most of the emergency period.

The river height shows a height of 73.77m at the time SEQWater were reporting a Wivenhoe capacity of 175.9%. The river experienced a minor peak of 74.51m commencing at 14:57m Tue 11th falling substantially (to 74.19m around 17:45 Tue 11th) until peaking again at 74.85m between 18:00 and 19:23 on Wed 12th (compared to a reported peak in Wivenhoe during the night of 11th/12th). The river level fell gradually, and has continued to fall, from this peak.

The sequence of events for the current flooding event seems to be: -

- 06:30 Tue 04th, Wivenhoe first went above 100% (i.e. using the flood storage capacity).
- Wivenhoe was at 106.3% at 06:00 on Fri 7th; but there are no reported heights for Sat 8th or Sun 9th.
- Wivenhoe continued to rise, and at 09:00 on Mon 10th it was at 148.4% and it was reported that "managers scrambled to increase the release from 116,000ML to 170,000ML per day.
- At 0800/0900 Tue 11th Wivenhoe was at 175.9%, Somerset at 160.8%; total available capacity for flood storage in both dams stood at 858,642ML. This is the last available data from SEQWater. At this stage the River height at the dam was 73.77m.
- The river (and by assumption the Wivenhoe dam) continued to rise over the next six hours and reached an interim peak of 74.51m at 14:57 Tue 11th.

- At this time the river level started to fall quickly to 74.19m around 17:45 Tue 11th
- Media reports indicate that the discharge from Wivenhoe was increased from 344,000ML/d through 490,000ML/d (both reported by the Courier Mail) to an overnight peak of 645,000ML/d (reported in a media release by the Queensland Police Service).
- SEQWater reported that at 0730 on Wed 12th the releases from Wivenhoe were reduced temporarily to 215,000ML/d to allow Lockyer Creek peak to enter Brisbane River and would subsequently be increased to maintain a maximum flow through Moggill of 301,000ML/d.

Some additional data: -

- SEQWater report that there is a delay of approximately 36 hours between a release at Wivenhoe and a peak at the Brisbane City Gauge.
- It is likely that the rapid drop in the river level at Wivenhoe commencing around 14:57 Tue 11th was due to a substantial increase in the discharge rate from Wivenhoe (645,000ML/d?).
- At around the same time, 16:03 on Tue 11th the Courier Mail reported that Wivenhoe was at 190% and Somerset at 176%, indicating a total capacity for additional flood storage of 636,000ML.
- 36 hours from 14:57 Tue 11th is 02:57 Thu 13th which corresponds almost identically with the peak of 4.46m experienced at the Brisbane City Gauge.

Now for an attempt at interpretation of this sequence: -

- SEQWater were very slow to respond to the initial increase in levels at Wivenhoe and took 6 days before there was any real increase in rate of release from Wivenhoe to return the dam to proper flood management levels. Even though there is apparently a legislated requirement to manage this over 7 days.
- SEQWater then substantially over responded during the afternoon of Tue 11th increasing the discharge to 645,000ML/d(?). This was at a much higher rate than the current water inflows, resulting in a substantial drop in the level in Wivenhoe. This was even though there was approximately 636,000ML of capacity available for additional flood storage in Wivenhoe and Somerset.
- This substantial increase in the discharge from Wivenhoe was the cause (sole cause?) of the peak in the Brisbane River.
- Early on Wed 12th (07:30), SEQWater recognised that this discharge rate was excessive and reduced it substantially to 215,000ML/d. This discharge rate has been sufficient to ensure that the river level at Wivenhoe (and presumably the dam) did not continue to increase and indeed has allowed the level to gradually fall.
- Hindsight is a wonderful thing; but there are really two decisions that were taken which would seem to have little justification at the time they were made. These are: -
 - Not increasing releases from Wivenhoe between the 4th and the 10th when the dam levels were rising and there was no downstream flooding, and
 - The decision to substantially increase the discharge rate from Wivenhoe to a peak of 645,000ML/d on the afternoon/night Tue 11th.
- It is difficult to understand the justification for this increase in the discharge rate, especially as the decision was substantially reversed within about 12 hrs. In addition even if SEQWater had released at the low rate of 215,000ML/d (which is the rate it was reduced to at 07:30 Wed) rather than a maximum rate of 645,000ML/d for the whole time from 14:57 on Tues it would have used only 306,000ML of the available free capacity in both dams of apparently 859,000ML.

The serious questions are: -

- Why did SEQWater not allow the total available flood storage capacity of Wivenhoe to be utilised during this period?
- What justification was there for the substantial increase in discharge from Wivenhoe to 645,000ML/d when a release rate of 215,000ML/d has been demonstrably sufficient to stop the levels in Wivenhoe rising and while there remained substantial capacity in Wivenhoe for additional flood storage?
- Was this increase to 645,000ML/d the sole reason for the significant flooding in Brisbane?
- Why did it initially take SEQWater 6 days to respond to the gradually increasing water levels in Wivenhoe which reduced its flood control capacity?

Rev 1A Mick O'Brien 14th-16th January 2011

Date & Time	Wivenhoe Capacity		Somerset Capacity		Releas
	ML	%	ML	%	Wivenhoe ML/d
Fri 31-Dec-10		112.7%		100.0%	No Report
Sat 01-Jan-11					No Report
Sun 02-Jan-11					No Report
Mon 03-Jan-11					No Report
Tue 04-Jan-11		102.1%		102.9%	No Report
Wed 05-Jan-11		102.4%		103.2%	No Report
Thu 06-Jan-11		103.2%		103.8%	Releases commenced during the evening of the 6th
Fri 07-Jan-11		106.3%		107.2%	No Report
Sat 08-Jan-11					Expected to reach 100,000ML/d by afternoon
Sun 09-Jan-11					116,000
Mon 10-Jan-11		148.4%		154.7%	116,000 increased to 172,000
Tue 11-Jan-11		175.9%		160.0%	236000 increased to 490,000 with a peak of 645,000 overnight
Wed 12-Jan-11		188.5%		189.7%	215,000
Thu 13-Jan-11	2172604	186.5%	651026	171.4%	228,000
Fri 14-Jan-11	2085584	179.0%	559552	147.3%	301,000
Sat 15-Jan-11		163.0%		129.0%	301,000
Sun 16-Jan-11					

Dam	Water Storage Capacity (ML)	Flood Storage Capacity (ML)	Total Capacity (%)
Somerset	379849	524000	237.9%
Wivenhoe	1165238	1450000	224.4%

e Rate	Comment
Somerset	
ML/d	
No Report	
No Report	No dam level reports available on SEQWater site
No Report	No dam level reports available on SEQWater site
No Report	No dam level reports available on SEQWater site
No Report	
No Report	
Through Regulator Valve	
Through Regulator Valve	
Through Regulator Valve	No dam level reports available on SEQWater site
Through sluice gates	No dam level reports available on SEQWater site
Through sluice gates	
No Report	
No Report	
123,000	
111,800	
79,000	No reports from either SEQWater or WaterGrid

Sources

www.seqwater.com.au/public/dam-levels

www.seqwater.com.au/public/dam-levels

www.seqwater.com.au/public/dam-levels

www.seqwater.com.au/public/dam-levels

www.seqwater.com.au/public/dam-levels

www.watergrid.com.au

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www.seqwater.com.au/public/dam-levels

www.watergrid.com.au

www.watergrid.com.au

From: "Leeanne Bond" [REDACTED]
Date: 17 January 2011 10:41:55 AM GMT+10:00
To: "Peter Borrows" [REDACTED] <phennessy [REDACTED]>
Subject: FW: Brisbane Flooding
Reply-To: <[REDACTED]>

I rang Mick and asked if there had been another email that I missed as the newspaper article indicated that he had worked the weekend on it. He said he had updated his documents with more accurate references and he has now sent me the same version that he sent Hedley Thomas. He has also given me the backup data he used to reach his conclusion.

He said he is very angry as he believes that Brisbane would not have been flooded if action was taken to increase releases on Sunday when the met data said there would be substantial rainfall. This is his key point.

He says releases should have been 300,000ML per day on Sunday, Monday and Tuesday and that would have allowed water to get away before the Lockyer waters reached Brisbane and flooding to be more like current inundation levels. He says even on Tuesday morning releases were only 212,000 indicating a slow response to the situation. That meant on Tuesday afternoon there was a sudden increase which caused the widespread flooding.

He is happy to talk to Seqwater and I can give you his contact details (mobile [REDACTED] email mick.obrien [REDACTED] told him there are lots of operational issues (water treatment, buildings etc) so you might not get back to him straight away.

Leeanne Bond
Director
Breakthrough Energy Pty Ltd
PO Box 225, Wilston Qld 4051
Phone [REDACTED]
mobile [REDACTED]

From: mick.obrien [REDACTED] **On Behalf Of** Mick O'Brien
Sent: Monday, 17 January 2011 10:22 AM
To: Leeanne Bond
Subject: Brisbane Flooding

Leeanne, attached is an updated version of the paper that I sent through to you - called Rev 1A - Hedley Thomas has this.

A spreadsheet called Release, which is the data I collated from the web sites on the weekend so that I could confirm the release rates that I had pulled from newspapers.

And then a third spreadsheet which contains all the data plus some workings.

Thanks

Mick

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Leeanne Bond

From: Peter Borrow [REDACTED]
Sent: Monday, 17 January 2011 5:31 PM
To: Hennessy, Phil A; Ibond [REDACTED] lbouly [REDACTED]
Tom Fenwick; Ian Fraser
Cc: Peter Borrow
Subject: FW: Australian Questions 17-Jan & Mr O'Brien
Attachments: Australian Questions 17-Jan & Mr O'Brien (31.4 KB); Australian Questions 17-Jan with answers.doc

FYI – Confidential at this stage.

These have now been held pending legal advice given the announcement of the Royal Commission.

I have also added some comments from Bob Reilly that will be incorporated in the answers – we want them packaged for when they are necessary. Bob's message is that we used almost all of the flood compartment and the dam was rising at between 4.5% and 5% per hour at the time – good indicators that the operations of the dam was appropriate given the circumstances.

There will also be some amendment to the comment about agreement with BoM, not because they disagree, rather, they only talk in river levels and not flows.

Regards, Peter.

Peter Borrow
Chief Executive Officer
Queensland Bulk Water Supply Authority *trading as Seqwater*



Ph: [REDACTED]
Level 3, 240 Margaret St, Brisbane City QLD 4000
PO Box 16146, City East QLD 4002
Website | www.seqwater.com.au



From: Peter Borrow
Sent: Monday, 17 January 2011 2:46 PM
To: 'barry.dennien' [REDACTED]
Cc: 'daniel.spiller' [REDACTED]; 'bob.reilly' [REDACTED]; 'peter.alle' [REDACTED]; Rob Drury; John Tibaldi; Jim Pruss
Subject: FW: Australian Questions 17-Jan & Mr O'Brien

Barry.

First 4 questions are answers to Mr O'Brien.

The rest are the Australian.

Regards, Peter.

Peter Borrows
Chief Executive Officer
Queensland Bulk Water Supply Authority trading as Seqwater



Ph [REDACTED]
Level 3, 240 Margaret St. Brisbane City QLD 4000
PO Box 16146, City East QLD 4002
Website | www.seqwater.com.au



From: John Tibaldi
Sent: Monday, 17 January 2011 2:36 PM
To: Peter Borrows
Cc: Arnou Pruden
Subject: Australian Questions 17-Jan (subject to BOM confirmation on one number)

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Leeanne Bond

From: Reilly Bob [REDACTED]
Sent: Monday, 17 January 2011 4:02 PM
To: Peter Borrows; Dennien Barry @ SEQWGM
Cc: spiller daniel @ SEQWGM; Allen Peter; Rob Drury; John Tibaldi; Jim Pruss
Subject: RE: Australian Questions 17-Jan & Mr O'Brien

Hi Peter

I suggest that we incorporate into these answers, where relevant, the flood capacity value which we actually reached i.e 191% (I think) You could also think about including the rate of increase, expressed in these terms, in the peak inflow events on Tuesday. Taken together, these two figures demonstrate that the dam was being operated appropriately, given the circumstances.

Regards

Bob

From: Peter Borrows [REDACTED]
Sent: Monday, 17 January 2011 2:46 PM
To: Dennien Barry @ SEQWGM
Cc: spiller daniel @ SEQWGM; Reilly Bob; Allen Peter; Rob Drury; John Tibaldi; Jim Pruss
Subject: FW: Australian Questions 17-Jan & Mr O'Brien

Barry.

First 4 questions are answers to Mr O'Brien.

The rest are the Australian.

Regards, Peter.

Peter Borrows
Chief Executive Officer
Queensland Bulk Water Supply Authority *trading as Seqwater*



Ph [REDACTED]
Level 3, 240 Margaret St, Brisbane City QLD 4000
PO Box 16146, City East QLD 4002
Website | www.seqwater.com.au



Swimming in weirs and fast
flowing water is FATAL.
rethink it.

From: John Tibaldi
Sent: Monday, 17 January 2011 2:36 PM
To: Peter Borrows
Cc: Arnou Pruden
Subject: Australian Questions 17-Jan (subject to BOM confirmation on one number)

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+-----+

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JANUARY 2011 FLOOD EVENT QUESTIONS AND ANSWERS

Why did Seqwater not allow the total available flood storage capacity of Wivenhoe to be utilised during this period?

- Wivenhoe Dam is not designed to overtop. If it did, the dam would fail and the resulting damage and loss of life would be at least 100 to 1,000 times greater than that currently being experienced.
- To ensure that this never occurs, the dam has been designed with fuse plugs that automatically open when it reaches more than 200% of full supply volume.
- Once triggered, the rate of release through these plugs cannot be varied.
- The plugs continue to release water at this rate until the dam reaches full supply level.
- The fuse plugs would take four to six months of dry weather to repair, and severely restrict the capability to manage further flood events during this period.
- Flood operations were managed to ensure a buffer below 200% to allow for possibilities of further extensive inflows to ensure that the dam does not fail.

What justification was there for the substantial increase in discharge from Wivenhoe to 645,000ML/d when a release rate of 215,000ML/d has been demonstrably sufficient to stop the levels in Wivenhoe rising and while there remained substantial capacity in Wivenhoe for additional flood storage?

At the peak of the event a discharge rate of 215,000ML/d would not have been sufficient to stop the levels in Wivenhoe rising.

The reasons why the remaining flood storage capacity in Wivenhoe Dam was not used at the peak of the event are contained in the answer to the previous question.

Was this increase to 645,000ML/d the sole reason for the significant flooding in Brisbane?

The Bureau of Meteorology has stated that, even at their peak, outflows from Wivenhoe Dam contributed slightly more than half the flood arriving in Brisbane (Courier Mail, 14 January). Seqwater agrees with this assessment.

Based on the fact that the current event was one meter lower than the 1974 event, BOM and Seqwater have agreed that the flow in the Lower Brisbane River at the peak of the event was in the order of 690,000ML/d. Accordingly outflows from Wivenhoe Dam contributed around 350,000ML/d to the total flow at this time. The difference between this flow and the peak outflow from Wivenhoe Dam during the event is due to attenuation effects along the length of the river as would be expected in such an event.

Why did it initially take SEQWater 6 days to respond to the gradually increasing water levels in Wivenhoe which reduced its flood control capacity?

Seqwater responded immediately to increases in storage level by commencing releases from Wivenhoe Dam at the commencement of the flood event. When managing a flood event using Wivenhoe Dam, the primary objectives in order of importance are:

- Ensure the structural safety of the dams;
- Provide optimum protection of urbanised areas from inundation;
- Minimise disruption to rural life in the valleys of the Brisbane and Stanley Rivers. Primarily this involves minimising inundation of the seven bridges below the dam upstream of Moggill.

The most recent four flood events (commencing October 2011), demonstrate the importance of following these objective to minimise overall downstream flood impacts.

Why did Seqwater permit the flood storage capacity to build up so much over the weekend?

Seqwater commenced releases from Wivenhoe Dam at the start of the flood event on 7 January 2011. When managing a flood event using Wivenhoe Dam, the primary objectives in order of importance are:

- Ensure the structural safety of the dams;
- Provide optimum protection of urbanised areas from inundation;
- Minimise disruption to rural life in the valleys of the Brisbane and Stanley Rivers. Primarily this involves minimising inundation of the seven bridges below the dam upstream of Moggill.

The most recent four flood events (commencing October 2011), demonstrate the importance of following these objective to minimise overall downstream flood impacts.

Why did Seqwater not release significantly greater volumes on Friday, Saturday and Sunday, prior to the freak rainfall event on Monday over the Toowoomba escarpment?

No agency or person was able to forecast the freak rainfall event on Monday over the Toowoomba escarpment prior to it occurring. Therefore it was not possible to ramp up releases to cater for this freak event before it actually occurred.

What does Seqwater say to the suggestion that its strategy to limit the releases on the weekend meant its storage buffer was limited, necessitating a massive outflow on Tuesday of 645,000 megalitres?

The peak outflow that occurred for three hours of 645,000 ML/d (total volume of 80,625 megalitres) does not reflect the impact at Brisbane due to the attenuation effects of the river. The Bureau of Meteorology has stated that, even at their peak, outflows from Wivenhoe Dam contributed slightly more than half the flood arriving in Brisbane (Courier Mail, 14 January). Seqwater agrees with this assessment.

Based on the fact that the current event was one meter lower than the 1974 event, BOM and Seqwater have agreed that the flow in the Lower Brisbane River at the peak of the event was in the order of 690,000ML/d. Accordingly outflows from Wivenhoe Dam contributed around 350,000ML/d to the total flow at this time. The difference between this flow and the peak outflow from Wivenhoe Dam during the event is due to attenuation effects along the length of the river as would be expected in such an event.

What does Seqwater say to the suggestion that this 645,000 megalitres release was responsible for more than 80 per cent of the peak flow rate (which you advised me last Friday was about 9000 cubic metres per second in Brisbane)?

The Bureau of Meteorology has stated that, even at their peak, outflows from Wivenhoe Dam contributed slightly more than half the flood arriving in Brisbane (Courier Mail, 14 January). Seqwater agrees with this assessment.

Based on the fact that the current event was one meter lower than the 1974 event, BOM and Seqwater have agreed that the flow in the Lower Brisbane River at the peak of the event was in the order of 690,000ML/d. Accordingly outflows from Wivenhoe Dam contributed around 350,000ML/d to the total flow at this time. The difference between this flow and the peak outflow from Wivenhoe Dam during the event is due to attenuation effects along the length of the river as would be expected in such an event.

What does Seqwater say to the suggestion that its delay in responding to the increasing water levels at Wivenhoe forced its management to take rash action on Tuesday, which produced the flood in Brisbane?

No rash action was taken at any time during the flood event in managing releases from Wivenhoe Dam. Wivenhoe dam reduced flood levels in Brisbane by up to 2.5 metres in Brisbane city and a metre from the BOM peak flood level forecast. This was achieved by following carefully considered objectives and procedures.

Seqwater commenced releases from Wivenhoe Dam at the start of the flood event on 7 January 2011. When managing a flood event using Wivenhoe Dam, the primary objectives in order of importance are:

- Ensure the structural safety of the dams;
- Provide optimum protection of urbanised areas from inundation;
- Minimise disruption to rural life in the valleys of the Brisbane and Stanley Rivers. Primarily this involves minimising inundation of the seven bridges below the dam upstream of Moggill.

The most recent four flood events (commencing October 2011), demonstrate the importance of following these objective to minimise overall downstream flood impacts.

Léeanne Bond

From: Peter Borrows [REDACTED]
Sent: Tuesday, 18 January 2011 1:52 PM
To: Ian Fraser; Ibouly [REDACTED] Tom Fenwick;
lbond [REDACTED]
Cc: Hennessy, Phil A; Peter Borrows
Subject: FW:

Phil has asked that I forward this to you. (I do agree with this approach and we have started moving on it.)

Regards, Peter.

Peter Borrows
Chief Executive Officer
Queensland Bulk Water Supply Authority trading as Seqwater

Ph [REDACTED] Level 3, 240 Margaret St, Brisbane City QLD
4000 PO Box 16146, City East QLD 4002 Website | www.seqwater.com.au

-----Original Message-----

From: Hennessy, Phil A [REDACTED]
Sent: Tuesday, 18 January 2011 12:56 PM
To: Peter Borrows
Subject:

Dear Peter

Would you please send the following to Board members from me(if you agree):

Dear Fellow Board Members

I have asked Peter to set up the following so that we are in front of the game for future events:

- our technical response in one comprehensive document that deals with all the issues including the claims made in the Australian -engagement of a communications consultant that can help us articulate our position to the average man in the street-again dealing with all issues in one document-I also believe we have a great story to tell.also some advice about how we can shore up our people who are now getting a kick in the guts after such a great job.although we have a press embargo I have asked Peter to consider what we can tell our own people and how -engagement of lawyers that can advise us through the course of the Commission including those that may be asked to or want to appear.

- engagement of a respected engineer/hydrologist to peer review us as we proceed to ensure we don't start believing or own BS -a dedicated person to keep us engaged in grid communications and responses and to ensure our own strategy takes this into account

We still have a business to run so I want to ensure that we are ahead of the game, over prepared,and in a position to go on the front foot if we choose to.

Peter is preparing some options for Board consideration about what our Dam strategy should be once the dam is back to 100%.We will need to form a view on this shortly so let's put our thinking caps on.

Any other views please let me know.

Thanks

Phil

Phil Hennessy

-----Safe Stamp-----

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QLD Bulk Water Supply Authority ABN75450239876 (Trading as Seqwater).

Leeanne Bond

From: Ian Fraser [REDACTED]
Sent: Tuesday, 18 January 2011 4:41 PM
To: 'Leeanne Bond'
Subject: RE: Australian Questions 17-Jan & Mr O'Brien

Thanks, Leeanne

From: Leeanne Bond [REDACTED]
Sent: Tuesday, 18 January 2011 2:22 PM
To: Ian Fraser
Cc: Peter Borrows; Hennessy, Phil A; [REDACTED]; Tom Fenwick
Subject: Re: Australian Questions 17-Jan & Mr O'Brien

Hi Ian - I also endorse

The 'report' was sent to me by a former colleague on Thursday night. I sent it to Phil & Peter when i opened it on Friday. I tried to defuse it but he went to the paper on Sunday. It was a one page word document. I rang Mick on Monday to get the version he sent to the paper and he also provided his spreadsheets etc.

I tried not to engage in debate but was unable to defuse his concerns. I am very sorry that this stance has been taken by a friend. I'll avoid further contact with him unless asked to get involved.

Sent from Leeanne Bond's iPhone

On 18/01/2011, at 14:11, "Ian Fraser" [REDACTED] wrote:

Peter

Thank you very much for all the information.

I endorse Tom's earlier comments. It must be very challenging for you and your people to read the media articles in recent days but particularly The Australian – a more positive perspective in today's Courier Mail on page 7 though. Who was the SEQWater director who was sent Mr O'Brien's report – yesterday's Australian ?

Regards, Ian

From: Peter Borrows [REDACTED]
Sent: Monday, 17 January 2011 5:31 PM
To: Hennessy, Phil A; lbond [REDACTED] lbouly [REDACTED] Tom Fenwick; Ian Fraser
Cc: Peter Borrows
Subject: FW: Australian Questions 17-Jan & Mr O'Brien

FYI – Confidential at this stage.

These have now been held pending legal advice given the announcement of the Royal Commission.

I have also added some comments from Bob Reilly that will be incorporated in the answers – we want them packaged for when they are necessary. Bob's message is that we used almost all of the flood compartment and the dam was rising at between 4.5% and 5% per hour at the time – good indicators that the operations of the dam was appropriate given the circumstances.

There will also be some amendment to the comment about agreement with BoM, not because they disagree, rather, they only talk in river levels and not flows.

Regards, Peter.

Peter Borrows

Chief Executive Officer

Queensland Bulk Water Supply Authority *trading as Seqwater*

<image001.png>

Ph 


Level 3, 240 Margaret St. Brisbane City QLD 4000
PO Box 16146, City East QLD 4002

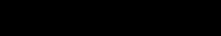
Website | www.seqwater.com.au

<image002.jpg>

From: Peter Borrows

Sent: Monday, 17 January 2011 2:46 PM

To: 'barry.dennier@seqwater.com.au'; 

Cc: 'daniel.spiller@seqwater.com.au'; 'bob.reilly@seqwater.com.au'; 'peter.allen@seqwater.com.au'; 

Rob Drury; John Tibaldi; Jim Pruss

Subject: FW: Australian Questions 17-Jan & Mr O'Brien

Barry.

First 4 questions are answers to Mr O'Brien.

The rest are the Australian.

Regards, Peter.

Peter Borrows

Chief Executive Officer

Queensland Bulk Water Supply Authority *trading as* Seqwater

<image001.png>

Ph 

Level 3, 240 Margaret St, Brisbane City QLD 4000
PO Box 16146, City East QLD 4002

Website | www.seqwater.com.au

<image002.jpg>

From: John Tibaldi

Sent: Monday, 17 January 2011 2:36 PM

To: Peter Borrows

Cc: Arnou Pruden

Subject: Australian Questions 17-Jan (subject to BOM confirmation on one number)

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Leeanne Bond

From: mick.obrien [REDACTED] on behalf of Mick O'Brien [REDACTED]
Sent: Tuesday, 18 January 2011 4:34 PM
To: Leeanne Bond
Subject: Brisbane Flooding

Leeanne, do you want to put me in touch with someone from SEQWater. If I even had a credible answer to my concerns, I would pull my head in very quickly.

However nothing that I have seen subsequently in the press attributed to SEQWater gives me any cause for a rethink.

The major threads that I have seen in the response are: -

1. We managed the dam levels in accordance with our operating procedures
2. The inflow was 2.6 million ML
3. That even with this, Wivenhoe prevented a more serious flood of Brisbane
4. The releases from Wivenhoe was match with peak releases from other streams

Item 1 does not really affect my concern, and even if the procedures had been followed 100% to the letter, it would just mean that my concerns related to the procedures

The second point may be significant, but it would depend over what period this inflow occurred and whether it was into both dam catchments. For instance the combined flood storage volume for both Somerset and Wivenhoe is 1.97 million ML and so we are talking about needing to release 630,000 ML over several days. This would be easily achievable. Even if this was inflow to Wivenhoe only, it still meant that total release of 1.15 million ML was required. Again not difficult over the period that we are talking about if managed properly. So the issue would be the rate of inflow over the various periods of concern - not just the overall rate.

I believe that the Brisbane flood could have been more "severe" without Wivenhoe; but that is not based on any data and I have a residual concern that the peak rate of release at 645,000ML/d exceeded the rate of inflow to the dam at that time and hence the height of the peak in Brisbane might have been higher than otherwise. But I am convinced that the peak was shorter with the dam. But there is no way I can make any assessment of this.

Item 4 just does not seem to be the case and on a lot of the information that I have, it looks like the peak release from Wivenhoe actually corresponded with high flows from downstream streams.

There is also the other possibility that there is a totally different reason for decisions made that is not being discussed. Again I would be very happy to understand and again I would pull my head in.

I have thought of contacting Barry Dennien directly, and may still do that; but he probably could not talk to me. The apparent selective release of information to the Courier mail by Barry also does not inspire me with a lot of confidence.

If you want me to stop contacting you I can also understand.

Thanks

Mick

Leeanne Bond

From: Hennessy, Phil A [REDACTED]
Sent: Wednesday, 19 January 2011 12:09 AM
To: lbond [REDACTED]
Cc: Peter Borrows
Subject: Re: Brisbane Flooding

Let's think about it-it should be a Board decision how we respond if at all.
This ??? has caused a lot of grief-right now my view is to leave him alone and treat him with the contempt he probably deserves.

Regards
Phil

Phil Hennessy

On 18/01/2011, at 9:31 PM, "Leeanne Bond" [REDACTED] wrote:

received this tonight from Mick - I didn't see it before I got on the plane home. I hear he was on the TV tonight but haven't seen it.

I suggest that he talk to us if anyone rather than Barry. I don't think they would get on very well in the circumstances.

please call me when you get this email otherwise I will try you in the morning.

From: [mick.obrien](#) [REDACTED] **On Behalf Of** Mick O'Brien
Sent: Tuesday, 18 January 2011 4:34 PM
To: Leeanne Bond
Subject: Brisbane Flooding

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Mick

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Leeanne Bond

From: mick.obrien [REDACTED] on behalf of Mick O'Brien <mick.obrien [REDACTED]>
Sent: Tuesday, 18 January 2011 9:16 PM
To: Leeanne Bond
Subject: Re: Brisbane Flooding
Attachments: Peter Allen.docx

Leeanne, you will be able to check whether the data that are claiming to be incorrect is so incorrect as to render the conclusion wrong. I know some of the data in the large spreadsheet is not right; for instance there is a lot of inconsistency in the media reported data and the times associated with the media data is the date/time of the media report not the event. But I have not just relied on a single piece of data.

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I have started to try and see if the operation is likely to have complied with the operations manual. The flood operating rules for Wivenhoe have been taken from a paper presented by **Peter Allen**, Director Dam Safety DERM Qld to 34th Annual Qld Water Industry Operations Workshop on 16 to 18 June, 2009. Now I understand that these may have changed in the interim.

But I have attached a preliminary comparison of these requirements against what was reported by WaterGrid. And at least on the surface, it looks to me like there could have been a lack of compliance over the weekend.

You should also be aware that additional data is now being provided by others; who are obviously better informed than I am. While you might believe that SEQwater are not responding publicly, Barry Dennien appears to be selectively briefing journalists.

Mick

On 18 January 2011 19:04, Leeanne Bond <[lbond \[REDACTED\]](#)> wrote:
We are discussing with the board tomorrow as it is likely I will come back to you with our data. I'll try to get back to you asap.

Seqwater have a response and say your figures are incorrect. Due to royal commission we are not responding publically.

Can you hold off til tomorrow afternoon - I'm on the tarmac in melbourne about to fly back to Brisbane.

Sent from Leeanne Bond's iPhone

On 18/01/2011, at 17:34, "Mick O'Brien" [REDACTED] wrote:

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If you want me to stop contacting you I can also understand.

Thanks

Mick

--

Thanks

Mick

Table 2: Flood operating rules for Wivenhoe Dam

Procedure	Reservoir Level	Applicable Limits		
0	EL < 67.25	$Q_{Wivenhoe} \approx 0 \text{ m}^3/\text{sec}$ ie. NO releases		$Q_{Wivenhoe} < 4000 \text{ m}^3/\text{sec}$
1A	67.25 < EL < 67.5	$Q_{Wivenhoe} < 110 \text{ m}^3/\text{sec}$	$Q_{Colleges\ Crossing} < 175 \text{ m}^3/\text{sec}$ with care not to submerge Twin Bridges prematurely	
1B	67.5 < EL < 67.75	$Q_{Wivenhoe} < 210 \text{ m}^3/\text{sec}$	$Q_{Burtons/Noogoorah} < 250 \text{ m}^3/\text{sec}$ with care not to submerge Colleges Crossing prematurely	
1C	67.75 < EL < 68.0	$Q_{Wivenhoe} < 500 \text{ m}^3/\text{sec}$	$Q_{Burtons} < 550 \text{ m}^3/\text{sec}$ with care not to submerge Burtons/Noogoorah prematurely	
1D	68.0 < EL < 68.25	$Q_{Wivenhoe} < 900 \text{ m}^3/\text{sec}$	$Q_{Kholo\ Creek} < 1900 \text{ m}^3/\text{sec}$ with care not to submerge Kholo prematurely	
1E	68.25 < EL < 68.5	$Q_{Wivenhoe} < 1500 \text{ m}^3/\text{sec}$	$Q_{Kholo\ Creek} < 1900 \text{ m}^3/\text{sec}$ with care not to submerge Kholo prematurely	
2	68.5 < EL < 74.0	$Q_{Wivenhoe} < 3500 \text{ m}^3/\text{sec}$	$Q_{Wivenhoe} < \text{peak of Lockyer \&}$ $Q_{Wivenhoe} < \text{peak of Bremer}$ $Q_{Colleges} < 4000 \text{ m}^3/\text{sec}$	Gates ARE NOT to be overtopped
3	68.5 < EL < 74.0	$Q_{Wivenhoe} < 3500 \text{ m}^3/\text{sec}$		
4	EL > 74.0 OR Dam safety may be compromised	Gates are to be opened until reservoir level begins to fall	Gate opening interval restrictions NO longer apply	

Performance against Basic Criteria

	$Q_{Wivenhoe}$ m^3/sec	$Q_{Wivenhoe}$ ML/d	Actual (based on WaterGrid reports)
Procedure 1A should have been implemented prior to 00:46 6 th January 2011	<110	<9500	Releases commenced during the evening of the 6 th Maybe were not complying
Procedure 1B should have been implemented prior to 00:37 7 th January 2011	<210	<18,144	No Report for 7 th
Procedure 1C should have been implemented prior to 08:29 7 th January 2011	<500	<43,200	No Report for 7 th
Procedure 1D should have been implemented prior to 14:34 7 th January 2011	<900	<77,600	No Report for 7 th
Procedure 1E should have been implemented prior to 21:16 7 th	<1500	<129,600	Did not increase release above 116,000ML/d until early Monday

January 2011			10 th Did other limits apply? High flows from Lockyer did not commence until after midday 10 th .
	Q_{Loowood} m³/sec	Q_{Loowood} ML/d	
Procedure 2&3 should have been implemented prior to 07:11 8 th January 2011	<3500	<302,400	Did not increase release above 300,000ML/d until Tuesday 11 th Did other limits apply? High flows from Lockyer did not commence until after midday 10 th .
Procedure 4 should have been implemented prior to 10:49 11 th January 2011			Did not comply till afternoon of 11 th .

From: Leeanne Bond [REDACTED]
Sent: Thursday, 3 February 2011 8:35 AM
To: Peter Borrows

31/01/2012

Subject: email history for commission

Hi Peter

Attached are the emails that I exchanged with Mick O'Brien during the aftermath of the flood, as well as to yourself and Phil. I know that email was disrupted so I've put them together so you can pass them on to whoever is managing the response (Jim Pruss?). Some of the emails include my responses - there are 3 key emails from Mick with attachments (Thursday, Monday and Tuesday).

At the board meeting tomorrow I'd like to understand the answers to the questions he raised (or when we will have the info), and know that we have a response prepared even if we choose not to respond but wait for the commission. I know we have already had some responses.

Mick did ring me and would be happy to be contacted if we wanted to talk to him but we had decided it would not help and could make things worse. In one of his emails he said "Leeanne, do you want to put me in touch with someone from SEQWater. If I even had a credible answer to my concerns, I would pull my head in very quickly. However nothing that I have seen subsequently in the press attributed to SEQWater gives me any cause for a rethink."

I have declined to try to convince Mick that he is wrong (as per discussion with the board members) but we can discuss again tomorrow. I do need to be in contact with him in another capacity (LNG Limited is the major shareholder of Metgasco where he is GM Operations), but I can just say I can't talk about Seqwater during the commission and while there is threat of legal action.

I haven't read the latest news so don't know if this has dropped off the Australian or is still being fed.

I'm so glad Yasi didn't bring rain south. Are you still OK for lunch at 1pm? I am flexible between 1pm and 4pm if you need to change the time.

best regards,

Leeanne Bond
Director
 Breakthrough Energy Pty Ltd
 PO Box 225, Wilston Qld 4051
 Phone: [REDACTED]
 mobile: [REDACTED]

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 Important information: This email and any attached information is intended only for the addressee and may contain confidential and/or privileged information. If you are not the addressee, you are notified that any transmission, distribution, or other use of this information is strictly prohibited. The confidentiality attached to this email is not waived, lost or destroyed by reasons of mistaken delivery to you. If you have received this email in error please contact the sender immediately and delete the material from your email system. QLD Bulk Water Supply Authority ABN75450239876 (Trading as Seqwater).

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If you want me to stop contacting you I can also understand.

Thanks

Mick

--

Thanks

Mick

From: Hennessy, Phil A [REDACTED]
Sent: Wednesday, 19 January 2011 12:09 AM
To: Ibon [REDACTED]
Cc: Peter Borrows
Subject: Re: Brisbane Flooding

Let's think about it-it should be a Board decision how we respond if at all.
 This ??? has caused a lot of grief-right now my view is to leave him alone and treat him with the contempt he probably deserves.

Regards
 Phil

Phil Hennessy

On 18/01/2011, at 9:31 PM, "Leeanne Bond" [REDACTED] > wrote:

received this tonight from Mick - I didn't see it before I got on the plane home. I hear he was on the TV tonight but haven't seen it.

I suggest that he talk to us if anyone rather than Barry. I don't think they would get on very well in the circumstances.

please call me when you get this email otherwise I will try you in the morning.

From: [mick.obrien](#) [REDACTED] **On Behalf Of** Mick O'Brien
Sent: Tuesday, 18 January 2011 4:34 PM
To: Leeanne Bond
Subject: Brisbane Flooding

Leeanne, do you want to put me in touch with someone from SEQWater. If I even had a credible answer to my concerns, I would pull my head in very quickly.

However nothing that I have seen subsequently in the press attributed to SEQWater gives me any cause for a rethink.

The major threads that I have seen in the response are: -

1. We managed the dam levels in accordance with our operating procedures
2. The inflow was 2.6 million ML
3. That even with this, Wivenhoe prevented a more serious flood of Brisbane
4. The releases from Wivenhoe was match with peak releases from other streams

Item 1 does not really affect my concern, and even if the procedures had been followed 100% to the letter, it would just mean that my concerns related to the procedures

The second point may be significant, but it would depend over what period this inflow occurred and whether it was into both dam catchments. For instance the combined flood storage volume for both Somerset and Wivenhoe is 1.97 million ML and so we are talking about needing to release 630,000 ML over several days. This would be easily achievable. Even if this was inflow to Wivenhoe only, it still meant that total release of 1.15 million ML was required. Again not difficult over the period that we are talking about if managed properly. So the issue would be the rate of inflow over the various periods of concern - not just the overall rate.

13/02/2012

I believe that the Brisbane flood could have been more "severe" without Wivenhoe; but that is not based on any data and I have a residual concern that the peak rate of release at 645,000ML/d exceeded the rate of inflow to the dam at that time and hence the height of the peak in Brisbane might have been higher than otherwise. But I am convinced that the peak was shorter with the dam. But there is no way I can make any assessment of this.

Item 4 just does not seem to be the case and on a lot of the information that I have, it looks like the peak release from Wivenhoe actually corresponded with high flows from downstream streams.

There is also the other possibility that there is a totally different reason for decisions made that is not being discussed. Again I would be very happy to understand and again I would pull my head in.

I have thought of contacting Barry Dennien directly, and may still do that; but he probably could not talk to me. The apparent selective release of information to the Courier mail by Barry also does not inspire me with a lot of confidence.

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Mick

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[REDACTED]

From: Lee anne Bond [REDACTED]
Sent: Monday, 17 January 2011 8:32 AM
To: Peter Borrows
Subject: did you receive my 3 emails?

Hi Peter

can you please confirm that you have received my 3 emails? I sent them from my iPad and hope they got to you.

1. one has the 1 page 'report' written by Mick and sent to me on Thursday night.
2. I replied on Friday and sent you the original email and my reply on Friday. I tried not to get defensive or to engage in a debate but to calm him down and point him to accurate information as he was making very big assumptions.
3. Then I sent another email to you after my last communication with Mick - I thought he was cooling down.

I called Phil on Friday morning and made sure he was aware of it as I figured he was in contact with you. I tried your mobile but could not get through due to congestion.

I'm happy to intercede with Mick if it helps. As background, I worked closely with him at WorleyParsons - he ran the pipelines group and I ran everything else. He is now the GM Operations for Metgasco (coal seam methane). He is a chemical engineer.

regards,

Leeanne Bond
Director
Breakthrough Energy Pty Ltd
PO Box 225, Wilston Qld 4051
Phone: [REDACTED]
mobile: [REDACTED]

From: mick.obrien [REDACTED] on behalf of Mick O'Brien [REDACTED]

Sent: Tuesday, 18 January 2011 4:34 PM

To: Lee anne Bond

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If you want me to stop contacting you I can also understand.

Thanks

Mick

13/02/2012

From: Hennessy, Phil A [REDACTED]
Sent: Friday, 14 January 2011 3:03 PM
To: Ibon [REDACTED]
Subject: Re: SEQWater

Leanne
 Who is this bloke
 Regards
 Phil

Phil Hennessy

On 14/01/2011, at 1:12 PM, "Leanne Bond" [REDACTED] > wrote:

looks like calmer heads are prevailing.

From: Leanne Bond [REDACTED]
Sent: Friday, 14 January 2011 12:09 PM
To: 'Mick O'Brien'
Subject: RE: SEQWater

yes - the dams are falling too as I understand. They are on track to come back within the 7 days.

From: [mick.obrien](#) [REDACTED] **On Behalf Of** Mick O'Brien
Sent: Friday, 14 January 2011 10:40 AM
To: Leanne Bond
Subject: Re: SEQWater

Thanks, I was looking at the SEQWater site; but I will also look at the watergrid site.

Yes the river height data came from BOM.

Obviously for Wivenhoe and Somerset the aim will be to get the levels down as quickly as possible without adding to the flooding in Brisbane and Ipswich. At least from the reporting around now it seems that the flooding is abating; but I can't tell if the dams are yet falling.

Mick

On 14 January 2011 11:03, Leanne Bond <[REDACTED]> wrote:

I'm not aware of any structural concerns but of course it is a key component to ensure the dam doesn't overtop to prevent this and to keep some control over releases.

Which site are you referring to for info? If you haven't already, have a look at the water grid media releases which give you timings and flows.

www.watergrid.com.au/media. There is an rss feed too. All water grid announcements go through here - Seqwater doesn't separately make announcements to make it simpler for the media. BOM would also have some public info I assume. I don't know how quickly the dam levels on the website are updated so I think the media releases might be the best reference.

I have every confidence in the flood control centre operations but of course will follow through with your concerns. My main concern right now is that we are prepared for any future weather patterns - any insight into that?

Sent from my iPad

On 14/01/2011, at 7:24 AM, "Mick O'Brien" <[REDACTED]> wrote:

Leeanne, I am happy for you to give it to SEQWater; but you probably can't give me any response or additional data. And I would not want to be compromised in who I can send the data to anyway. If SEQWater did want to respond it would probably be better if I sent a copy directly to an SEQWater officer in which case you might want to direct me to the most appropriate guy.

Yes the dams (Somerset and Wivenhoe) were probably within 1.5 days of filling with no releases. But the apparently very high rate of release through Tuesday afternoon and night would have made little fundamental difference to the levels in the dams on Wednesday morning. I don't have the timings; but even if SEQWater released at the low 215,000ML, which is the rate it was reduced to at 07:30 Wed rather than a maximum rate of 645,000ML/d for the whole time from 14:57 on Tues it would have used only 306,000ML of the available free capacity in both dams of apparently 859,000ML.

I find it very difficult to come to any other conclusion other than SEQWater were very slow to respond over the weekend and then had a minor panic on Monday followed by a major panic Tuesday afternoon and then some cooler heads looked at it over Tuesday night.

I do have some suspicion that the maximum level in Wivenhoe of 191% apparently given to the media and then reported is low; because the timings do not quite tie up with the river height data. The SEQWater site temporarily stopped posting dam heights during this period so I have nothing to check it against. But even still, it does not look like Wivenhoe even got close to its maximum potential capacity of 224%.

If there was any potential issue for collapse of Wivenhoe (or Somerset as I have seen on some blogs) below this 224% level that would be a separate issue and just as significant.

Mick

On 13 January 2011 23:40, Leeanne Bond <[REDACTED]> wrote:
Hi Mick,

We will have a full review in due course but what I do know is that until Tuesday night we had significant inflows. I interpreted that it was reduced rainfall that enabled reduction in discharge on Tuesday night which certainly saved many houses. When I flew home from Perth I heard that ongoing rain for 1.5 days would fill the dam (i can't remember if that was the news or from Seqwater). The consequences of any structural breach of the dam are unimaginable.

Are you happy for me to ask Seqwater to respond to this or provide accurate figures to you? Or are you going to submit it yourself?

The flood operations centre has expertise from Seqwater, SunWater, the dam safety regulator, bureau of meteorology and others like emergency services and local government.

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Thanks

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Thanks

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From: mick.obrien [REDACTED] on behalf of Mick O'Brien [REDACTED]

Sent: Friday, 14 January 2011 10:40 AM

To: Lee anne Bond

Subject: Re: SEQWater

Thanks, I was looking at the SEQWater site; but I will also look at the watergrid site.

Yes the river height data came from BOM.

Obviously for Wivenhoe and Somerset the aim will be to get the levels down as quickly as possible without adding to the flooding in Brisbane and Ipswich. At least from the reporting around now it seems that the flooding is abating; but I can't tell if the dams are yet falling.

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Yes the dams (Somerset and Wivenhoe) were probably within 1.5 days of filling with no releases. But the apparently very high rate of release through Tuesday afternoon and night would have made little fundamental difference to the levels in the dams on Wednesday morning. I don't have the timings; but even if SEQWater released at the low 215,000ML, which is the rate it was reduced to at 07:30 Wed rather than a maximum rate of 645,000ML/d for the whole time from 14:57 on Tues it would have used only 306,000ML of the available free capacity in both dams of apparently 859,000ML.

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> Mick

> <What went on in Brisbane.pdf>

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Mick

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Thanks

Mick

13/02/2012

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To: Peter Borrows; phennessy [REDACTED]
Subject: FW: SEQWater
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> Mick

> <What went on in Brisbane.pdf>

13/02/2012

--

Thanks

Mick

[REDACTED]

From: mick.obrien [REDACTED] on behalf of Mick O'Brien [REDACTED]

Sent: Monday, 17 January 2011 10:22 AM

To: Lee anne Bond

Subject: Brisban e Flooding

Attachments: What went on in Brisbane - Rev 1A.pdf; Release.xlsx; What is happening in Brisbane - Rev 3.xlsx

Leeanne, attached is an updated version of the paper that I sent through to you - called Rev 1A - Hedley Thomas has this.

A spreadsheet called Release, which is the data I collated from the web sites on the weekend so that I could confirm the release rates that I had pulled from newspapers.

And then a third spreadsheet which contains all the data plus some workings.

Thanks

Mick

[REDACTED]

From: mick.obrien [REDACTED] on behalf of Mick O'Brien [REDACTED]

Sent: Thursday, 13 January 2011 8:26 PM

To: Ibon [REDACTED]

Subject: SE QWater

Attachments: What went on in Brisbane.pdf

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Mick