

Transcript of Proceedings

Issued subject to correction upon revision.

THE HONOURABLE JUSTICE C HOLMES, Commissioner

MR JAMES O'SULLIVAN AC, Deputy Commissioner

MR P CALLAGHAN SC, Counsel Assisting
MS E WILSON SC, Counsel Assisting

IN THE MATTER OF THE COMMISSIONS OF INQUIRY ACT 1950
COMMISSIONS OF INQUIRY ORDER (No. 1) 2011
QUEENSLAND FLOODS COMMISSION OF INQUIRY

BRISBANE

..DATE 09/02/2012

..DAY 66

GREGORY KENNETH ROADS, CONTINUING:

MR RANGIAH: Your Honour, before the first witness commences I might say something. Yesterday you asked for a copy of a transcript of the discussion between Bob Munt and Rohan Thorogood and Agg Dagan. Just before I provide that to you I'd like to briefly place on the record some relevant matters about the events of yesterday.

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Yesterday Maurice Blackburn, the solicitors for the Fernvale residents in this Inquiry, received letters from Allens - received a letter from Allens Arthur Robinson, solicitors for Seqwater. They also provided a copy of that letter to the Commission.

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The letter, apparently written on instructions from Seqwater, makes an allegation that a person from Maurice Blackburn had pretended to be from the Commission of Inquiry, and the allegation seems to be that that was done in order to induce Mr Thorogood to contact Mr Dagan so that a statement could be taken from Mr Dagan.

The allegation made to the Commission about the conduct of Maurice Blackburn was of the utmost seriousness, alleging as it did a behaviour that might constitute criminal conduct, and at least contempt of the Commission and professional misconduct.

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The discussions between Mr Munt and Mr Thorogood and Mr Dagan had been electronically recorded and a copy was provided to Allens Arthur Robinson, leading to the withdrawal of the allegation.

The allegations made against Maurice Blackburn were baseless, and that seems to have been accepted by Seqwater's lawyers because they wrote a letter yesterday afternoon in which they said that, "on the basis of that recording our client unreservedly withdraws the allegation made in paragraph 2 of our letter this morning".

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Late yesterday afternoon Mr O'Donnell, for Seqwater, also told the Commission that he was instructed to withdraw the allegations made against Maurice Blackburn.

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The allegations against Maurice Blackburn were, as I've said, very serious. The allegations were made to the Commission, which was rightly concerned about the content of those allegations. The allegation was made, apparently, without Mr Thorogood and Mr Dagan having provided any affidavits to Seqwater or its lawyers.

Mr O'Donnell, just after lunch yesterday, conveyed his instructions that the assertions in Allens Arthur Robinson's letter were being maintained. I responded.

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I'm instructed that at that time Mr Mike Foster, a public relations manager from Seqwater, handed out copies of the letter from Allens Arthur Robinson to reporters in the media room. Clearly this must have been done with an expectation that the media would report the allegations contained in the letter. I submit that that action was an abuse of the Commission's process.

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I'm instructed that Maurice Blackburn received a number of phone calls during the afternoon from members of the media, some of which questioned whether they had jeopardised the Inquiry with their alleged behaviour.

This has been very damaging to Maurice Blackburn, a law firm that is simply representing persons in this Inquiry whose houses have been flooded. They are representing people who are simply seeking answers as to why their homes were flooded, and this includes asking questions as to whether their homes might have been flooded because of Seqwater's actions or inactions.

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No-one from Seqwater has had the common decency or courtesy to apologise to Maurice Blackburn for the false accusation.

Seqwater's conduct in making this false allegation to the Commission is, in my submission, quite disgraceful.

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In view of Seqwater's failure to apologise I propose to tender the two letters from Allens Arthur Robinson, dated 8th of February 2011 (sic), so that there can be a permanent record before the Commission of Seqwater's withdrawal of its allegation.

I tender the two letters from-----

COMMISSIONER: Well, hold up, I'm just thinking about that. They weren't placed on the record in the first place. I have a little trouble with the notion that handing them to the press was an abuse of the Commission's process, I must say, Mr Rangiah. It may have been a very bad idea for a number of reasons but I'm not sure that that's one of the reasons.

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I'm not sure that I really want the Commission to be the resolution process for your argument with Seqwater about this, and there is, I think, some basis for saying that if Seqwater thought this had happened it couldn't have done other than bring it to the Commission's attention.

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Now, they may have been a bit hasty with that, and the idea of handing out letters to the press is certainly unattractive, but I think it's really an issue you two should fight out somewhere else, frankly.

MR RANGIAH: Yes. The only difficulty with that is that it was raised by the Commission yesterday-----

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COMMISSIONER: That's true.

MR RANGIAH: -----publicly and-----

COMMISSIONER: Well, if you'll note, I said as little as possible about it when I did raise it.

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MR RANGIAH: Oh, of course, but after lunch the allegation was maintained and I had to respond to the allegation-----

COMMISSIONER: All right-----

MR RANGIAH: -----because there were - discussion about the provision of affidavits and so forth ensued.

COMMISSIONER: Okay. Well, let's cut to the chase. Mr O'Donnell, what do you say about the proposition that the two letters should go on the record to show that the allegation was made but was then withdrawn?

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MR O'DONNELL: In my submission it's unnecessary. I said in open hearings yesterday that the allegations were withdrawn, that should be the end of it.

COMMISSIONER: All right. I'm inclined to agree with that, Mr Rangiah. I think it's all been aired. The fact that there was nothing in the allegations has been made very clear, Mr O'Donnell accepted that that was the case, I never reached any conclusion to the contrary, and now, given all the concessions, accept that that's the case, I don't know that you need any further vindication.

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MR RANGIAH: Yes. I will hand up a copy of the transcript.

COMMISSIONER: What are you doing? Oh, the transcript you were going to give me.

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MR RANGIAH: Yes.

COMMISSIONER: Thank you. If you just give it to Mr Zangari, thank you. All right, back to the-----

MS WILSON: Thank you, Madam Commissioner.

Mr Roads, before we adjourned yesterday afternoon I took you to your notes that you made on the 9th of February 2011, and that is Exhibit 1110. If we can see at the bottom of that page it says reviews nine to 10 section - 9 to 10 sections. Were they the only sections that you were asked to review?-- I think pretty much, yes. As far as I can remember. That's what I've written down, so-----

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Well, that was the case on the 9th of February 2011. Did you review more than sections nine to 10 of the record?-- Obviously the summary section 2 as well, and I think I've got that in my report, which sections I actually reviewed.

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Was there any suggestion in your notes or on that telephone conversation that day or in any of your communications with Seqwater that you should not read the whole report?-- No.

Was there any discussion in the telephone conference or any time in your dealings with Seqwater about the methodology that was used to prepare the report?-- No.

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Now, in this note it says the report is available on - report available Friday?-- Yes.

Now, did you get a copy of that report soon after the telephone conference?-- No, I wouldn't have - I don't even think I got it that Friday, I think it was - it didn't arrive until after that time.

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You did receive a copy of a report for you to start work on?-- Well, not that - not at that time. I think - I don't know when the 9th was, I think that might have been a Tuesday, and they said it was due to arrive on Friday, from that note, but I've just got a vague recollection it didn't turn up on Friday-----

Okay. So there was a couple of days?-- Couple of days.

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Couple of days in that. Did you receive your report by electronic version or by paper version?-- Paper.

Can I show you this document, please?-- Yes.

Do you know what that document is?-- That's - I'll just see. That is the one that I received, yes.

Now, you received two draft reports?-- Yes.

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And that is the first draft report you received?-- Yeah, I think so, yes.

Madam Commissioner, I tender that document and it is the first draft report. Now, Mr Roads.

COMMISSIONER: Slow-----

MS WILSON: Sorry.

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COMMISSIONER: 1111.

ADMITTED AND MARKED "EXHIBIT 1111"

MS WILSON: When you received that draft report did you start work on it? Did you start reading?-- Look, I can't remember exactly when I started reading. Probably very closely, I was interested to see what was going on.

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Okay. And did you read the whole of that draft report or was it just some sections of that draft report that you read?-- Oh, look, I focused on - I focused on section 9 and section 10, the summary and also the modelling results.

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Okay. Can I show you Exhibit 1072, which is an e-mail from you Terry Malone on the 11th of February of 2011 at 1.20 p.m.?-- Yes.

Now, this is a query from you to Terry Malone-----?-- Yes.

-----about Wivenhoe rainfalls and flood volumes?-- Yes.

Can you tell me what this is about?-- Terry had e-mailed me requesting information on design rainfalls for the Wivenhoe catchment to - so he could calculate what the - so I could calculate what flood volumes were for the various design storms, as in the one in 100 year, 100, 200 and things like that. So that's what - I had all that information available from when I did the Wivenhoe Alliance Study so I was able to give it to him fairly quickly.

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Okay. You pointed out that the information that is attached was not totally correct. Do you see that-----?-- Yes.

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-----in the second line?-- Yeah.

Was this issue ever resolved?-- I didn't hear back from him.

Now, you were engaged by Seqwater to perform an independent review of the March report or the report that you were - we've just been discussing?-- Yes.

Can I show you your - this letter from Seqwater to WRM Water & Environment, dated the 11th of February. This is, in a sense, your letter of engagement and your instructions?-- Yes.

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You can see, if you turn the page, for - instructions for professional services. We can see three paragraphs down, "the scope of your services and the relevant information that will be provided are set out in the consultant's brief at annexure C". See that?-- Yes.

Can I show you this document, please. If you can go to that last page of that document you will see that is annexure part C, and it sets out the brief?-- Yes.

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And it sets out what you are required to undertake, any or all parts of the services as set out below?-- Yes.

Madam Commissioner, I tender the letter of engagement and also the consultancy services agreement as one tender.

COMMISSIONER: Exhibit 1112.

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ADMITTED AND MARKED "EXHIBIT 1112"

MS WILSON: I'll now take you to a - an e-mail from Colin Apelt that - sent to you and John Tibaldi and BBJ at Big Pond dot net AU, which is Exhibit 1042. If we can go to the bottom of that chain. If you can just go up a bit, please. Stop. We can see there actually the e-mail that I'm referring you to is the e-mail from John Tibaldi to you and Colin Apelt and BBJ at Big Pond. Do you know who that is, "BBJ"?-- Yeah, Brian. I think he's the next-----

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Brian who?-- -----expert. I'm not quite sure-----

Sorry?-- Brian - sorry, forgotten his last name.

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Okay. We can see what is set out in this e-mail. If we can just put it up on the screen a little bit. We can go down a bit, please. And down a bit more-----?-- Brian Shannon, there you go.

This is an e-mail that sets out a meeting tomorrow for an informal discussion, that is - that was to take place on the following day at 9.30?-- Yes.

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Do you recall receiving this e-mail from John Tibaldi?-- Yes, I do, I suppose.

And the meeting location is - was at your office?-- My office, yeah.

And did this meeting occur?-- Yes.

And can you tell me who attended this meeting?-- It was just the three of us - Colin Apelt, Brian Shannon and myself.

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Did Mr Tibaldi attend?-- No.

And what was discussed at that meeting?-- What was discussed is we'd all done our independent review completely separate of each other and it was - the intention was really to - to discuss whether we found anything that was in breach so we could discuss it further and either agree or disagree on those points.

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And were any - you talked about any breaches?-- Of the manual.

Were any breaches discussed at that meeting, potential or otherwise?-- There were two - I can only remember the two that I brought up in my report, two potential breaches. One was associated with when they - they first went into W4 and another one on the gate closure procedures. They were the two

that I brought up. I don't think the others brought up anything else outside of those.

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By this time had you done some work on the material that you had been provided to be able to have a view one way or the other about-----?-- Yes.

----- these matters?-- Well, that's right. There was only the draft report, so with the information I had from the draft report we were able to make a fairly good estimate of what they had done.

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Can I show you this letter, please. This is a letter dated the 24th of February 2011 from John Tibaldi to yourself?-- Yes.

It encloses a copy of the above draft report for you to review?-- Yes.

So did you receive another hard copy of a draft report?-- I imagined it did come with it, yes. I can't remember exactly, but, yes, I did receive two. I can't remember exactly when the second one came.

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Did the second one come - come after your meeting with the other experts on the 22nd of February?-- To be totally honest with you I can't remember.

Okay. Well, you received two draft reports, and did you receive a final report at any stage?-- Yes, the final document that came out in March.

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And had you - which of those documents had you done your work on, which were you working off?-- The majority of the work was done on the first draft report.

Okay. Can we have a look at this document, please. Can you tell me what that document is?-- This would be the second - second report that I received from Seqwater.

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And had you completed your own review by the time that you got that second report?-- Well obviously I hadn't completed it but I had to go through what was in this one and crosschecked what had been changed from the first version to the second version.

Then did you find any changes?-- Well, when I did the first - first version - first check there were quite a few inconsistencies in between the model results and the - and the flood discharge log in what was in the summary, so I'd gone in and crosschecked what was in - what actually occurred to what they said they did or what the numbers were in the summary, so I had advised John by phone I picked up some of those inconsistencies in the summary and I had to check and make sure those inconsistencies had been removed.

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Did - when you were provided with the second draft report and when you were provided with the final report were any inconsistencies pointed out to you by Seqwater?-- No.

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So it was a job that you had to do to satisfy yourself?-- Yeah. Well, a summary is a summary, so the real data is actually in the - in the discharges and the modelling, so it's just - that's what actually occurred so you have to base it on that and the summary is just making sure it's consistent.

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Madam Commissioner, I tender those documents, which can be titled the second draft report you received-----?-- Yes.

-----is that correct?

COMMISSIONER: They will be 1113.

ADMITTED AND MARKED "EXHIBIT 1113"

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MS WILSON: And we are still on the letter, which is the 24th of February letter. This sets out two questions that you were asked focus on?-- That's correct, yes.

And to confine your review to those two questions?-- Correct.

Madam Commissioner, I will tender that letter of the Thursday, the 24th of February, from Mr Tibaldi to Mr Roads.

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COMMISSIONER: Exhibit 1114.

ADMITTED AND MARKED "EXHIBIT 1114"

MS WILSON: Can I show you this document. It's Exhibit 1106. It's an e-mail from Jim Pruss to you. Did you know where Jim Pruss - what Jim Pruss' role was in this?-- Probably not until I got this e-mail, I suppose, and I saw his title on the bottom of it, but I had - I'd never met him, and I didn't know him.

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Okay. It also sets out the two questions that we've seen previously?-- Yes.

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It's asking you that at this stage the answers to these two questions are required ASAP?-- Yes.

How far along the track of your review were you when you received these two questions?-- This is - what's the date on this one-----

This is the 7th of March?-- 7th of March. Well, no, I'd received that by the 24th, I think that letter came through. There were two - I got two letters on - on my record. I don't know what the dates of them are, but I imagine I got that first letter with the second report because it was dated the 24th of February, I thought.

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Okay. This letter also sets out that if there are any technical questions you may have you should discuss them with John Tibaldi?-- Yes.

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Did you have any technical questions that you needed to discuss with John Tibaldi?-- As I said, I did have a phone call with John. The - I did require some clarification on what was actually meant in W2, and the wording of that W2, I think. The majority of the things - I think almost all of what I was talking about was really - is the inconsistencies with section 2 compared to section 9 and the modelling results.

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Sorry, the inconsistency?-- Yeah, the numbers that were in the summary weren't consistent with what was in the discharge summary in section 9 or the modelling results in the appendix.

And then you pointed that out to-----?-- I pointed those out to him and said, "Look, these aren't right. Which ones are right?"

And did you get an answer?-- Yeah.

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And which ones were right?-- The - section 9 and the modelling results are is the - what actually happened and the summary is the summary, which is they reported after it.

Okay, well, I might go to that later. In terms of the wording of W2, you had some questions about that?-- Yeah, it is a little bit confusing-----

I can take you to the - Exhibit 21, which is the manual?-- Yep.

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You've probably got a copy there as well. It will come up on the screen. What's your confusion?-- With W2 it says in the line in the middle, it says, "The intended strategy W2 is limit the flow in the Brisbane River to less than the naturally-occurring peaks at Lowood and Moggill while remaining within the upper limit of the damaging flow". So I first take that is make sure inflows don't exceed outflows, is the way I would first read that. If you look at the table below that is - is saying that the - limit the flow in the Brisbane River to the naturally-occurring peak at Lowood excluding Wivenhoe. It's a bit of a hard one to get your head around given that Wivenhoe takes up half of the catchment, it's hard to exclude half the catchment, I suppose, is what, I guess, I was trying to clarify.

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And what was - did John Tibaldi clarify that for you?-- I think we had a discussion about it, and effectively at that

time he said, well, they'd - they were already discharging at a rate that was higher than the naturally-occurring flow in - at Lowood excluding Wivenhoe releases so therefore W2 was somewhat redundant.

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And at what time was this when you - at this stage when they were already releasing?-- Sorry?

You just said that John Tibaldi clarified that for you?-- Yes.

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And he said that W2-----?-- Well, I was trying to work out exactly what the wording in that was and there was only the one time where they were considering W2 or W3 and so - and that's the way he described it. As far as I can remember it.

On the 9th of March you provided your report?-- Yes.

And that is Exhibit 413. If we could go to that. Now, if we go down the page we see the scope of the work, and that is a repeat of the two questions that you provided by - from Seqwater-----?-- Yes.

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-----on two occasions? On at least two occasions?-- Yes.

We can see that from the material. You set out the response to those questions is based on the information provided in the Seqwater report, with particular reference to - and you set those out. Section 2, the flood event summary-----?-- Can't quite - you might want to scroll it up, I can't quite see-----

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We can give you a hard copy, Mr Roads, if you-----?-- I've probably got one in here.

What would you prefer? We can give you a hard copy?-- That would be great.

So we see there that you had particular reference to section 2, section 9 and section 10?-- Correct.

Now - so did you proceed on the basis in performing your review that sections - these sections were accurate?-- I formed the view that section 9 particularly was accurate and then I was trying to use section 9 to work out what they had - what they were writing in section 10 and section 2.

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We will come to that in a moment. What about the appendices, did you have any reference to the appendices in part of your review?-- Yes, certainly. The flood modelling results in appendix one, so I used those quite a lot.

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Yes, you've said at the end you put that into your report, of appendix A?-- Correct.

Did you look at the detail in the appendices such as the situation reports in appendix E and the flood event log in appendix M?-- No.

Do you have any reference to it?-- No.

Why is that?-- I guess it didn't change the way that the dam was actually operated, and it was really only - I'm assuming only tell us what - the hurly-burly of what was going on and who was getting told what to when and where and why.

The manual requires the flood engineers to have a strategy when operating the dam?-- Yes.

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And that during a flood event, Wivenhoe Dam is operated in accordance with one of four specified strategies?-- Yes.

And each strategy has a different primary consideration?-- Yes.

So your task, was it, was to determine whether during the January flood event the dam was operated in accordance with those strategies?-- Yes.

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That is, whether the right strategy was used at the right time?-- Yes.

When a flood engineer is operating a dam, he must be aware of the strategy that he is operating the dam at?-- Yes.

Because the manual states that the dam must be operated with a primary consideration?-- Amongst other things, yes.

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So if we could go to the flood event summary, which was Part 2 of the report - the March report, which is found at page 13. Have you got that, Mr Roads?-- Yes.

We can see the background on the left column?-- Yes.

And the third dot point sets out that "transitioned from strategy W1E to W3 as it became apparent Wivenhoe Dam level would exceed 68.5 metres"?-- Yes.

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Eight a.m. on 8 January 2011?-- Yes.

So did you accept that the engineers moved to strategy W3 at 8 a.m. on 8 January?-- I accepted that as the water level fell over the line they were automatically in W3, whether they liked it or not.

Whether they liked it or not. But the flood engineer would have to appreciate that he is in a different strategy?-- Yes.

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So at 8 a.m. on the 8th, did you assume that the dam engineers had appreciated that they had moved to a different strategy?-- I must admit I didn't really think about that time and what they were appreciating; just looking at what they actually did.

But they have to take into account the primary consideration?-- Yes.

So is it the case to have compliance with the manual, the dam engineers must understand that they have moved to a different strategy?-- Yes.

To take into account what is set out-----?-- Yes.

-----in that strategy. And you looked at the data and paid particular attention to the data in looking at your review?-- Yes.

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COMMISSIONER: Was your basis to look at what the strategies had to be at given times by reference to the lake level, among other things, and to see whether what they did was consistent with having been in those strategies; as opposed to looking at what their state of mind actually was?-- I have no idea what their state of mind was, and I can't really report on that. I look at it what I would do. I'm a flood modeller. I look at all of the model runs and when they have done them and when they reported them. If you look at the model runs and pick any day, any of those scenarios, you look at - you put in - you know, whether you use forecast rainfall or not, I looked at all the forecast rainfall plots. At any particular point in time, you could look across that chart and see that - which objectives were met. So it's almost like a reset of your mind whenever you do a model run to check whether your primary objectives are met. So I look at that model run, say the run that was done at 2 o'clock on Saturday, you do the run, you use forecast rainfall, you see that the peak water level in the dam is going to reach X, and using that maximum outflow that the models are predicting, whether - what is going to be the flow at Moggill and at Fernvale. If you look at that and you say the flows are lower than the 3500 or 4000, tick, your primary objectives are met; then it comes back to looking at your secondary objective.

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Is there anything in what they did on Saturday which would tell you, apart from the lake level - setting that aside - is there anything that would tell you objectively whether they were operating in 1 or 3?-- Well, they were - it's a funny thing, if you satisfy the primary objective and your model results are telling you that the maximum you are releasing to achieve the primary objective is actually the same discharge as you would under W1. So if you look at it from the sense the model is telling you to operate it in accordance with the W1 rules, and you can achieve the primary objective by operating under the W1 rules and still satisfying the W3 objectives.

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So essentially, you can't tell from what they did whether they were in 1 or 3 from their perception?-- Well, they were releasing in accordance with W1 as you would expect, given the fact that by releasing in - using the W1 rules, you were achieving the W3 objectives. It seems to make sense to me.

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Yes. You'll appreciate that I'm trying to establish what they actually were thinking at the time and whether there's any clue to that purely in the objective evidence which would tell

me conclusively that they were in 3 as opposed to 1?-- I mean, you know, all I can do is tell you what the modeling results were saying at those various times that they have provided us. If you look at the model results, you can see the peak discharge even using forecast rainfall from the dam is only 1400, 1500, and doing that they are still achieving 2000 at Moggill.

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So are you telling me that what they did is rational, consistent with either W1 or W3?-- Absolutely.

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Thanks.

MS WILSON: Can I show you Exhibit 1047, please. You haven't got this document. You may not have this document, Mr Roads, because this is a situation report that was not included in appendix E. If we can scroll down to the second page under "forecast scenario". We'll give you a hard copy if it's easier, Mr Roads?-- Thank you.

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Can I ask you to read the paragraph under "forecast scenarios" - the paragraphs under "forecast scenario". Actually, Mr Roads, can you take the time and read from "Wivenhoe full supply level 67"? Do you see that, Mr Roads?-- Sure. What's the date on this?

The date is on this, Mr Roads, is 5.53 p.m. on January 8?-- Yes.

Mr Roads, the paragraph under the forecast scenario with - can you tell me, just reading that, what that means to you?-- So they have done some model runs with some predictions of what the rainfalls are going to be in the downstream catchments to work out what potentially they can hold the dam at, I suppose, to maintain those bridges being open.

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What about, "The interaction with the runoff from the Bremer River and Warrill Creek catchment"?-- That's exactly what I'm saying, yes.

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"Is an important consideration, as the event magnitude will require the application of Wivenhoe Dam flood operation strategy W2"?-- Yes.

The flood event report that is set out in Part 2 states that W3 was engaged at 8 a.m. on the 8th?-- Yes.

This is 5.53 on the 8th?-- Yes.

Does at that cause you any - does that cause you to ask any further questions whether W3 was engaged at 8 a.m.?-- I guess the way I look at it is it's not the correct terminology in accordance with the manual, that's true. But in effect, as I said before, they were releasing in accordance with W1 at that time, although still achieving the objectives of W3. So if they go to W2, which means that effectively they are still looking at making sure inflows are not higher than outflows, is the way I interpret W2, they are thinking maybe they will

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be taking out the bridges at some point in time, but still be less than inflows.

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Does this paragraph raise any concerns about whether the dam engineer appreciated that he was in W3 at 8 a.m. on the 8th?-- I can't tell you what they were appreciating. But I can tell you what the model results were saying, and they would have been telling them that too, that they were satisfying W3 at that point in time because there was no risk, even using forecast rainfall, that W3 was going to - that the urban areas were going to be affected.

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Mr Roads, is it the case that when a dam engineer is operating the dam, that he has to appreciate at the time that he's operating the dam what strategic he is in?-- Yes.

Is it the case that after a flood event you can look at the data and then work backwards to work out what strategy the dam engineer was in?-- That's a possibility, yes.

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So the dam engineer doesn't have to appreciate at the time what strategy he is in; he can just wait to the end of the flood event and then just work backwards. Is that in compliance with the manual?-- I wouldn't have thought it would be good practice, no.

Is that in compliance with the manual?-- In my view, the only real thing that's important with the manual is how they actually operated the dam in terms of what was actually released at any particular point in time.

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And in terms of the primary consideration that the dam - the flood engineer has to take into account?-- I satisfied myself that that objective was achieved every time they did a model run.

If I could take you to appendix M of the flood event log. We'll take you first of all to the one that is in the final report, which is at page 82 of appendix M. Can you read that entry at 3.30 p.m., please?-- This is on what date?

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This, Mr Roads, is on-----?-- 9 January.

-----9 January?-- Yes.

You've read that?-- Yes.

You didn't read that when you did your review?-- No.

If you did read that, would that ask - would you think that you should be asking more questions about whether W3 was engaged at 8 a.m. on the 8th?-- I would have asked questions about what they were - what they meant by that, yes.

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Can you explain?-- Well, by definition they were in W3. So talking about being in W1 and W2 at that point in time - or going to W2 at that time was exactly what they were referring to.

If you take this entry prima facie, if you just - prima facie, at face value?-- Yes.

You're just looking at the data?-- Yes.

So once it ticks over 68.5, you're in W3 no matter what?-- No matter what.

But what happens if the dam engineer doesn't appreciate that and just keeps on operating the dam without any reference to the strategies?-- I guess you still have to go back to the model results and see what they would do to see whether the decisions they made: (a), were in accordance with the manual; and (b), were logical.

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Or could be in accordance with the manual, if you take - if you're looking at the data?-- Yes.

This was in the final report that you were provided. If we can go to Exhibit 113, which is the second draft that you were provided. If we can go to page 3 of that document, we can see two entries there 3 p.m. to 4 p.m. down the bottom?-- This is Sunday night, 3 p.m. to 4 p.m., yes.

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There's a hard copy there, Mr Roads?-- Yes, I can see it here.

If you can just take a reference point perhaps from 2.42 onwards to 4.15?-- Yes.

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If we can now go back to Exhibit 24. If you can go to 2.42 to 4.15?-- Yes.

It appears there was an entry missing in your second draft report that you were provided?-- Yes.

And that entry was the duty engineer conference starting with, "Attended by all duty engineers at this stage operating at top of W1 and bottom of W2"?-- Yes.

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But it really made no difference for you, because you didn't read the appendixes in the draft record, second draft report, or the final report?-- No.

For completion can we go to Exhibit 1111. This is your first draft report that you were provided, and if we can go to page 3 of 30 of appendix M?-- Yes.

If we can do that same exercise, say, from 2.40 p.m. to 4.15?-- Yes.

50

And it appears that first draft report that you were provided didn't have that entry as well?-- Yes.

But again, it didn't make any difference to you because you didn't read it?-- No.

Now, assume that the report, in particular what is set out in

part 2 - just assume this basis, if you could, Mr Roads - is not based on the flood engineers' recollection of their choices as to strategy, but is based on a reconstruction of the events having regard to the objective data such as lake level at particular points in time; in other words, going back, looking at the data, and saying this must have been what we did at this point in time?-- Yes.

1

If you assume that was the methodology, would that cause you any question - would that cause you to ask any further questions about whether W3 was engaged at 8 a.m. on the 8th?-- Look, I can't tell you whether they actually had a thought process that they engaged W3 at that particular point in time. I can't do that because I wasn't them. Section 2, in my view, is a summary, what happens, how they put it into a format that is digestible to the public. What really matters is what they did, and that is presented in section 9, and also the flood modelling which tells them what they should be doing. So I can't tell you what their thought process was at that time at 8 o'clock. I guess if you look at it in reality, the big difference between going to W3 is their maximum releases can go up; that they can no longer limit it to reducing - limiting their outflows to 1900, but they are capable of increasing their discharges to 3500. Having said that, it would have looked rather ridiculous to start ramping up to 3500 at that time, given the information on rainfalls and dam water levels and flow predictions.

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COMMISSIONER: Is that true for both the Saturday and the Sunday? Because the forecast changed significantly on the Sunday?-- Sunday morning I think that they were still pretty much releasing what they should have been. I think on Sunday afternoon it's starting to get touch and go really. I think everything is still operating the way that they thought was the right way to go and the right objectives to meet at that point in time, but in hindsight you look back at it and say Sunday afternoon maybe we should have taken down the bridges a bit earlier. We're all very clever in hindsight. But certainly Sunday morning there was nothing in the information that I could see that would have changed their mind on how they should have been operating, given that there hadn't really been a lot of rain overnight and dam was falling.

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MS WILSON: And finally, Mr Roads, can I show you Exhibit 1071. It's an email from Terry Malone to you, looks like it's cc'ing the other flood engineers, on 17 January at 8.47 a.m.?-- Yes.

Had you been approached at this point in time to do any work for Seqwater?-- No.

50

And it's an email that says - from Terry Malone thanking you for your supportive comments in that day's "Australian". If we can scroll up again, we can see your reply. Do you understand what these emails are referring to?-- Yes, I haven't seen them for quite some time. I don't have a copy of it.

Okay, well take your time?-- Yeah, do you want me to explain what that was all about?

1

Yes, please?-- I had been approached by Hedley Thomas at that time. It was an unsolicited phone call, and he had a story that he wanted to put in the paper. He had already written it at that time. It was obviously fairly damning on what they had done - critical of what they had done. It didn't really have any reference or knowledge of the operating rules and the manual at that time. I tried to explain to him that there is a manual of procedures that these guys had to follow. I couldn't tell him whether they actually did everything in accordance with the manual at that point in time, but I advised him that there's a lot more into it than his very simplistic headlines.

10

Are you at this point in time make the comment that, "It looks like you guys did a great job"?-- Yes.

Obviously at that point in time you hadn't had a look at all of the data?-- We were following it intently on the BOM website. We could see what the inflows to the dam were and what the outflows were, and you can see that the first event had been completely sucked up. So we had a fair idea that they were reducing flows.

20

And the report that you performed looked at the data?-- Yes. So I didn't have any data other than the water level data from the BOM site at that time.

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Thank you, Mr Roads. I have no further questions.

MR RANGIAH: I have no questions.

COMMISSIONER: Ms Wilson, were those emails in the record somewhere?

MS WILSON: They are Exhibit 1071.

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MR MURDOCH: Could we have up on the screen RD-5, 321. Mr Roads, could I ask whether you have seen these emails previously?-- No. Not that one.

Do you know Mr Dan Spiller?-- No.

Do you know Rob Drury?-- I know of him.

50

You would have a familiarity, though, with the positions that they appear to have?-- I don't know exactly Dan Spiller's position, no.

Well, so far as Mr Spiller was concerned, he was director of operations with the Seqwater grid management; Mr Drury, dam operations manager?-- Yes.

Do you see a question is asked, "Are you operating under release strategy W2 or W3?", and the reply provided by Rob Drury at 8.23 a.m. on Monday, January 10, was W2?-- Yes.

Now, if you assume that that advice was correct as at the time that it was given, could I get you to go back to your report and to the table which you provide as table 3.1? What would you say to the advice which you give as to compliance if in fact it was W2 as at 8.23 a.m. on Monday, January the 10th?-- The advice was wrong, I guess. That's what I would say. The advice that they were given in that was wrong, they were above - they were releasing more than W1, so they were either in W2 or W3.

10

Alternatively, if they believe they were under W2, their actions were, you would say, non-compliant with the strategy that they believed they were in?-- I - I must admit, I struggle with this to try and work out what only - what matters is not what label they give it, it is what they actually released and whether those releases were in compliance with the manual.

20

Mr Roads, I might have misunderstood the summary that you provide in your report, but it does say in your report - and this is in the last paragraph on page 2 - that "table 3.1 provides a summary of the compliance criteria detailed in the manual for each operating strategy"?-- Yes.

30

So wouldn't that suggest that we first ascertain the operating strategy which the operators asserted was in use and then test their actions against that? If we're pursuing the objective of ascertaining whether there was compliance or non-compliance?-- Well, I guess to do that would be not assessing in accordance with the manual, because the manual says where they were at that particular point in time. To say that they thought they were in a different strategy is almost superfluous, unless they were releasing that are outside those conditions given in the manual, really.

40

Look, to be very direct about it, what you've done is look at what they did and you've determined retrospectively what manual strategy they were under?-- Yes, and looked as whether they've satisfied the criteria in each of those strategies.

You do say, though, don't you, in that last paragraph at the foot of page 2 - and this is in the note - you say, "Note there is considerable latitude within the above strategies to operate the dams differently and still comply with the manual"?-- Yes.

50

Can't you see that when you make that reservation, that your compliance assessment, where you retrospectively assess what strategy that they were under, is extremely inexact, isn't it?-- The manual is - only gives broad outlines. I didn't write the manual, so I'm only assessing what those - what the guidelines are or what the procedures are in the manual. And

there is enormous latitude within those guidelines and what they could possibly release.

1

So that didn't phase you or trouble you when you looked at what they did and then retrospectively determined what strategy they were under?-- No, it didn't really. No, not at all.

In relation to the considerable latitude that the operators had, if we look at table 3.1, is it the case that while you say they were under strategy 1A through to and including 1E, that they could, as a matter of discretion, have directed the release of greater volumes from Wivenhoe Dam?-- They - in each one of those strategies there is a maximum that they can release from - as you can see in the table, W1A, the maximum release is 110. So if - they didn't have any latitude within that lake level zone to release any more than that. That was the upper limiting factor.

10

So you say they had the latitude to release less but not to release more?-- Yes.

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Is that the case with each of the five levels in W1?-- Yes.

Does that suggest that the real issue was the timeliness in moving between the various levels? They could have moved more quickly to the upper levels?-- What do you mean? If they didn't release anything under the lower order ones, then they would have been forced at a higher lake level, so they could have released at a higher rate, I guess. Is that what you're asking?

30

Well, I'm asking you. Could they?-- There is latitude in there to operate them. In releasing at 110 cubic metres per second is not a lot of release. I think the - I think there was still water coming out of the hydro at that stage, and that was 50, and that's without operating the main gates at all. I must admit I am missing your point on the question.

Well, my point is could they have more quickly brought it through the W1 levels, within this broad strategy?-- Have got into a W2 or W3 strategy?

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Mmm?-- They had latitude to release less than they actually did to get into a higher strategy. That's correct, yeah.

Well, under the broad strategy, as you see it, when could they have moved to W2?-- I - you would have to go back and have a look at each entry and seen when they opened the gates and remove that from the flood storage of how much they discharged, added that in to see what the lake level would be. That's a fairly complex calculation.

50

You see, under the manual that prevailed at the time, W2 was a transitional strategy, wasn't it?-- Yes.

And on your analysis of the situation, there was no transition; it was immediate from W1 to W3, is that-----?--

Yes.

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So was there scope for an earlier introduction of W2?-- There - I - I guess there was scope to reduce releases, and if you reduce releases at that particular point in time to below the naturally occurring peak, which would mean that you'd be releasing only 100 to meet that peak of 500, or whatever it is, to match the flows at Lockyer, then they would have been in W2 at that stage. So they would have had to have reduced releases at that stage to comply with W2.

10

Could the witness see, please, Exhibit 414, which is Mr Cooper's final report, 12 January 2011? Do you know Mr Cooper?-- Yes, I do.

Have you read this report previously?-- No, I haven't. Thank you.

You have been through it?-- Not this last section.

20

You would agree with me that Mr Cooper and yourself have both found that during the January 2011 flood event, the Control Centre operators were compliant with the manual?-- Yes.

All right. If you look at page 2 of his report, do you see there is the long paragraph that commences with the words "Until the last day or so"?-- Yes.

Right. I think it is generally accepted that Mr Cooper acknowledges that the reference to EL 74.0 should have been a reference to EL 68.5?-- Right.

30

But do you see that both of you have formed the opinion that there was compliance with the manual, but you'll note that Mr Cooper puts forward the view that - this is line 3 of that paragraph - "For the last day or so before yesterday's big rise, strategy W2 would be in place"?-- Sorry, where is this? This is the last line-----

The paragraph that starts "Until the last day or so"?-- Yes, yeah, "for a few days"-----

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Would you just read the first four lines of that paragraph to yourself, please?-- Yes.

So can you see the problem that when an expert such as yourself, an expert such as Mr Cooper, attempt this exercise of looking at what happened, and then retrospectively saying what strategy was in place, we're coming up with quite different answers, aren't we?-- I can't tell you what his thought process was-----

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I know that-----?-- Yeah.

-----but can you see the folly - and I say this very respectfully - the folly of not starting with the strategies that the operators said they were applying, but with, in fact, you retrospectively saying what strategies they were under?--

I really - I must admit I struggle with this line of questioning. In the end of the day, they fall over the line by being in W2 or W3 by going into that water level. There is really not a lot of choice. What release strategy they have once they fall over that line is depending upon the situation. Now, it just so happens that when you just fall over the line into W2 or W3, you are releasing in accordance with W1 and will still achieve the objectives of W3. So I'm not - I'm not saying what their thought processes were, or whatever. I can see that what they would have written was saying that we are releasing in accordance with W1 because W1 meets the objectives of W3.

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W1 meets the objectives of W3?-- Using the release strategy of W1, as in their model results show that the maximum release they needed to make from the dam would achieve the results of non-damaging flow in Brisbane, plus keeping those two bridges open. So, in essence, they are the same rules as W1 to achieve both objectives. Now, it is loose, and I'm sure they wouldn't do it again, to write that they were releasing under W1 but, in effect, that's what they were doing because they were achieving the objectives of W3 by releasing in that manner.

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COMMISSIONER: Mr Roads, can I just put this to you hypothetically: it may be that your actions would equally be appropriate whether you were under W1 or under W3. But isn't there this difficulty: that if you are not - if you were operating under a false constraint about the maximum level of flows you can achieve, you may not be acting in accordance with the manual because you haven't appreciated the full range of your powers, even though you may have not, in the end, decided to exercise them at the upper limits of the range?-- That's the problem we have. The only answer I have to that is if you look at the model results, the model results - effectively, you are using the rainfall that's fallen and the rainfall that's going to fall, you put that into the model and the model gives you an indication of what release rate you will need to achieve the objectives of, you know, whatever flows are required. So, you know, I can't tell you what their mindset is, but the model results will tell you, "Well, look, all I really need to release is 1,200, 1,500 at that particular point in time.

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All right. I have another question for you. You operate on the basis that the lake level will tell you what strategy you are in, like it or not?-- That's - the manual reads that way.

But the trouble is the manual isn't quite that clear, is it, because it talks on occasion about predicted or likely lake level?-- Not between W1 and W2, though.

50

All right. I would have to check that for myself but in other contexts-----?-- Yes.

-----where you are talking about predicted or likely, then there is an exercise of judgment, isn't there?-- It says "predicted" going from W3 and to W4. Going from W - in the

Ws, it is actual, when the lake level, as far as I can tell in the-----

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It may also depend on whether you look at the table or the flowchart, I think, from memory. So if you look at strategy W2 on page 27?-- Yes.

You will see the first of the conditions is Wivenhoe storage level predicted to be between 68.5-----?-- Yes.

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-----and 74?-- If you look at - but in the W1 strategy, they are all lake level greater than. It is not predicted; it is actually greater than.

That's all right. But then you have this area between 1 and 2 where I suppose it depends whether you're looking at the bottom of page 26 or the top of page 27, effectively, because at 27 it certainly indicates a prediction that will suggest an exercise of judgment, I'd suggest?-- Yes.

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All right. Thanks.

MR MURDOCH: Just one final matter in Mr Cooper's report, in that same paragraph that I've been asking you about, do you see that after he refers to - he uses the expression "strategy W2 would be in place", then he has in brackets "restrain releases from Wivenhoe Dam such that Brisbane River flows are maintained within the upper limit of non-damaging floods at Lowood." Do you agree with his assessment, based upon the restraint of the releases from the dam at that particular stage of the event?-- I think that's where the wording of W2 is a little confusing, and that was one of the clarifications that I made before. If you look at that paragraph in W2 where it says that "the intent of strategy W2 is to limit the flow in the Brisbane River to less than the naturally occurring peaks at Lowood and Moggill", blah, blah, blah. So in reading that sentence, that's pretty much within W2. However, you look at the bottom bits, the bottom section of that, then clearly it is not within those in terms of the naturally occurring peak excluding Wivenhoe, because your Wivenhoe releases were more than that. And that's - I guess it is - W2 is not a clear strategy in terms of the way it is written, in my view.

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Do you see any utility in the retention of strategy W2, in the light of what you've said in answer to the last few questions?-- I must admit, I haven't really had a good think about it. I would imagine that there could be a case when there is a flood in the Lockyer and the Bremer and not a very big one in the Upper Brisbane, and then you would be looking at a W2 strategy. I think it would be a fairly rare occasion.

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Sorry, a very?-- I think it would be a rare occasion.

A rare occasion. Nothing further.

COMMISSIONER: Mr O'Donnell?

MR MacSPORRAN: Commissioner, could I just raise one matter?
Mr Robertson, the Minister, is here today as a witness. He
has been here since about 10 o'clock, or shortly before, on
the basis that he was going to follow Mr Roads or be
interposed.

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COMMISSIONER: All right. Well, I suppose we could interpose
him at this point then, if you want to do that. Is that
suitable, Ms Wilson?

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MS WILSON: Yes.

COMMISSIONER: Sorry, Mr Roads, you're being stood aside for a
Minister, just for the time being.

WITNESS STOOD DOWN

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MS WILSON: I call Stephen Robertson.

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STEPHEN ROBERTSON, ON AFFIRMATION, EXAMINED:

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MS WILSON: Your full name is Stephen Robertson?-- Correct.

You are presently the Minister of Energy and Water Utilities?-- Correct.

You've held that position since 21 February 2011?-- That's right.

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During the December/January - December 2010 to January 2011 flood events, you were the Minister for Natural Resources, Mines and Energy?-- I was.

And as the Minister for Natural Resources Mines and Energy, you were the responsible Minister referred to in various Acts, like the Water Supply Safety and Reliability Act, the South-east Queensland Water Distribution and Retail Reconstructing Act, and the South-east Queensland Water Reconstructing Act?-- Correct.

20

You appreciated the responsibilities in those Acts?-- Yes.

Now, you have submitted three statements to the Commission so far, a statement dated 1st of April 2011, which is Exhibit 11 before this Commission. You have also provided to the Commission a statement dated the 1st of February 2012. Can you have a look at this document, please? Is that your statement?-- Yes.

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With attachments?-- Yes.

Madam Commissioner, I tender that statement.

COMMISSIONER: Exhibit 1,115.

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ADMITTED AND MARKED "EXHIBIT 1,115"

MS WILSON: And you have also provided to the Commission a statement dated the 2nd of February 2012?-- Yes, I have.

Is that that statement?-- Yes, it is.

And that has an attachment as well?-- Correct.

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Madam Commissioner, I tender that statement.

COMMISSIONER: 1,116.

ADMITTED AND MARKED "EXHIBIT 1,116"

WITNESS: Can I just say in relation to my third statement, just a minor correction.

MS WILSON: Certainly?-- In terms of the third paragraph, it says, "I have been provided by Seqwater with a copy of the transcript". That should read "South-east Queensland Water Grid Manager".

10

Certainly. While we're at that point, is there any other amendments that you wish to make to any of your statements that you have provided to the Commission?-- No.

Thank you. When you were the Minister for Natural Resources, Mines and Energy, part of your responsibility was dam operations?-- Ultimately responsible, yes.

Ultimate responsibility. As part of your responsibilities as the Minister at that time, you were aware - were you aware that the Wivenhoe Dam had an operational manual?-- Yes.

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And at that time in December 2010, January 2011, during the flood event, did you understand the different strategies in place for Wivenhoe Dam pursuant to the Wivenhoe and Somerset Dam's operational manual?-- Yes.

Did you appreciate that there was four - during a flood event that there was four strategies in place?-- Yes.

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W1 to W4? You have to say yes?-- Yes.

Or no. It just has to be recorded by the shorthand reporter. Did you appreciate when these strategies would be triggered and engaged?-- In general terms, yes.

And when you say "in general terms" what do you mean by that?-- Well, I was aware that there were various trigger points mentioned in the manual that would cause you to transition, to increase or decrease flows, depending on the circumstances that were being faced.

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And the primary considerations relevant to each of those strategies-----?-- Yes.

-----did you appreciate that?-- Yes.

And that was at the time of the flood event?-- Yes.

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Now, if I can take you to your second statement that's dated the 1st of February 2012. You've got that statement there? We can get you a copy of it and it will also come up on the screen. This statement was prepared in response to a requirement issued by this Commission on the 30th of January this year, and that requirement appears at attachment 1 of your statement. If we can go down to paragraph 1 of that requirement? That requirement asked you to give an account of

your understanding in the period 7 January to 12 January 2012 of the flood operations strategies that were in use at Wivenhoe Dam during that period, and the times at which each strategy was in use. Do you see that?-- Yes.

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And you appreciated at the time you made your statement, that was what was required from you?-- Yes.

If we can now take you to your statement of 1st of January 2012, and if we can go to page 2 of that statement? In your statement from paragraphs 5 to 8, you respond to item 1, which is your understanding?-- Yes.

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You outline the briefings and emails you received from 7 to 12 January?-- Yes.

But Minister Robertson, you don't answer the question. What was your understanding in the time period from 7 to 12 January of the strategies that were in place? You have provided documents but you don't set out your understanding. Could you do that now?-- Well, they - they - those documents do represent my understanding of what decisions were being taken over that period of time.

20

So can we take it that everything that is contained in those documents you appreciated and understood, and therefore that was your understanding of the strategies in place?-- I believe so.

And is there one document in particular that you paid particular reference to or appreciation to, or is it the cumulative nature of those documents?-- I imagine it would have been an accumulation of documents that were provided to me over the course of a number of days.

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Can we go to some of those documents? And I will take you to page 14 of attachment 2 to your statement of 1st of February. This is an email from Dan Spiller sent to you and others on the 10th of January at 9.36 a.m.?-- Yes.

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Do you recall seeing this e-mail?-- Yes.

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And if I can understand your answer that you gave me previously, it is - these are the documents that form your understanding of the strategies that Wivenhoe Dam was operating in?-- Yes.

If we can go to the third dot point of this - sorry, if we can go to the third paragraph. We can go up a bit, please. Sorry, are we at page 14 of your attachment? I'm sorry, we've got page - it seems we've got page 18 up, if we can have page 14. Minister Robertson, have you got that in front of you so we can short-track this-----?-- Certainly not on the screen-----

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COMMISSIONER: What is the actual document you are looking for?

MS WILSON: I'm looking for an e-mail of- from Dan Spiller on Sunday the 9th, 2011, 11.07 p.m.

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WITNESS: I have it in front of me.

MS WILSON: Which is at page 14. It will come up in a moment?-- I've got it in front of me.

Okay. Here we go. This is the document that you've got in front of you, Minister?-- Yes, it is.

And this is the e-mail from Dan Spiller on the Sunday the 9th of January 2011 at 11.07 p.m.?-- Yes, it is.

30

Okay. Now, at any time if I'm referring you to any documents that you didn't read or you didn't get could you please tell me but I will proceed on the basis that you did read them and this forms the basis of your understanding?-- Sure.

If we can go down to the paragraph that starts, "To date the primary objective". Do you see that?-- Yes.

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And we - that paragraph, that very short paragraph, sets out what the primary objective has been in - what - the primary objectives for this has been managing to prevent inundation of the Mt Crosby Weir and Fernvale bridges?-- Yes.

The second - the paragraph that follows that refers to the primary objective has now been changed?-- Yes.

When you received this e-mail what did you appreciate that this e-mail was telling you?-- That they were increasing the outflows from the dam.

50

And in terms of your knowledge of the strategies of the dam operational manual what did this e-mail - what information did this e-mail give you?-- At the time I didn't refer back to the manuals.

Did you appreciate that at this point in time - did you get from this e-mail that there was a shift in primary objectives of operating the dam?-- Yes.

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But you didn't go back and connect that shift with what that meant in terms of W1 to W4, is that what you-----?-- I didn't cross-reference, no.

If we can go to page 16, which is the e-mail that follows that one - provided in your statement. This is again an e-mail from Dan Spiller on Monday, the 10th of January at 5.31, and it is sent to you and others, and this e-mail refers to the Mt Crosby Weir and Fernvale bridges being inundated by flows last night and dam releases began to be increased overnight?-- Yes.

10

Did you read this e-mail?-- Yes.

And is there any information that you got from this e-mail in relation to the operation of the dam as per strategies?-- Well, that they had obviously increased outflows from the dam and that had resulted in the inundation of those bridges. It suggested to me that it was a dynamic situation that they were managing.

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If we can go to the next e-mail that you have included, which is at page 18. This is-----?-- Sorry, page 18?

Yes?-- 10th of January?

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That is the case. This is an e-mail from Dan Spiller on Monday, the 10th of January at 9.46 a.m. It is sent to you and others?-- Yes.

We can see for dam operation it sets out key points?-- Yes.

And the third point there down from the dam operations is, "as specified in the approved operational procedures the primary objective is now to minimising the risk of urban inundation, release strategy W2"?-- Yes.

40

And it goes on to refers - to involving larger releases now. Did you read this e-mail?-- Yes, I did.

And I - is it the case that after reading this e-mail you appreciated that the dam was being operated in release strategy W2?-- Based on the information provided, yes.

And that was at 9.46 a.m. on the Monday, the 10th?-- Yes.

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Could I show you an e-mail that is from Barry Dennien to Lance McCallum on Monday, the 10th of January 2011 at 11.46 a.m. This can be found in attachment 2 to your statement of 1st of February 2012. It's effectively the next document on, I'm told. The next document, that probably attaches a TSR, and if you keep on going, there's number "3" at the bottom of the page?-- Is this SRB, is it?

No, it's an e-mail from Barry Dennien to Lance McCallum?--
I've got it on the screen but-----

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Yes. Now, I'm not too sure whether this e-mail - you've got that, Minister?-- Yes I do.

Now, this is an e-mail not to you, to Lance McCallum. Who's Lance McCallum?-- Lance McCallum is my chief of staff.

Okay. And this e-mail refers to a teleconference at 12.30 for an update?-- Correct.

10

Now, you attended that telephone conference?-- Correct.

Was this e-mail forwarded on to you or were you just advised that there was a telephone conference?-- I think I was just advised. I can't say for certain but-----

And the teleconference that occurred at 12.30 that day, you've provided the transcript of that in your third statement at SR-03 to your statement of the 2nd of February 2012?-- Correct.

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If we can go to your - that statement. Before we actually go to the transcript that you provided, can we go to your - the third statement at paragraph 5 - paragraph 4. Now, you don't - didn't have a record of this - attending this teleconference in your diary?-- No.

And you didn't recall attending this teleconference until you saw the transcript?-- Correct.

30

Once you saw the transcript did that help you recollect - remember that you did attend this teleconference?-- Yes.

And have you had the opportunity to read that transcript?-- Yes I have.

And does that transcript accurately set out what occurred at that teleconference?-- To the best of my recollection.

40

Do you - after reading that do you actually remember now attending it?-- Yes.

Is there any corrections that you wish to make?-- No.

Now, you have attached the transcript of that teleconference to this statement. The substance of this teleconference is about fairly operational matters?-- Yes.

50

Such as discharge rates and the purpose of them?-- Yes.

Now, was it the case that when you attended this conference, this teleconference, what did you appreciate - what strategy did you appreciate that the dam was being operated on at this time?-- That's not something I turned my mind to. The discussion there, and I've used the word "dynamic" before, informed me that the situation was changing, in fact it was

deteriorating quite quickly, and as a result changes in strategy or release rates needed to be put in place in accordance with their consideration of what was happening downstream with both the Bremer and the Lockyer.

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I've already taken you to the e-mail from Dan Spiller to you at 9.46 a.m. of that day-----?-- Yes.

-----some three hours before-----?-- Yes.

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-----where it was set out that, "as specified in the approved operational procedures the primary objective is now to minimising the risk of urban inundation, release strategy W2". So that was your view at 9.46 in the morning but are you telling me that it was a dynamic situation and attending that meeting you didn't know where it was at? Is that effect of your evidence?-- In attending the meeting it became clear to me that the situation was deteriorating and that further information had come to hand, further consideration of what needed to be done was occurring in response to that deteriorating situation.

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And when you left that meeting did you have any view of your understanding what the strategy was being implemented by the dam?-- No, what I had an understanding of was that all of the experts, and bear in mind that I am not a qualified flood or dam engineer - what I came away from that meeting with was that the impression that the people who were qualified to make these decisions were making decisions based on information that was changing and they were responding to that changing situation.

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The substance of the teleconference, as stated before, was fairly operational matters, such as discharge rates and the purpose of them. Did you understand all the discussion about release rates and the implications of those releases?-- In general, yes.

Did you seek further advice to assist your understanding in relation to those matters?-- No, I didn't need to.

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So can you in summary tell me what was in your mind when you left that meeting as per the operation of the dam?-- That, as I said, the situation was deteriorating, there was more inflows coming into the dam, as a result they needed to increase the outflows, but bearing in mind they also had to take into consideration what was happening downstream with the impact of outflows from the Bremer and the Lockyer. I was also aware that the State Disaster Control Centre had been mobilised and that the reporting requirements from these dam engineers changed in - to the extent that they were no longer just reporting to me but also reporting centrally as the whole of government State Disaster Control Centre was now the preeminent body responding to this emerging natural disaster.

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Now, you received a briefing note on the - on the January 2011 floods dated the 17th of January 2011?-- Yes.

And that - this document was prepared by the Seqwater Grid Manager and Seqwater?-- Yes.

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And it appears as annexure SR-12 to your statement dated the 1st of April-----?-- Yes.

-----and it is Exhibit 11. This is the briefing note that you received?-- It is.

As far as you were concerned what was the purpose of this briefing note?-- This briefing note was prepared at my request to provide me with the necessary information that I may take to meetings with either my - either the Premier or the whole cabinet. As it turned out an emergency cabinet meeting was scheduled for the following Monday. So this was a document that was prepared to aid me to report to cabinet in terms of my understanding as responsible minister as to what had happened over the preceding week.

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Were any decisions based on the basis of this briefing note?-- At the cabinet meeting?

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Yes?-- No. What - the reason being is that at the same time the Premier was turning her mind to establishing this Inquiry and that became the preeminent topic for discussion at that cabinet meeting rather than the contents of this briefing note.

One of the document that comprises attachment A, the briefing note, begins with a page with the Seqwater logo and the title "January 2011 Flood Event"?-- Yes.

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You've got that on your screen?-- Yes.

Did you read this document?-- Yes, I did.

If I can take you to page 5 of that document. Page 5 of this document sets out a description of strategies W1, W2, W3 and W4?-- Yes.

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Did you read this part?-- Yes.

And did this accord with your understanding of the strategies in the operational manual?-- Generally, yes.

When you say "generally", what does that mean?-- Well, again I didn't cross-reference this page against the manual. My expectation would have been that that would have been an accurate description.

50

If we can go to page 7 of this document. Page 7 sets out at 4.2 "Event Decisionmaking"?-- Yes.

It sets out a table showing the decisions that were made and the times at which they were made?-- Yes.

And it sets out the decisions about when they were made in relation to the strategies pursuant to the manual. That's

what you understood it to be?-- Yes.

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Did you read this section?-- Yes.

Now, if we can go across the page. Did you read this page on page 8 about when operational strategies had progressed to W2 and to W3?-- Yes.

If I can take you to, for example, the - 6.30 a.m. on the 10th of January 2011?-- Yes.

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You see that there - set out there, that entry, "Rainfall continued during the night and based on rainfall on the ground it was apparent the operational strategy had progressed to W3"?-- Yes.

You read that entry?-- Yes.

Did you think that that was different information than information that you had previously been provided?-- It didn't occur to me. Again I didn't cross-reference this document with previous documents that - I think you need to appreciate that by the time these documents get to me as minister they pass through numerous hands, so my expectation is that by the time a document is provided to me it has gone through appropriate quality control at the various levels of the organisations or the department. So to think that I would then sit down and cross-reference this document against previous briefings, that's just not the way it happens.

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One of the matters that would have been on your mind is whether the dam had been operated in compliance with the manual; is that the case?-- As - what was in my mind was whether the dam had been operated to the best of the ability of the dam and flood operators.

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So you didn't consider whether - it wasn't a consideration of yours whether the dam had been operated in compliance with the manual?-- Yes.

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That - so that was a consideration?-- Yes.

And were you interested to know whether that had had - occurred?-- Yes, in general.

When you say "in general" what do you mean?-- Well, I requested a briefing as to who did what during the course of the preceding week, bearing in mind that the flood event was still being managed, therefore this document represents to me a fairly comprehensive report done in a - as quick a time as possible, given the short turnaround that I had requested. I put - and I've said in my - in my statement that I don't consider it to be a definitive tone in terms of every decision that was taken. I also knew that it was a requirement of Seqwater to produce within a period of time a detailed report on what had occurred. This briefing was to provide me with background information that I could take to cabinet and report to cabinet if requested on what had happened. I at no time

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considered, as I've said, that this would be a definitive blow-by-blow description of what happened.

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So did you expect that the times and dates as to when the dam was operated in relation to the strategies would change from this document?-- I wouldn't be surprised-----

Well-----?-- -----Given the fast turnaround that I requested this briefing note to be prepared, and given the fact that the individuals who were responsible for preparing much of the information contained in this report had been through an extremely stressful, very difficult and challenging time, and that flood event was still being managed by those people. So I think in terms of a reasonable approach that I take as Minister to appreciating the pressures that officers in my department or agencies that report to me are under, it fulfilled the purpose for which I required as per my request.

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Thank you. In terms of the operational manual, are you aware that compliance - to comply with the manual you have to be in a strategy at a certain point in time? Were you aware of that?-- In general, yes.

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Okay. We've taken you through your understanding of the manual?-- Mmm.

So did you think at this point in time when you got this report that at 6.30 on the 10th of January 2011 it was - when this entry states, "it was apparent that the operational strategy had progressed to W3," that that may move to another time?-- That's not something I turned my mind to.

30

Did you expect that the times and dates about when the dam had moved to various strategies would remain the same?-- Put it this way, I wouldn't have been surprised if in the preparation of the final report from - from Seqwater as was required under legislation if some of the information changed based on a more considered and more detailed review of what occurred. It's not unusual.

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It's not unusual in - is it the case, in the ministerial briefings you'd received in the past for information to change?-- Absolutely. It happens quite regularly.

But in terms about when a strategy had been triggered, a time and date, did you expect that that could change?-- It's not something I turned my mind to.

So is it the case that when you received this document you assumed that the information was correct?-- I took it at face value, yes.

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So you assumed the information was correct?-- Yes.

Minister, did you read the Cooper report?-- Yes, I did.

And it's Exhibit 414, and I'll just put it on the screen. Can you tell me, Minister, when you read that document?-- I

couldn't give you the particular day but it was handed to me expeditiously from its receipt.

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Was there anything in that document that caused you to ask further questions about when strategies had been triggered?-- No.

And why is that?-- Because the conclusion that I came to from the Cooper report was that he expressed general satisfaction with the way that the dam had been managed and that satisfied me that in terms of a very quick, independent review at the time the events were taking place, that gave me confidence that the right decisions were being taken.

10

And again you didn't get the two documents together and compare-----?-- No.

-----the information in one or the other?-- No.

Now, did you read the Seqwater report published on the 2nd of March 2011, which appears at Exhibit 24 before this Commission?-- Yes.

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You did read it?-- Yes.

Did you read part two of that, which sets out when the strategies were engaged?-- Yes.

Did you note any difference between that document and the ministerial briefing that you received on the 17th of January?-- No.

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You've done - you've looked at the two documents now?-- I've since become aware of the differences through media reports but at the time, no. The documents were read two months apart.

And no-one advised you that there was any differences?-- No.

Thank you very much, Minister, that's all the questions I have for you?-- Thank you.

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COMMISSIONER: Mr Rangiah?

MR RANGIAH: I don't have any questions

COMMISSIONER: Mr Murdoch?

MR MURDOCH: No Commissioner.

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COMMISSIONER: Mr O'Donnell, questions?

MR O'DONNELL: Yes.

That last - the ministerial briefing you received on the 16th of January, and you were taken to that event milestone table,

was it your understanding at the time you received it that the
- that document had been prepared by some of the flood
engineers who had actually been managing the dams during the
flood event?-- Yes

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You had an understanding they had been working long hours?--
Yes.

With compromised sleep?-- Absolutely.

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They were suffering from fatigue?-- Yes.

And stress?-- Correct.

Because they had had to make some quite stressful decisions?--
Extraordinary decisions.

And you also understood it was prepared in a very short space
of time?-- Yes.

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So you appreciate - and with limited access to or limited time
for verifying against contemporary-----?-- Yes. I've
expressed the view, I think, they've done the best job that
they could do in terms of preparing that report for me to take
to cabinet.

Yes. And you understood at the time that there may be errors
in it?-- Yes.

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They were doing their best they could in the circumstances available to them?-- Yes.

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Rather than it being a considered exercise carried out with unlimited access to information and time to get the facts right?-- For the purposes of reporting to Cabinet, we weren't going to do a forensic study of this document. I would be reporting to Cabinet in general terms about how the dam was managed. So if figures were not entirely accurate, that probably - I can't imagine that would have impacted on the nature of the report or the accuracy of the report I provided to Cabinet.

10

Thank you. Is it also - as I understood your evidence before, you were asked were you interested in whether the dam was managed in compliance with the manual. And as I took down your answer, you said your interest was was the dam operated to the best of the ability of the dam operators?-- Correct.

That is, with a view to minimising urban inundation?-- That's right.

20

During the flood event?-- And ultimately to the safety of the dam itself.

That was your focus, was it?-- Yes.

I take it therefore your focus was not on whether there had been any noncompliance with the manual which did not have a practical consequence in terms of the dam being managed to the best of the ability of the dam operators to minimise urban inundation?-- That's right. To perhaps put it in colloquial terms, if I had detect a "she'll be right" attitude, that would have set off alarm bells in my head as Minister. At all times through the briefings and discussions that I had, the impression that I was left with was that everyone was treat this matter with the utmost seriousness, and they were dedicated to the task of reducing the impacts on residents downstream and ultimately to the overall safety of the dam.

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Thank you.

MR AMBROSE: We have no questions.

MR BURNS: No questions

MR SULLIVAN: No questions.

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MR MacSPORRAN: If I take you to the teleconference of 10 January. You understood at that time that event was rapidly escalating; is that so?-- Correct.

One of the purposes of that teleconference was to get a sense of how serious the event was becoming?-- Yes.

And at that stage was your focus on what the likely impacts for inundation was for Ipswich and Brisbane downstream of the dam?-- Yes.

1

You weren't focused, I take it, on what strategy in particular the flood engineers were operating at?-- No.

And that teleconference time, which was around lunchtime or shortly before on the Monday morning, the flood engineers were not taking part in the teleconference, were they?-- I couldn't tell you. I couldn't recall the full array of people who were connected into that.

10

You would have assumed that they would be operating the dam?-- Yes.

Getting on with the job?-- Yes.

In difficult circumstances, as you've told us?-- Yes.

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But you were there to get a sense of what was happening, and there were a number of other people, Seqwater executives-----?-- Yes.

-----who were in part of the conference, as were representatives from the Brisbane City Council and Ipswich?-- Correct.

And to get a sense of how serious the impacts were going to be?-- Yes.

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And throughout this period you were aware, I take it, that there would be an official formal report into the events furnished through Seqwater?-- Yes, within a set period of time, I think, established by the legislation, if I recall correctly.

The briefing you received on the 16th for the emergency meeting on the 17th, you took into account the severe time constraints in which that document was put together?-- Yes, I did.

40

And you were seeking more of a broad overview by way of background to take to Cabinet if necessary?-- Yes.

And that's what you got?-- Correct.

And you treated it in that context?-- Correct.

You didn't sit back and compare it line by line with other documents you had received over the time in terms of how the dam had been operated?-- No, that is the responsibility of others.

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Thank you.

MS WILSON: I have no additional questions. May the Minister be excused.

WITNESS EXCUSED

COMMISSIONER: I think we'll take the midmorning break a bit early to save Mr Roads coming back and going again. We'll adjourn until 11.25.

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THE COMMISSION ADJOURNED AT 11.04 P.M.

THE COMMISSION RESUMED AT 11.25 A.M.

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GREGORY KENNETH ROADS, CONTINUING EXAMINATION:

MR O'DONNELL: Do you have there the manual?-- I do.

And the flood report?-- Yes.

You'll need the manual. I want to raise with you a topic that the Commissioner raised with you this morning, this question of transitioning out of W1. Could I suggest - I'm really asking is this your interpretation of the manual as an expert engineer that there are two possible situations which you can transition out of W1 to the higher strategy: one is when there is a predicted future rise in the lake level to 68.5; and the other is when the lake level actually crosses that line?-- I must admit, when I interpret the manual, I interpret the manual more literally in that as soon as it crosses the line, then you are automatically in W1 and W2. Having a look at what it says up the top there in W2 that it's predicted to be between these levels, I guess because it's in conflict with the previous one, then I would take that over the other. I wouldn't - I wouldn't - given where you are if the flood, as in it's always a very, very flood and you are trying to keep those bridges open as long as you can, it would make sense to me to be - make sure that you go over those limits rather than predicted to be above those levels.

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Let's say we're at common ground when the water level crosses 68.5 there is an automatic requirement to transition?-- Yes.

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But there is also reference to a predicted future crossing of 68.5. Doesn't that contemplate a situation where the flood engineer says the lake level is not at 68.5 yet, but on my modelling it is predicted to cross at that level, say, later today; therefore, I elect now to transition?-- Well, according to the two words - you know, I interpret it differently. But

according to what it says in the top of W2, then that is correct.

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So I'm suggesting there are two possible situations: one is by election of the flood engineer when the lake level is still below 68.5; and the second is when the lake level actually crosses that line, there is a mandated transition?-- Mandated requirement.

Yes. Could I show you the model results made at Saturday, the 8th, at 7 a.m. It's probably in the evidence somewhere, but I haven't had time to look up where, so I'll just hand up a copy.

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COMMISSIONER: Is this the one we've looked at before?

MR O'DONNELL: Yes.

COMMISSIONER: My Associate has it on the screen.

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MR O'DONNELL: I'm sure last year. I've got a hard copy that I can show you?-- I prefer hard copies.

If we go to page 48 at the bottom, this is a model run at 7 a.m. on the Saturday, the 8th. What it shows is the lake level at that time is rising in the dam?-- Correct.

It's not terribly clear on the model. But if you take my word for it, the evidence is that at that time the lake level was just below 68.5. I think it was about 68.4. But as you can see, it's predicted to rise close - up to close to 69 over the next 24 hours?-- Yes.

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So could I suggest under the manual as you interpret it, the flood officer could say, I elect right now to go to 68.5; or he could make no election, wait until the water level crosses that line, and then there's a mandated transition?-- Yes, he could do either. Mind you, to open up your releases you're still consistent with W1 at that point in time as well. So your maximum release within W1E is 1900 at that point in time.

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Yes, that's right. All right. Now, the releases at that time, around 7 a.m. on Saturday morning, were about 890 CUMECS from Wivenhoe. You can check that if you want?-- Yes.

You'll find that's in the manual?-- Section 9 of the report.

Page 155: 879 CUMECS?-- Yes.

Now, the question is when the lake level crosses 68.5 - sorry. You know the sentence in the manual, you looked at it before, when the lake level crosses 68.5, the transition to W2 or W3 is appropriate. If you look at what was appropriate at that time, that is, at 8 a.m. when the lake level actually crosses, if you look in that model run at page 49, it's a modelling of the flows at Lowood ignoring the Wivenhoe releases?-- Yes.

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And the flows at Lowood are about 500 CUMECS, would you say?--

Yes, it's around there.

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On the next page, page 50, it shows the flows at Moggill ignoring Wivenhoe releases, and the flows at Moggill were around 770 CUMECS?-- Yes.

So the flood officer who is there managing the dam at 8 a.m. when the water actually crosses the line, he would immediately see from the modelling that the releases out of Wivenhoe alone are greater than the predicted naturally occurring peaks at Lowood and Moggill?-- At that point in time, yes.

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And therefore W2 is just not available?-- Yes.

And that's how you would interpret the situation as an engineer?-- Yes.

In other words, where the manual says when the water crosses 68.5 transition to W2 or W3 is appropriate, W2 is just not appropriate because of the physical-----?-- That's right.

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-----comparison of flows, so there is no choice for the flood engineer?-- No, that's right.

As you read it as an engineer - expert engineer, the manual in those circumstances is mandating the use of W3?-- Yes. The only thing I will add to that is that the line above that in W2 - it's got the naturally occurring peak, and it doesn't refer to excluding Wivenhoe in that sentence. So I guess it could be - it's almost in conflict that one is the naturally occurring peak. Now, I first read that as assuming that includes the upper Brisbane River flows. It's only that table below that that refers to the excluding Wivenhoe.

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So you are looking at page 27 of the manual, the box at the bottom of the page?-- Yes, the middle paragraph, that first sentence, it doesn't - the naturally occurring peak. Now, to me, a naturally occurring peak includes all the catchment flows, not just the flows excluding half of the catchment. And that was the question I asked.

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COMMISSIONER: Mr O'Donnell, I just need to clarify something, and I did ask another witness this.

But in the circumstance where your concern really is the Bremer-Lockyer Creek outflows, is it not conceivable that you would have a situation where you would actually decide to drop your releases so as to ensure you're in W2; in other words, at this point you might be saying to yourself there's so much water coming down those tributaries that I should operate in W2, so I'll stop releases to allow that to happen?-- Yes. In the modelling that I had done, the model predictions certainly do that. They will ratchet down releases to allow the peak to go past and then piggyback on the releases on the tail of the Lockyer and the Bremer peak to make sure that the releases are less than that peak.

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I'm just putting this on a hypothetical basis because I don't

have any impression this is the circumstances around that time?-- No.

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But my point is it's not automatic, is it, that because you're already letting out more than that natural peak, you can't contemplate W2 because you could adjust the flows?-- You could, yes, that's right.

To bring yourself in?-- Yes.

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Thanks.

MR O'DONNELL: Let me explore that situation with you a bit further. You are the flood engineer. You're sitting there at 8 a.m. in the Flood Operations Centre. You see the water level crosses 68.5. At that time the releases from Wivenhoe alone are in excess of the naturally occurring flows at Lowood and Moggill, so therefore you know at that time W2 is not available to you. But let's say you have the thought the Commissioner raises: You would prefer to be operating under W2, so therefore you decide you'll reduce the releases from Wivenhoe so that the releases from Wivenhoe with the other flows in the river will come under the naturally occurring flows at Lowood and Moggill?-- That's right.

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That might lead to the situation where, say, some hours hence - some hours later that day, say in the afternoon, the releases from Wivenhoe allow you to operate under W2. Isn't the situation then as you would see it at 8 a.m. the manual has required you to use W3. But after you have reduced the releases from Wivenhoe, say, that afternoon, you could then elect to transition to W2?-- Correct. Putting myself in the shoes of the operator, you would need to have some good information that it wasn't going to rain any more to reduce your flows, I think.

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Really I think what the Commissioner was raising was at 8 a.m. could you as a flood engineer elect to jump into W2 rather than W3. I'm suggesting that you as an expert would interpret the situation as you couldn't elect to jump into W2 at 8 a.m.; you were required to use W3; but you could, in using W3, elect to reduce your releases so later on after the releases from Wivenhoe were dropped down substantially, you could then elect to jump into W2?-- You could have, once you went across the line, decided to release - reduce your flows almost straightaway to get yourself back into W2. But again, that's not something that I would have done.

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But it's not until you have actually achieved the reduces in flow - reductions in flow that you-----?-- Correct.

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-----could transition to W2?-- Yes. But you have latitude within W3 to release anything up to the maximum, effectively.

Yes. And you would also have to decide at 8 a.m. - you'll have to consider, wouldn't you, as at 8 a.m., is it appropriate to reduce the releases from Wivenhoe, bearing in mind my primary consideration is now minimising the risk of

urban inundation?-- Yes. As I said, you would need to have very good information that it was clearing up to suggest there wasn't going to be any more rain to reduce your flows sufficiently to satisfy W2.

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And as at 8 a.m. on Saturday morning, to reduce your flows so that you could transition to W2, you would have to reduce them by-----?-- You'd almost have to shut down the gates.

Shut down the gates, exactly. Which hardly sounds consistent with a primary - meeting a primary consideration of minimising urban inundation?-- Given the rainfalls that were forecast and the long-term rainfalls, no, it wouldn't have been consistent.

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Now, in forming your views as an expert, as I followed you before - I'll start again. You've expressed the view that as at 8 a.m. on the Saturday morning, the - in the circumstances then applying, the manual requires the use of W3. Your task as an expert was to review what the engineers actually did in managing the dam over that day and the following days to decide whether they met the performance criteria required under W3?-- Correct.

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In other words, your task, as you saw it, was not to look what was in their state of mind at the time, but rather look at their objective actions and ask: Do their objective actions meet the requirements of W3?-- I can't find anywhere in the manual where it requires them to put their state of mind, no. It is just purely what they did.

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And your opinion - the opinion you formed was that they did meet the requirements of W3 in operating the dam from 8 a.m. Saturday, for the rest of that day?-- Yes.

And on the Sunday?-- Yes.

And on the Monday?-- Yes.

And you remain of that view?-- Yes. I'll just go further, I suppose. If you look at that model results log and you look at the - what the model is telling you the predicted maximum release from the dam is and the maximum discharge at Lowood and Fernvale with the releases, if they had changed their operating strategy significantly from what the model was saying, that would be a red flag to me as that okay, they have changed something here that is not consistent with that, and I'd have to check that out further. So to me, the model results tell me what they are considering in their decisions.

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What does it tell you they were considering in their decisions?-- It tells me that the primary objectives were met over that period of time, and the second area objectives of keeping those two bridges open were sufficiently - were what should have been considered at that point in time. It was appropriate to do that.

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When you say it tells you that their primary objectives were met, what does it tell you were their primary objectives over

those three days?-- Their primary consideration was to prevent inundation of properties through Brisbane and Ipswich or below - downstream, so - and by doing that is keeping those flows below 3500, 4000 at Moggill.

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COMMISSIONER: Can we just get this clear. Are you taking about their primary objectives in the sense of their state of mind, or their primary objectives in terms of what the manual contemplates for the strategy?-- I can't tell you what their state of mind is. I can only tell you that what - it was being achieved, that - the model results were telling me that regardless of what their state of mind was, their release strategy was achieving that objective.

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MR O'DONNELL: Based upon your analysis of the modelling they were doing?-- Based on the results of the modelling that they did.

Can I raise another thing that the Commissioner raised with you. The Commissioner said to you something along the lines of from 8 a.m. Saturday morning, if I look at the decisions they made about releases can I tell from those decisions whether they are made with a mindset of W1 or W3, something along those lines. Before you answer - you've already expressed a view on that - can I direct your attention to a couple of things. Can we look in the flood report at one of the gate opening directives. So if you go to appendix 3 and open that. And you will also need the flood report itself, first volume at page 155?-- On which one? Which report? The appendix or the main report?

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The main report?-- Yes.

Page 155. Got that?-- Yes.

You can see from page 155 that as at 8 a.m. the releases are around 927 CUMECS from Wivenhoe?-- Yes.

And that's when the water crosses the 68.5 line?-- Yes.

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Then if you look in the flood directives, there's one that issues 15 minutes later on that Saturday morning?-- Yes.

That's at page 5?-- Yes.

Got that? And you see that the effect of the directive, if you look down at the second-last paragraph commencing, "it is noted that the hydro". It says, "At the completion of these gate operations, the dam will be releasing 1247 CUMECS"?-- Yes.

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So in other words, someone has taken the decision to increase the releases from 900 to around 1250 CUMECS within the next six hours?-- Yes.

The decision to increase - that's an increase of about 30 per cent over what they are currently releasing?-- Yes.

The decision to increase the releases by about 30 per cent, that's not needed to give effect to the objective of minimising disruption to rural life downstream of the dam, is it?-- Well, you had already taken out the bridges by this stage, so the only bridges you hadn't was Mt Crosby and Fernvale, so you were maximising your releases up to that point where it didn't affect those two bridges. Everything else was already out.

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That's certainly true, but what I am suggesting to you is that ramping up the releases to this extent on the Saturday morning, that's not needed to give effect to the W1 objective of minimising impact on rural life?-- The lower W1D and E, no, that's right.

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Or-----?-- E it is, but A, B, C, D it is not.

You are keeping open Mt Crosby and Fernvale?-- Yes.

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But by increasing releases you are not causing any minimisation of impact on rural life?-- That's right.

Isn't the increasing of releases just after the water crosses 68.5 consistent with an intention to maximise the flood storage capacity within Wivenhoe so that if substantial further rain comes, you've got maximum storage possible so as to protect against urban inundation?-- I think that's exactly what it means. At that point in time, yes.

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Thank you.

COMMISSIONER: But isn't it also consistent with not taking the remaining bridges out if more rain - more water comes in? In other words, you let out what you can now, you have already got a lot of bridges closed but you want to keep those two open?-- That's right.

And you will do it at 12.47?-- That's right. But you're releasing up to that point where it maximises the capacity of those bridges. So you're releasing out as much as you can without taking those two bridges out.

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It is just that it seems to me equivocal about which objective it is. It might achieve both-----?-- Yes.

-----but, again, it doesn't seem - unless you can tell me something that makes it conclusive that it must be for one objective rather than another?-- Well, you know, I can't tell you no; it is what makes sense, what's logical. If I was a dam operator at that time, what would I do, and I would do this.

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All right.

MR O'DONNELL: And you do it because - with the primary objective of giving maximum protection against urban inundation?-- That's right. As much as you could at that point in time. You've taken out all the other bridges, keeping those two open, so you may as well release as much as you can to lower the dam as quickly as you can.

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Because the effect of increasing this release at 8.15 is really neutral as regards impact on rural life, isn't it?-- Correct.

Then if you look at the pattern of releases we see at page 155 and over to 156, do you see that the releases increase from

around the 900 figure on Saturday morning, during the day on Saturday, up to about 1,240 CUMECS-----?-- Yes.

1

-----by Saturday night? Then there is a gradual increase on Sunday, up to around?-- 1,334.

1,300s, and it progresses through the 1,300s to 1,400s?-- Yes.

Again, that level of release is really neutral as far as - sorry, the increases in releases from the Saturday morning to the Sunday evening are really neutral as regards the impact upon rural life?-- That's right. As far as I am aware, they were ratcheting up and increasing their releases as the downstream flows were reducing to maintain that flow at the bridge at the maximum you could without going over the top. That makes logical sense.

10

So you would say, wouldn't you, that the increasing of releases over that Saturday and Sunday was consistent with wanting to reduce the levels in Wivenhoe so as to preserve maximum flood storage capacity if the heavy rain forecast does come so that you've got maximum ability to protect against urban inundation?-- That's what I would say, yes.

20

COMMISSIONER: But, Mr Roads, the reason I'm just having difficulty with the concept is it seems to me that if you're trying to keep the two bridges open, you're automatically guarding against urban inundation, aren't you, because if those bridges are open, there is no problem further downstream?-- That's right, yeah.

30

So I just struggle with the idea that it tells you conclusively, one way or other, what it is they are aiming at?-- Well, I can only tell you what I would have done.

I know what you would have done - I am sure you'd have done a great job - but-----?-- Well, I mean - yeah, I mean I can't - as I said, I can't tell you what their state of mind was. All I can say is what that was was appropriate to try and maximise your discharges while keeping that bridge open.

40

I understand that?-- And that, in effect, is reducing - increasing your storage volume in your dam.

Mmm. Yeah. All right.

MR O'DONNELL: Then we get to Sunday evening and there is a decision taken then to increase releases - Sunday evening around about - actually, I will show you some model results. I will hand up a copy of Exhibit 22 for you. I have a hardcopy of that, if that will assist you, Commissioner.

50

COMMISSIONER: Thank you.

MR O'DONNELL: If you turn, please, to the third sheet in called appendix A1. Now, this is the without forecast rainfall summary of results - model results. And if you

wouldn't mind - you will see at the foot of the page someone has written in by hand column numbers?-- Yes.

1

Just take a moment to look at this if you want to?-- I haven't seen the supplementary runs at all, I only saw the others, but I am very familiar with-----

If you go to the column numbered 10?-- Yes.

And if you go up to Sunday the 9th?-- Yes.

10

At 4 p.m.?-- Yes.

At that stage the predicted outflow from Wivenhoe is 2,740?-- Yes.

Now, when the engineers decide on a planned increase of releases above 1,900, they can only be in W2 or W3, can't they?-- Yes.

20

They can't decide upon planned increase in releases if they're still operating under W1?-- That's absolutely correct. The maximum release in W1 is 1,900.

That's right. Also while we're looking at that, can we look at the comparison of column 10 and columns 21 and 23? Now, at column 21 are the predicted peak flows at Lowood ignoring Wivenhoe releases, and column 23 are the predicted peak flows at Moggill, ignoring Wivenhoe releases. And we can see, can't we, that throughout the Saturday and Sunday, the releases from Wivenhoe are at all times in excess of the predicted naturally occurring peaks at Lowood and Moggill?-- Yes.

30

And that suggests to you, doesn't it, that the dam was not being operated under W2 at any time during that weekend?-- That's correct.

All right, thank you. You said, as I followed your evidence, that in your opinion the critical question is - sorry, the critical consideration is what the engineers - flood engineers did in managing the dam, not what was in their mind?-- Yes.

40

As I took down one of your answers, you said the critical thing was have they satisfied the criteria in the applicable strategy. In your opinion, from Saturday 8 a.m. onwards, for that day, Sunday, and Monday, the applicable strategy was W3?-- Yes.

And so you say the critical thing is did they satisfy the criteria of W3 in managing the dam over those three days?-- Yes.

50

And that's something you carefully considered in preparing your report?-- Yes.

And is it your opinion that they did satisfy the criteria of W3 in managing the dam over those three days?-- Yes, as evidenced by the modelling results. At each stage that was

provided to me that they were satisfying it at each one of those model times.

1

As I took down one of your answers, you said words to the effect, "What matters is not what label they give to what they're doing but whether what they release is in compliance with the objectives of the strategy"-- Yes, I took the manual quite literally in that sense, and in the question that I was asked to do, yes.

10

So if you look at the requirements of W3, for example, you've got a requirement to make decisions about releases which gives effect to a primary consideration of minimising urban inundation. You've got a secondary objective of avoiding disruption to rural life. You've got other objectives regarding what can be the maximum releases and regulating your releases by reference to downstream flows?-- Yes.

In your view, what the engineers did from Saturday 8 a.m. for the rest of Saturday, all day Sunday, Monday met those objectives?-- Yes, that's my view.

20

And it is also your view that as an engineer, that is the important aspect of what they do, not whether they subjectively sit there thinking "I am in this strategy or that strategy"?-- Yeah. I - that's correct. I guess the fact that the model results are there are showing that it is achieving it. You know, it is fairly obvious, I guess.

Fairly obvious?-- That they're achieving that objective. So it is on their screen every time they do a model run that, yes, that objective is being achieved.

30

Did I understand you before to say that - words to the effect that from your review of what decisions they made about releases, you formed the view that the decisions they made about releases over those three days were appropriate by reference to the information then available to them at the time they made the releases?-- Yes.

40

And you remain of that view?-- Yes.

Thank you. Now, could I take you to something else? You were shown a situation report at Saturday the 8th at 6 p.m. Would you mind turning that up, please? Now, I need you to look at three documents simultaneously. You have got that document, the situation report?-- This appendix 3?

Situation report - no, it is not?-- Which situation report?

50

COMMISSIONER: It is on the screen, if that's any help?-- Oh, this one. Yes, yes, yes.

MR O'DONNELL: If you've got the model result summary, Exhibit 22?-- Yes, I've got those here.

And I also need you to go to the flood report, appendix 2, page 224?-- Yes.

Just look at page 224 for a minute. This is a model of the inflows to Wivenhoe excluding Somerset Dam releases?-- Yes.

And it shows, doesn't it, three peaks occurring - three peaks of inflows?-- Yes.

One at about 2,000 CUMECS some time on the 7th?-- Which had already occurred.

10

Had already occurred. The second one of about just over 1,600 CUMECS some time on the 8th, some time in the morning, would you say?-- Yes.

Then a third one on about the Tuesday the 11th?-- Yes.

Going into Wednesday the 12th?-- Yes.

At about just under 1,400 CUMECS. And this is prepared, as you see at the top, Saturday 3 p.m.?-- Yes.

20

So at this time the inflows would be falling?-- I beg your pardon, sorry?

The inflows would be falling?-- Yes, that's right. At that point in time.

So it is contemplating inflows will continue to fall down to below 200 CUMECS. Then there will be further rainfall producing a steep rise in inflows probably on the Tuesday?-- Yes.

30

Now, can I ask you to assume that model is prepared just a couple of hours before the situation report?-- Yes.

And is prepared by the same person who writes the situation report. If we can look at what that person says in the situation report, if you look on the second page under the heading "Wivenhoe full supply level 67", you will see it says that at 18:00, "Wivenhoe Dam was at 68.65 rising slowly, currently releasing 1,250 CUMECS"?-- Yes.

40

So we're just above the 68.5. Then it says, "River levels upstream of Wivenhoe Dam have peaked and are now receding"?-- Yes.

And that rather fits with the model, doesn't it?-- Yes, it does.

On the basis if the river levels are receding, but you are maintaining a constant 1,250 release, your inflows will fall and your lake level will also fall?-- That's right.

50

Then if you go to the foot of the page under the heading "forecast scenario based upon mid-range rainfall forecasts"? You would understand "mid-range rainfall forecasts" to be referring to three to five days ahead?-- Yes.

And it is talking about a possible increase in releases, given the likelihood of significant inflows in the next few days. Then it talks about the interaction with run-off from Bremer to Warrill Creek requiring the application of W2?-- Yes.

1

Do you see the next sentence, "Predictions based upon forecast rainfall suggests flows of up to 1,200 CUMECS will emanate from the Bremer River catchments."?-- Yes.

So it is contemplating a situation, isn't it, where if this rainfall comes, the flow in the Bremer - the naturally occurring flow in the Bremer will be around 1,250 CUMECS?-- 1,200, yep.

10

1,200. And that might allow releases from Wivenhoe, if this rain comes, to be effectively piggybacked on the back of the naturally occurring flows downstream?-- Yes.

Now, that was not a situation which was applicable on Saturday the 8th when this was written, was it, because at that time the flows in the Bremer were nothing like 1,200 CUMECS?-- No, that's right.

20

If we go back to that Exhibit 22, the summary of model results. If we just check that for a moment. So if we look at what the model was then telling the author of this document was the flow in the Bremer, go to the third page of that summary?-- I am trying to find that - yes, I will look at it on the screen.

30

I did hand you the copy?-- You did.

Do you want another copy?-- I have got it here.

We have written column numbers?-- Yes, okay.

If you go to the third sheet and count along to column 15. It gives you the predicted peaks in the Bremer flows, doesn't it, in column 15?-- Yes.

40

And if we look along the line of Saturday the 8th at 6 p.m., do we see that the predicted peak in the Bremer was 410 CUMECS?-- Saturday at - what time did you say?

6 p.m.?-- Is 410, yes.

That's without forecast rainfall. If you count two sheets over, you have got a with forecast rainfall?-- Yes.

Let's do the same exercise. Column 15. If you look at Saturday the 8th at 6 p.m., you've got a predicted peak in the Bremer of 520?-- Yes.

50

So from where the author of this situation report is sitting at the moment, predicted peaks in the Bremer is around 520, which is less than half of the current releases from Wivenhoe. Therefore, the idea of piggybacking releases from Wivenhoe on downstream flows is not feasible, is it?-- That's right. I

guess this one - these runs are taken using the 24 hour forecast rainfall, as far as I'm aware, whereas the one you were talking about before was the three day one, I would imagine.

1

Yes. So it suggested that as at Saturday the 8th, the option of transitioning to W2 is not currently available?-- That's the way I see it, yes.

But it is also suggesting that if that longer term model we just looked at, which has the third peak coming on the Tuesday evening, if that proves true, then on the Tuesday there might be a prospect of transitioning to W2 because by then - or the model shows at that time the Bremer flow will be dramatically different than it is on the Saturday, that is the 1,200 flow?-- Yes.

10

That makes sense to you, doesn't it?-- Yes, it does.

So what it is contemplating in that situation report is not an imminent transition to W2, that is imminent as at 6 p.m. on Saturday; it is contemplating a transition to W2 maybe on the Tuesday or Wednesday?-- Based on those long-term forecast rainfalls, yes.

20

Just going back to that model at page 224 of the flood report-----?-- Yes.

-----if you look at where we're sitting on Saturday the 8th at around 6 p.m., you've got the inflows falling, inflows to the dam are falling, you've got the lake - sorry, the releases relatively constant around 1,250, and you've got your lake level only just above 68.5, haven't you?-- Yes.

30

It has only got to fall about six inches and you're back in W1?-- W1.

So if that model comes to pass, wouldn't you expect that what would happen is you're currently in W3, the lake level will fall back below 68.5, probably that Saturday evening or early Sunday morning. So you're back in W1. If this further rainfall comes down Tuesday, then the lake level is likely to rise again, and if it goes over 68.5, you can then transition to either W2 or W3?-- Yes, that - that's logical, I suppose, yes.

40

And if the Bremer is then flowing at 1,200 CUMECS, it is quite likely that you can transition to W2?-- Yes, you may even reduce your releases - yeah, if that's what - you know, depending on the forecast rainfall that you get after that, you may actually reduce your releases just as we said and then piggyback on the back of it so your releases don't get any higher than that.

50

And you're thereby minimising the risk of inundation or inconvenience to urban areas?-- Yes.

That sounds feasible to you?-- It does, yeah.

And on that understanding, you would not see that situation report as inconsistent with the author operating - consciously operating under W3 as at the time the situation report is written?-- Yeah. It will take a little bit longer to get my head around everything but certainly everything you're saying makes sense.

Thank you, Commissioner.

10

COMMISSIONER: Mr Ambrose?

MR O'DONNELL: I am sorry, I should have - the model results I think are in evidence, as Exhibit 22. The model run at 7 a.m., would it be of assistance if I tender that? It probably already is in evidence-----

COMMISSIONER: But it might be nice to have it as a discrete document.

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MR O'DONNELL: Yes.

COMMISSIONER: All right. That will be Exhibit 1,117.

ADMITTED AND MARKED "EXHIBIT 1,117"

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MR O'DONNELL: Thank you

COMMISSIONER: Yes, Mr Ambrose?

MR AMBROSE: I want you to have a look at the Manual of Operational Procedures, please, first of all. And at page 25, I just want you to read strategy 1A and 1B, please, paying some attention to the releases at the various crossings that are mentioned there?-- Yes.

40

Now, I want you to assume the lake level is greater than 67.5 but less than 67.75?-- Yes.

Now, that puts you fairly and squarely in strategy W1B?-- Yes.

50

And when you're in strategy W1B releases can be made up to 380 CUMECS?-- Yes.

But if the releases made, when combined with the natural flow, are in excess of, shall we say, 175 CUMECS, then Colleges Crossing, referred to in W1A, would likely not be traffickable?-- Yes.

So consistently with a flood engineer's obligation to return to full supply level of 67 metres within seven days, it would be desirable to have a release rate that not only would achieve that objective but also to keep as many bridges open as possible?-- Yes.

1

So if you wanted also to keep Savages Crossing traffickable, you'd be releasing less than giving a combined flow of 110 CUMECS?-- Yes.

10

Now, if we move on and assume that the lake level is greater than 68.5, your primary objective is to keep the releases such that combined with natural flows there is no inundation of urban areas?-- Yes.

And if your objective is to make releases so as to achieve full supply level in seven days, provided you can achieve that primary goal, a flood engineer will also try to keep the releases to a level that will keep as many bridges open?-- Yes.

20

And that is acting consistently with achieving full supply level in seven days' time?-- Yes.

All right. So here in the situation we're facing, after 68.5 was reached, I suggest to you the flood engineers, based upon the information they had as to what was happening on the ground or in the areas, made releases that were appropriate to protect the urban areas from inundation and to keep as many bridges and crossings traffickable?-- Yes.

30

And in doing that, what they achieved was also minimising disruption to the rural areas?-- Yes.

And, as we follow the pattern over the weekend, as the situation changed on Sunday, it was necessary to effect increased release rates?-- To take out those bridges.

To take out those bridges. And in doing so, the flood engineers were acting in perfect compliance with the manual when operating within strategy W3?-- Yes, that's my view.

40

Now, you were also shown appendix M, the flood event log, and the 3.30 entry on Sunday the 9th?-- Appendix M?

Do you remember that? It will be brought up on the screen for you?-- Oh, yes, yes, yes.

Given what you have said about putting labels on strategies, it is a fact, is it not, that you cannot operate simultaneously in W1 and W2?-- I guess - this is where I tried to make clarification before, that I think by definition you're in W3 but your release strategy is very consistent with being in W1 because they satisfy the conditions of W1.

50

I understand that?-- But that's a label.

I understand that too, but what I'm - not really asking you that, what I'm asking is, you are either in W1 or you're in W2. You can't be in both at the same time?-- Yes.

1

All right. As a matter of an expression of language, if you're at the top of W1 you might look at what is said about W1E?-- Yes.

W1E is the top of W1?-- Yes.

10

As a matter of expression, if your releases are having the effect that all the other bridges except Mt Crosby Weir Bridge and Fernvale are closed you are in fact, as a matter of expression, operating at the top of W1?-- That's right, yes.

If I suggest to you that simultaneously, if that is where you are on the ground, shall we say, you are also operating at the bottom of W2, which is on a, shall we say - a range of - well, I'll take you to W2. Have a look at W2 where it gives a description, will be easier. There's transition where the primary consideration changes from minimising impact downstream to protecting urban areas from inundation. So if you're looking at an extension, shall we say, a line, then the bottom of W2 could be described at minimising the impact to downstream rural life, and at the top of W2 it would be protecting urban areas from inundation?-- Yes, I guess so, yeah.

20

All right. So if in fact as a matter of what is being achieved on the ground is at the top of W1, consistent with that is operating at the bottom of W2?-- Yeah. I must admit I struggle with that term given the objectives. I mean, I know where you're getting at it but it's sort of - W2 is - I do take W2 as the limit of the flow of the Brisbane River less than naturally-occurring peaks at Lowood and Moggill, and if you are already above those naturally-occurring peaks, excluding Wivenhoe, it's probably hard to say that you are actually in W2.

30

Oh, yes, I'm not talking about being in-----?-- Yeah.

40

-----a particular strategy by a label, I'm talking about-----?-- Operating it.

-----as a matter of expression-----?-- Yes.

-----in terms of language?-- Yes. That's right, yep.

In practical terms you are minimum-----?-- In practical terms, that's right.

50

In practical terms you are minimising the disruption to the rural areas?-- That's right, yes.

Thank you.

COMMISSIONER: Mr MacSporran?

MR MacSPORRAN: I have nothing, thank you, Commissioner

1

COMMISSIONER: Mr Sullivan?

MR SULLIVAN: Just a few questions.

You were asked some questions - or you gave some answers, I think, in relation to your view about the transition at the time between the W1 and the W3 stages at about 8 o'clock on the 8th of January; do you recall that?-- Yes.

10

And in one of those answers, as I understood it, you said it would look ridiculous if you ramped up significantly-----?-- Yes.

-----the waters to the top of the maximum of-----?-- W - that W3-----

20

-----of W3?-- -----Yes.

Does that accurately state your answers?-- Yeah - yeah, it would. It would - just with all the information they had that - that would look funny, they would need a very big crystal ball, I think, to have done that.

And if they'd done that they, in effect, in the conditions that they were in at the time, they would have sent down, effectually a flood pulse-----?-- That's right-----

30

-----down the river?-- -----and - and really not - not consistent with the manual because the manual still says that you've got to try and reduce flood peaks.

And that wouldn't be having regard to the lower level objects, in effect-----?-- That's right.

-----in the circumstances which existed at that time?-- Yes.

40

You were asked also some questions, do you recall that, about - you were given some hypothetical things about drafting reports where you looked at the objective evidence and reconstructed a situation. Can I put - suggest this to you: assume - and you referred to a flood engineer, but assume a drafter of that type of flood summary wasn't there for events, you would accept, wouldn't you, firstly, that person doesn't have personal knowledge of what actually was going on?-- Yes.

And assume that they look at the objective evidence available, and you're aware that there's various objective evidence? You've referred to some. There's the models. Situation reports is another form of objective evidence, and so forth?-- Yes, so they're - section 9 was physically what they did, not that subjective, and the model results are not that subjective-----

50

Sorry, I meant objective?-- Objective, that's right.

My apologies, objective?-- Yes.

1

So you were asked to assume they looked at the objective evidence-----?-- That's right.

-----and that they'd worked out what believe occurred?-- Yes.

Had occurred on that occasion. In that situation it would have been appropriate, wouldn't it, for the person who had gone through that process then to provide, for instance, to flood engineers who may have been there at the time, their - what they'd written or their draft for their assessment as to the accuracy? That would have been an appropriate thing to do?-- I guess so, yes.

10

No further questions, thank you.

COMMISSIONER: Thank you. Mr Burns?

MR BURNS: Nothing, thank you.

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COMMISSIONER: Ms Wilson?

MS WILSON: I have no questions. May Mr Roads be excused?

COMMISSIONER: Thanks, Mr Roads, you're excused.

WITNESS EXCUSED

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MS WILSON: I call Brian Shannon.

MR AMBROSE: Madam Commissioner, can I make an observation, please, at this stage? We are having some limited time to get through all the evidence, and with the greatest respect to our learned friend, asking Mr Shannon, and all the other experts, to go through the e-mails they received and the times and the contract documents when it doesn't appear to be controversial seems to be unnecessary.

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COMMISSIONER: Oh, well, that's a matter for Miss Wilson to work out.

MR AMBROSE: Yes, of course.

COMMISSIONER: If they're not controversial perhaps you can just place them on the record without asking the questions.

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MS WILSON: I will take into account what Mr Ambrose said.

BRIAN JAMES SHANNON, SWORN AND EXAMINED:

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COMMISSIONER: Yes, Miss Wilson.

MS WILSON: Thank you, Madam Commissioner.

10

Can you tell us your full name, please?-- Brian James Shannon.

And you're a registered professional engineer?-- No longer registered.

When were - when did you no longer become registered?-- That is in Queensland, yeah.

Sorry, what was that?-- It would be somewhere in - 2008, I think-----

20

2008?-- -----the year following my retirement-----

You-----?-- -----from full-time duties.

You have experience in the operation of dams?-- Yes.

May I show you this document, please. This is your curriculum vitae, which sets out your experience and qualifications?-- Yes, it is.

30

Madam Commissioner, I will tender that document.

COMMISSIONER: 1118.

ADMITTED AND MARKED "EXHIBIT 1118"

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MS WILSON: On the 2nd of March 2011 you provided a report to Seqwater about the operation of Wivenhoe Dam?-- I did

This report is Exhibit 411. May the witness see this document?-- Thank you, I have a copy.

You've got a copy?-- Mmm-hmm.

50

I'll just make sure that the one that we've got is the same copy that you have got. See the document in front of you?-- Yes, I believe that's it, without reading it in detail. Yes.

You were approached in February 2011 by Seqwater to undertake some work for them?-- I was.

And that work was in the nature of an independent review of the operation of Wivenhoe Dam?-- Yes, along with two other gentlemen, who you've just had evidence from.

1

Okay. And have you listened to their evidence whilst waiting outside?-- In part.

Now, you got instructions for professional services - you got a document that you signed and also a contract for services. I can show you these two documents together. That's your instructions and also the contract of services?-- Yes, I believe so. I am - I was engaged indirectly, as this contract indicates, through Cardno Consulting Engineers.

10

Madam Commissioner, I tender those documents.

COMMISSIONER: Exhibit 1119.

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ADMITTED AND MARKED "EXHIBIT 1119"

MS WILSON: Can I show you an e-mail from John Tibaldi on the 22nd of February. Madam Commissioner, this is Exhibit 1042. If we can go to the bottom of that, please.

COMMISSIONER: It will just come up on the screen.

30

MS WILSON: Is that up on the screen? Mr Shannon?-- I can - can you just flick it down to see the-----

If we can just see the address. If we can go up a bit, please?-- Oh, yes, yes, yes.

If we can go up a bit more, please. And a bit more. Okay. This is an e-mail from John Tibaldi on the Tuesday, February the 22nd?-- Yes.

40

At 10.53 a.m.?-- Yes.

We see that BBJ at Big Bond-----?-- Yes.

-----is that addressed to you?-- That's my e-mail address.

Okay. It refers to a meeting that was to take place on the following day at 9.30?-- Yes, that's right.

Did that meeting occur?-- It did.

50

Who attended that meeting?-- The three gentlemen to whom the e-mail is addressed.

Did John Tibaldi attend?-- No, no. It was agreed that it was to be an independent report and that was the start of the independent considerations.

So the three independent reviewers got together?-- Yes. 1

And what did the three independent reviewers discuss?-- I think we discussed the nature of the Commission, really. Discussed things only in generalities because we hadn't got into the nitty-gritty of any of the evidence that we were asked to review.

At this time had you had any information that you reviewed, been provided - had you been provided with any information that you've reviewed?-- Yes, I believe at that time I had at least had a copy of the flood operations manual. 10

And were you provided that in hard copy or an electronic version?-- In hard copy version.

And who provided that to you?-- John Tibaldi.

Now, was - did you get provided a draft copy or a final version of the March report?-- I was provided the draft copy initially because, according to the timetable required for the Commission's submissions, the final version wasn't going to be available with sufficient time for us to do our review work. There was no other option, I believe, than to work off the draft report. 20

You provided your report to Seqwater on the 2nd of March?-- I don't have-----

Well, if I can-----?-- -----that right front of me, but, yes, I accept that. 30

If I can show you this document, please. This is an e-mail from-----?-- Yes.

-----you; is that the case?-- That's right.

To Jim Pruss?-- Yes.

Also seeing John Tibaldi?-- Yes. 40

And attached is your report?-- Yes, that's right.

If we can turn the page we can see your report, which is headed up "Review of Dam Operations Brisbane River Floods January 2011". You set out the scope of your work in that first paragraph?-- I agree.

And the review," you state, "is based on the contemporaneous report of the subject by the dam owner Seqwater"?-- That's right. 50

By "contemporaneous report" are you referring to the Seqwater's flood event report that you were provided with?-- Yes.

And the material-----?-- Draft report. The draft report I believe at this stage. I provided this in full expectation

that it might only be - or it might need to be amended for clarification. It - there was no request to me ever to have it amended. I subsequently received the final copy of the report, which I reviewed in all aspects, depending on the parts of it that I had depended on to provide my report, to satisfy myself there was no material difference between the draft that I had relied on and the final report.

1

How many drafts did you get?-- Only one.

10

And when you got the final report were any differences brought to your attention between the draft report and the final report?-- None were brought to my attention, nor did I discover from looking through the sections that I considered relevant for my report were there any material differences.

Did you in reviewing the material that was contained in the draft report in preparing your independent review, did you look at the appendices?-- No, not in any detail at all.

20

So when you say, "not in any detail," did you look at them at all or-----?-- It would only be cursory to appreciate what the nature of the appendices was. I believe that in the time available, especially since my engagement wasn't formalised for perhaps 10 days because of the difficulties of arranging an engagement so it would be truly independent, or truly have no conflict of interest, I had very little time to finish it off.

What did you do with your draft report?-- I disposed of it when I got the final report and satisfied myself there were no material differences.

30

And in the comparison to satisfy you there was no material differences did you do a comparison of the appendices that is contained in the draft report and is contained - and was contained in the final report?-- No.

Now, when you used the term, "the review is based on the contemporaneous report of the subject by the dam owner," did you understand the report on which you based your review to contain a contemporaneous account of the operation of the dam?-- What else could I understand?

40

Now - Madam Commissioner, I will tender that e-mail.

COMMISSIONER: Exhibit - which e-mail is it? I've lost track.

MS WILSON: It is an e-mail on the 2nd of March 2011 at 3.52 attaching the report

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COMMISSIONER: Okay. Exhibit 1120.

ADMITTED AND MARKED "EXHIBIT 1120"

MS WILSON: Now, can I show you Exhibit 1106. I apologise, I'm just getting you the document. Can I show you this document, please. Now, this document is dated March the 7th. It's an e-mail from Jim Pruss to various persons, including yourself, and it sets out the questions that you were being asked to confine your review to?-- Yes.

1

But at this point in time you had already done your review?-- I had indeed, yes.

10

When you were doing-----?-- When I say - I might have expected some clarifications to be asked of me but such request never came to light.

When you were doing your review did you have cause to discuss any technical questions with any person from Seqwater?-- Not after I've - did my report, no.

What about before?-- I got a briefing with Seqwater beforehand so that was bringing me up to speed but that was before I had formulated any idea of myself or been able to comprehensively review what was in the report.

20

And we will come to that in one moment but if I just show you an e-mail I think from yourself to Jim Pruss on the 7th of March 2011?-- Yes, that's-----

It's-----?-- -----the one I have now.

You can see that's on top of that chain?-- Yes.

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And that just satisfies that the questions that you addressed in your report are the same as these?-- Yes.

Madam Commissioner, I tender that document.

COMMISSIONER: Exhibit 1121.

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ADMITTED AND MARKED "EXHIBIT 1121"

MS WILSON: Now, in doing your review did you have cause to look at the manual and to determine what strategies needed to be in place at a certain time?-- Absolutely, that was the first thing to - to familiarise myself with.

The manual requires that during a flood event Wivenhoe Dam is operated in accordance with one of four specified strategies?-- Yes.

50

"Yes"?-- Yes.

Each strategy has a different primary consideration?-- Yes.

So was it the case that your task was to determine whether during the January flood event the dam was operated in accordance with those strategies?-- That would be the primary objective. In the manual there is provision for discretion. It is not a manual that sets out in infinite detail the steps to be followed. There is one very technical provision for variation from the manual.

1

Well, if we can go to section 2, and page 13 of section 2. Exhibit 24. That's a flood event summary?-- Sorry, is this of the operations manual or of the report?

10

No, of the flood event - of the March report?-- Oh, sorry. Page again?

It's page 13 of the flood event summary, part two?-- Yes.

We can see in that left-hand column that the flood event summary states that transition from strategy W1E to W3 as it became apparent Wivenhoe Dam level would exceed 68.5-----?-- Yes.

20

-----metres. Did you accept that the engineers moved to strategy W3 at 8 a.m. on the 8th of January because of this entry?-- As you might see in my report I've made comment that W2 was totally irrelevant in the circumstances and so it did not come into consideration in gate operations.

But when - to when - you were looking at when the dam engineers, the flood engineers were implementing a strategy, you got the material - you got the - you referred to the flood event summary to determine when that occurred?-- Sure.

30

And you accepted prima facie that W3 was engaged at 8 a.m. on the 8th of January?-- Yes. I saw none of those situation reports.

Okay. Well, perhaps if we can go to that situation reports, since you've raised it. If we can go to Exhibit 1047. Now, you've obviously been listening to some evidence outside while waiting to come in, and you've seen reference to the situation report?-- Sure.

40

Have - you haven't seen - have you seen the situation report before?-- I've never seen a situation report, no.

Okay. This one was not included in appendix E of Seqwater's report. Take your time to read this situation report?-- Which section would you like me to concentrate on just-----

50

If you could read from on page 2, "Wivenhoe (full supply level)," down to the bottom of that page?-- Very well.

After reading that document, and if you had seen that situation report at the time that you made your own review, would it have caused you to ask questions about what was recorded of W3 being engaged at 8 a.m. on the 8th of January?-- Sorry, W3 being engaged or W2?

W3 being engaged at 8 a.m. on the 8th of January?-- As distinct from?

1

As that is what is recorded in the flood event report-----?-- Yes.

-----at page 13 of part 2?-- Sure.

By reading this does that raise any questions that that entry is accurate?-- The irrelevance in my conclusion of W2 takes it out of the equation in the circumstances and therefore a transition from - directly from W1 to W3 is logical.

10

But looking at this on the prima facie value of what this document tells you-----?-- Yes.

-----this has been written at 5.53 on January the 8th, looking at whether it is accurate that W3 was engaged at 8 a.m. on the 8th, does this cause you to ask any further questions?-- Well, it refers to transition into W2-----

20

Mmm?-- -----which in the circumstances was impractical. So this is prognosticating something which couldn't necessarily have been determined too far in advance.

When you see - when you say "prognosticating" what do you mean?-- Well, looking into the future, what will be - this is a future scenario. "Forecast Scenario", as that last paragraph says.

30

And looking into the future that "will require the application of Wivenhoe Dam Flood Operation Strategy W2"?-- It may have required W2. In circumstances W2 wasn't relevant.

And you take that from the - looking at the data?-- Looking at the data, particularly the graphical representations of the data. I regard the graphs as being like a picture that tells a thousand words. The graphical representations gives you both an idea of what has gone on beforehand, what is happening now in terms of inflow, whether there have been any sudden changes in it suggesting an aberration somewhere or an attempt to correct something that may have been overlooked. I never detected anything like that.

40

Can I ask you this: when a flood engineer is operating the dam does the flood engineer have to appreciate what strategy he is in? At any given time?-- The general answer to your question is "yes", but, as I have thought about the use of the terms "strategies", it's a bit like my street address at home. I don't read my street address every time I drive home but I know I'm in the street that I live in when I get there. Now, these flood engineers are on call seven days a week, 365 days a year. They are very familiar with it but I wouldn't regard that they need to address the exact strategy at every hour of the day during the flood emergency.

50

So is the answer to my-----

COMMISSIONER: So would you expect they'd be pretty clear about it at the time and shortly afterwards?-- They would need all the circumstances, a bit like understanding the geography of your home address. You know where you are not just because there is a street name at the end of the street because you know all the circumstances that surround it. You don't absolutely need the tag to do the job that you have been tasked with.

1

But what you're saying suggests to me you're advancing an argument that you would be so familiar with it, with where you were, that there wouldn't really be room for doubt then or later?-- I wouldn't think so, no, but, having said that, they have an obligation to make sure that they do follow the manual as it's set out.

10

MS WILSON: Can I take you to appendix M of the flood event log, and page 82 of that. Now, this is of the final report, appendix M of the final report?-- I don't have that.

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It will be up on your screen?-- All right.

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Can you read that?-- Yes.

As I understand your evidence, you didn't have - pay much attention to the appendices whatsoever?-- No, I didn't in any detail. I sort of checked them through for the completeness, I suppose, of the evidence, but took them for what they were.

Did you take check them through for useful information?-- Only at critical times where I thought there was a need for doing that.

10

If we can see the entry at 3.30 p.m.?-- Yes.

Take your time to read that entry?-- Yes.

This entry was made on 9 January 2011 at 3.30 p.m.?-- Yes.

We've just seen that at part 2 of the flood event report where it states that W3 was engaged at 8 a.m. on the 8th. Does that entry make you question the matters that are stated in part 2, that is, W3 was engaged at 8 a.m. on the 8th?-- Not particularly. I believe that that's an unfortunate way of stating it, but it's at the top end of W1 and the bottom end of W2. I think there isn't a state defined as crossover of the two strategies, so either it is in W1 or it was in W2. As I've said, in the event W2 wasn't relevant, so I think any mention of W2 only confuses things.

20

For you?-- For me.

30

And do you come to that conclusion from part by listening to the evidence of Mr Roads this morning?-- No, not at all. It's contained in my report. I haven't had cause to change.

COMMISSIONER: What's contained in your report?-- That I found that W2 was irrelevant when moving out of W1. I've also said in my report the phraseology of W2 is somewhat confusing, and perhaps it was better that they didn't have to grapple with it. But in the event, there was an obligation to go from W1 to W3.

40

MS WILSON: That's your analysis of looking at the manual?-- And the data in the report, yes.

That may not be - I'll withdraw that?-- Sorry, my comment, yes, in confusion did relate to the manual, yes.

Just looking at this entry prima facie, what this entry states, this entry is inconsistent with the assertion that W3 was engaged at 8 a.m. on the 8th?-- By the mention of W2.

50

And also the mention of W1?-- Well, it's - yes. I suppose I might interpret that as moving out of W1, and therefore the question to be answered is into what are you moving? What I'm suggesting is that it was impractical to move to W2, so a movement to W3 was the only avenue available.

COMMISSIONER: This is the Sunday evening, you do a - sorry, Sunday afternoon at 3.30; you do appreciate that?-- Yes.

1

MS WILSON: And is that your construction of matters looking at the data that was provided to you?-- Yes.

The data that was provided to you does - can you get any reference to what - to the primary consideration and the state of mind of the flood engineer at the time?-- I couldn't speculate on the state of mind of the engineer, not with any reliability, apart from the fact that it would have been fairly concerning, but not nearly as concerning as later that following week when the second flood peak arrived.

10

Do you know whether this entry was in your draft report that you were provided?-- No - sorry, I don't know. I would not have reviewed that in any detail.

So do you find these situation reports immaterial for doing your review?-- I did not depend on them. I assumed that they had been rolled up into the summary report, and I based my assessments on the summary reports.

20

By looking at that 3.30 p.m. entry, if you had looked at that at the time that you did your review, would that have caused you to ask any more questions at least to Seqwater?-- I might have suggested that they needed to think again about the mention of W2 as be a possibility, yes.

At 3.30 on the 9th?-- I think bearing in mind W2 is a transitional strategy - it is not a state in itself - it is a different state from W1, 3 or 4. So it's saying that it's a movement from W1 to W3, and you are trying to manage an intermediate requirement to limit the flows at the confluence of Lockyer Creek and the Bremer River.

30

COMMISSIONER: About the reference to W1 though?-- In what respect?

Well, you're saying that W2 was always irrelevant, but this also suggests they were at the top end of W1 on the Sunday. You haven't mentioned that in your answers?-- Well, sorry, I've just taken that to be a given. I haven't put the days of the week in this, Sunday being the-----

40

Sorry, this is Sunday the 9th?-- The 9th, okay. I beg your pardon. So I take your advice. No, on Sunday, the 8th, the lake level exceeded 68.5.

Saturday, the 8th?-- Saturday the 8th, I'm sorry, yes.

50

You see, that's the context that Ms Wilson is putting to you this?-- Right. Sorry, I beg your pardon.

So that at 8 a.m. on the Saturday we moved to W3, so does this cause any questions, I think, is what she's asking you?-- Sorry, I didn't follow your lead there.

MS WILSON: Well, can you follow the Commissioner's lead and could you answer that question? Or I could ask you again?-- Yes, that's a contradiction that that's on Sunday, the 9th, yes.

1

Yes. So what does that mean to you now that you've got this contradiction - prima face this contradiction?-- I would have to go back and question that again, yes.

And what would you be questioning?-- If that's an accurate entry. My first recourse might be to look at the graphs of the inflow and outflow just to see based on the timing and what the release rates were at the time.

10

You gave evidence just before that dam engineers - flood engineers would be so familiar with the terms, that it's like knowing your street address?-- Um hmm.

Taking that into account, when reading this entry that must cause you some concern, that they have put in the strategies W1 and W2 on 3.30 on the 9th, would it?-- Yes, that would not be consistent with what I had picked up out of the summary events, yes.

20

Did anybody from Seqwater ever explain to you the methodology by which the report or any of the draft reports that you were provided was prepared?-- I sat in on a preliminary meeting at Seqwater where discussions about the collation of the report was indulged in by way of briefing by myself, so I had an appreciation of how they were attempting to go about it and the allocation of duties, and I'm aware of some of the individuals from my professional background.

30

When the dam - I've canvassed this before. But when the dam is being operated by a flood engineer, the flood engineer has to appreciate the strategy that he is operating the dam under; is that the case?-- Yes, the reading of the manual would require that.

And then you gave an analogy that said well look, it's just so obvious because it's just like knowing my street address; I'm so familiar?-- Well, I wouldn't expect them to be sharing it amongst themselves on an hour-by-hour basis: Are we moving into W3 or are we not?

40

But at 8 a.m. on the 8th, the flood engineer would or should have appreciated that he was in W3?-- That was when the transition was called for, yes.

Because the primary considerations, you have to take into account that, and you have to take into account what's in the manual?-- Sure.

50

Now, is it the case that - it's not the case, is it, that you go through a flood event and then you work back through the flood event to work out when the strategies were engaged?-- To put the terminologies of the formal strategies, that might be required because you mightn't be logging it according to the

defined strategies. It might be the defined levels and the outflows. So when you put the report together, you would be cross-referencing the flood manual and putting the appropriate labels on it, yes.

1

But each flood engineer who was operating the dam at any particular time during the flood event would know what strategy he was operating the dam under?-- He would know what the requirements were according to the circumstances at the time. Whether it would be in the front of his mind to put the label of the strategy on it, I wouldn't be too concerned.

10

So you wouldn't be concerned if the report was prepared not on the flood engineer's recollection of their choices as to strategy, but based on a reconstruction of the events having regard to when the lake reached certain levels?-- I would expect them to know exactly when they needed to consider varying their operating strategy according to the lake levels, which is the primary requirement under the manual. You can look up to the heading of that requirement and it will say what strategy that falls under.

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Would that be a convenient time, Madam Commissioner? I'm about to go on to another topic.

THE COMMISSION ADJOURNED AT 12.58 P.M. UNTIL 2.30 P.M.

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THE COMMISSION RESUMED AT 2.30 P.M.

BRIAN JAMES SHANNON, CONTINUING EXAMINATION:

MS WILSON: Mr Shannon, can I just ask you a few questions about a meeting you attended on 18 February 2011?-- Can you remind me who was in attendance?

40

You attended a meeting - technical report discussion on 18 February 2011?-- With Greg-----

If I can show you a copy of Exhibit 1087. If you can go to the next page of that document. This is an agenda minutes of a technical review meeting for the January flood event on 18 February. Do you see your name is noted as one of the attendees?-- Right. Okay. Got you.

50

Do you recall attending this meeting?-- Yes, I believe so.

Can you tell us what this meet was about?-- It was just a general - well, for me it was a briefing about what was - might be required of myself. It was a general review, I believe, as to the duties to be undertaken by Seqwater

personnel in preparing their report.

1

What was the purpose of you attending this meeting?-- Just to become familiar with what the requirement was of me.

Sorry, I didn't quite hear?-- Just to know what the requirement might be of me.

Can I show you a document which is Exhibit 1088. This is an email from Chloe Cross to John Tibaldi on Monday, 21 February at 8.26 a.m. Obviously you're not - haven't sent that email, but if we can - this attaches a flood event report meeting. These appear to be notes that were taken of this 18 February meeting?-- Right.

10

Is that correct?-- I've never seen these minutes before. I've scanned down that to see where my name is mentioned. Yes, that page is okay.

If I can take you to "report conclusions"?-- Yes.

20

It's got a note there of, "Tibaldi: Conclusions need correcting." Can you give me any information what that was about?-- Under my name on the second dot point-----

Yes?-- -----that was an issue that I addressed finally in my report that I believed during the upper phases of strategy W3 there was contemplation of W4 may have been avoidable. As I said in my report, that would have technically required under the manual the invocation of due discretion, which is especially covered under the manual, and I was just seeking advice as - in the event that didn't happen, because the second wave of the flood took over and changed the circumstances. That was just-----

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So what advice - sorry?-- That was just my asking was that to be dealt with in the report - yes, in their report, I suppose.

So what was the advice that you were seeking?-- Were they intending - as I recall it now, I didn't believe that there was any mention in their report about the possibility of due discretion being used, and I was just wondering whether they intended to do that.

40

There's a comment there "to discuss off-line". What do you recall that was about? Was that-----?-- That was a standalone meeting. I had no further contact follow that meeting, so I didn't have any of those further discussions.

We can see the second dot point under the second major point under "report conclusions"?-- Yes.

50

"Shannon" - that's you - "if you did step outside the manual, show you did what was necessary." Is that you telling Seqwater that if they did step outside the manual, then they needed to show that what they did was necessary?-- Yes, that's going to what I've just said, I think.

Is that in relation to going to W4?-- That was where I had perceived that there was a possibility of having invoked discretion - formal discretion.

1

Thank you, Mr Shannon, I have no further questions.

MR RANGIAH: Could Mr Shannon see Exhibit 21, page 22.

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Mr Shannon, can you see that towards the top of the page the objectives of the strategies in the flood manual are listed?-- Yes.

And underneath the bullet points it says that within any strategy, consideration is always given to these objects in this order when making decisions on dam releases?-- Yes.

Something similar is said on page 28. They're under - in a box entitled "conditions". The third dot point says, "The primary consideration" - this is in strategy W3 - "is protecting urban areas from inundation." And then in the fourth dot point, "Lower level objectives are still considered when making decisions on water releases, but" - I just want to draw your attention to the next part - "objectives are always considered in order of importance?-- Yes.

20

Now, did you understand then that flood operations engineers are being directed in strategy to W3 consider whether the releases will protect urban areas from inundation, and only if that can be achieved they are to look at avoiding disruption of rural life?-- Avoiding urban disturbance was to be the first priority.

30

Yes?-- The rural life was a lower priority and therefore should be looked at in that order.

Yes. So what I'm asking you is just to confirm your understanding that it's only if the primary consideration, that is, protecting urban areas from inundation, can be achieved, that the dam operations engineers then look at a lower level objective?-- That would be my understanding, yes.

40

And it's not a case of flood operations engineers trying to see if they can avoid disruption of rural life by keeping rural bridges open and then, only if that can't be achieved, looking at preventing urban areas from inundation?-- I believe W1 is about setting disturbance in the rural community as the highest priority. Once you've moved into W3, the situation reverses.

50

Yes. Now can I ask Mr Shannon be shown Exhibit 411. This is the report that you provided to Seqwater?-- Yes.

Could Mr Shannon see page 3. Do you see that just under the heading "The First Peak" you refer to, "The first burst of heavy rainfall occurred before noon on Sunday, 9 January"?--

Yes.

1

And then you go on to say, "By 2 p.m. the estimated total dam inflow exceeded historical records and by 7 p.m. was again revised upwards by over 50 per cent"-- Yes.

Then can I ask you to read to yourself the next paragraph?-- Sorry, what did you want me to do?

Just read to yourself the next paragraph?-- Yes.

10

Is what you are saying in that paragraph that by 7 p.m. it was clear that release rates had to be increased and that rural bridges would be inundated?-- We were operating under strategy W3 at the time, in which case we were looking at minimising urban disturbance. So rural disruption had become a secondary issue.

But where you say that lower priority objectives under strategy W3 were no longer viable?-- Yes.

20

Did you mean by that that it was quite clear now that the rates of release from Wivenhoe would have to be increased to the extent that the rural bridges would be inundated?-- Yes, the highest of the rural bridges, the last of the rural bridges.

Which is Fernvale bridge?-- Yes.

And that increase in release rates had to be made in order to protect - to try to protect the urban areas from inundation?-- Yes. My allusion to the possibility of W4 there relates back to where possibly due discretion may have been exercised.

30

Now can I take you to some of the data that might have influenced your views expressed in that paragraph. Could the witness see Exhibit 24, page 157. If you look at the entry for 9 January at 7 p.m., 1900, at that stage was the lake level 68.97 metres?-- So it says.

40

And the total outflows were 1411 CUMECS?-- 1411.

Yes?-- Yes.

And total inflows had increased by that stage to 5,848 CUMECS?-- Yes.

And so it was clear that there was a significant excess of inflows compared to - over outflows?-- Absolutely.

50

And that was one of the factors that influenced your view that rural bridges could not be kept open?-- Yes, the prediction was that it could possibly go beyond EL 74.

Could the witness see page 73 of appendix A of the same document. Is this a model run showing the predicted Wivenhoe lake levels at about 7 p.m. on Sunday, 9 January?-- I haven't looked at these in detail. I've looked at the summary forms

of them. But yes, from what you say, at face value that's the case.

1

And what that shows is that on a with rainfall forecast, it was a predicted peak lake level of just under 74 metres?-- Yes.

And on a without forecast rain basis it was just above 72 metres?-- Yes.

10

And in your report where you talked about strategy W4 being foreseeable though not strictly predicted, that was a reference to the predicted lake level on a with forecast rainfall basis?-- Yes, I believe so, yes. My recollection is that one of the later model runs, I would assume, actually showed that it would probably just go over 74, even though the peak of the inflow had by that stage started to diminish, and so it looked as though a crisis had been averted. At least during the first wave.

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Well, in your report, in the paragraph I just took you to, what you said is that "strategy W4, dam safety was foreseeable though not strictly predicted", and then you had in brackets "0.1 metre lower lake level"?-- Yes.

Would you have been referring there to this model run at 7 p.m. where it showed a peak on a with rainfall basis-----?-- That's-----

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-----of just under 74 metres?-- That's all consistent.

But certainly your opinion was at that stage it was foreseeable that the lake level might reach 74 metres?-- Yes. Given the unpredictability of the Met Bureau's forecast. I mean, as I say in my report, they swung widely between 50 per cent below the actual to 200 per cent above.

Yes?-- So the Met Bureau forecasts were highly unreliable. Not that that's an undue criticism; they have an unenviable job, I appreciate that, but the forecasts couldn't be relied on in the first order of accuracy.

20

But the point that you were making is this, isn't it: that if forecast rainfall was greater than expected - sorry, I will start that again. If actual rainfall was greater than forecast, then the lake level could go over 74 metres?-- Yes.

Now, could I then take you to situation report 11, which is for 5 p.m. on the 9th of January?-- This is material I haven't reviewed before, so-----

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Yes?-- -----I will be seeing this for the first time.

You see, you may have seen some of the data?-- Yeah, that's possible, yes.

I wonder if he could see situation report 11?-- Yes.

Do you see that under the heading "rainfall", the BOM rainfall forecast is set out, and then underneath the forecast it said that, "The severe weather warning remains current for heavy rainfall in dam catchment areas" and that "dam catchment areas are relatively saturated and significant inflows will be generated if the forecast rainfall eventuates"?-- Sure.

40

Do you see that? Then over on the next page, the - under the heading "Wivenhoe Dam", "Dam levels are currently rising again with the current level being 68.7 metres"?-- Yes.

50

That was the situation report at 5 o'clock on Sunday the 9th of January, and it was also said in the same paragraph that, "At this stage the dam will reach at least 72.5 metres AHD during Wednesday morning." Do you see that?-- Yes.

And it at least suggested that it could go higher than 72.5 metres?-- That was based on including the forecasts, yes. I suppose since it is saying at least 72.5, that would be based

on the rain on the ground. So, by extension, that's excluding the forecast rainfall which hadn't been recorded in any stream flow gauges.

1

Yes, thank you. Now, taking into account the data that I've just taken you to from 5 o'clock, as well as the lake level at 7 o'clock, and predicted lake level at 7 o'clock, the inflows at that time and the outflows, I would ask you to assume that the primary objective at 7 p.m. was to protect urban areas from inundation. And I want to put this proposition to you: that to try to achieve that objective, a rational approach would be to close the downstream rural bridges as soon as possible and significantly increase releases from Wivenhoe?-- Increasing the releases, yes.

10

Do you agree with that proposition?-- Well, we're in W3. So that means that the bridges have been already closed.

They weren't closed at 7 p.m.?-- Sorry, right, okay. They were in the - the probability that they would be closed was approaching and their being kept open was no longer a priority.

20

Yes. So what I'm suggesting to you is that the rational approach to achieve the primary objective of protecting urban areas from inundation at 7 p.m. would have been to close the bridges as soon as possible and to significantly increase release rates?-- I am not privy to what is required to clear out or to give adequate warning to the people affected by the bridge closures. So I do not have a handle on the time that's required to warn people, or to carry out evacuations, or to mobilise emergency services for bridge closures, for example to maintain road safety. So I would not have a reliable handle on just what amount of time that took to make sure that you were protecting life and limb.

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I am suggesting that should be done as soon as possible?-- Whatever "as soon as possible" might be defined as.

Do you agree with that?-- I could accept that, yes.

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And that when that's done, the rates of release should be increased significantly?-- The rates of release should be increased. I mean, there is an underlying principle in all this that the rates of increase shouldn't be unduly quick, and there is the provision for limited rates of rising of the dam gates just to provide for such a circumstance. So that the increase in flow doesn't happen so quickly so that people are caught unawares. Put in another way, that the increase in flow under the control conditions probably shouldn't be any more rapid than the increase in flow under natural conditions, that is while we are in W3. In W4, that circumstance wouldn't apply.

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Now, we know that the rate of release from Wivenhoe was not increased beyond 1,900 CUMECS?-- Right.

Until some 13 hours later at 8 a.m. on the 10th of January?--

Yes.

1

And after that there was some fairly rapid increases in the rates of release. Now, if we look at 7 p.m. on Sunday the 9th of January, I'm suggesting - what I suggest the rational approach would have been to increase releases more rapidly between 7 p.m. and then 8 a.m. the following morning than in fact occurred?-- I am not in a position to be able to say definitively if that was possible. It goes to the comments I made just a minute ago, that I don't know what is required by way of forewarning to people who will be affected by that.

10

All right?-- So there is - if you are getting to the point that it would have been better in terms of the levels or maximum levels in the dam subsequently, I couldn't disagree, but in W3 you are considering more than just the dam; you are considering people in the downstream area.

Can I take you back then to the position at 5 o'clock on Sunday the 9th of January - and I have taken you to the situation report at that time - and just to remind you that the lake level at Wivenhoe was 68.7 metres and expected to reach at least 72.5 metres. Now, at that stage it was foreseeable, wasn't it, that 74 metres might be reached?-- Yes, that was getting to be a possibility.

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And in any event, it was quite clear then that this was going to be a very large flood?-- Sorry, at what time of the night are you saying that is?

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5 p.m.?-- Well, by that stage the second - second intense rainfall - period of rainfall hasn't occurred, I believe.

Yes, but the first burst had occurred before noon?-- Had we known nothing more - if we had nothing more than the first burst, none of us would be here now. I mean, it probably would have passed downstream and, as has happened previously, floods of the order of 1974 have come through Wivenhoe Dam. People in the urban area downstream are blissfully unaware of it because of the flood mitigation effects of Wivenhoe.

40

Yes, but I took you to that situation report at 5 p.m. which indicated that severe weather warning remained current for heavy rainfall in the dam catchment areas?-- Whatever that meant.

That the dam catchments were relatively saturated?-- Sure.

That significant inflows would be generated if the forecast rainfall eventuates?-- Yes, but that had been highly unreliable - or was highly unreliable.

50

I have taken you to the position that the dam level was 68.7 metres at that stage?-- Yes.

And that it was expected that the dam would reach at least 72.7 metres?-- Yes.

And you have said that that was on the basis of water that had already fallen?-- Yes.

1

So there was a - and we know that by that time there was significant inflows-----?-- Sure.

-----into Wivenhoe?-- Yeah.

Which significantly exceeded the outflows. And so what I'm suggesting to you is that this was - it was already apparent that this was a very significant flood event?-- It wasn't significant enough to invoke W4 strategy at that stage. However, there was some forewarning of that possibility.

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Yes?-- So this is where the operators are walking a narrow line. If they had released more water down than was strictly necessary, there would be any amount of complaint about that.

Well-----?-- And they are trying to manage the safety of the dam as against downstream disturbance.

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Well, there had never been a flood event that had previously required W4?-- That's true.

And the fact that it was now being - that W4 was now foreseeable made this a very significant flood event, didn't it?-- It is before the - before the onset of the extreme rainfall that did finally provoke W4.

Yes. But, still, at a point where even with the rainfall that had already fallen, it was expected that the dam level would reach at least 72.5 metres?-- Yeah, in which case you would still be in W3.

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Yes. So I'm suggesting to you that even at this stage, it was still a very significant flood event?-- It was a significant flood event, even though people in the downstream area might not have ever perceived that had not the second flood wave come by.

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And I'm suggesting that at 5 p.m., the rational approach with the aim of - with the primary aim of protecting urban areas from inundation, would have been to close the bridges as soon as possible and to significantly increase flows - releases, I should say, at that stage?-- I think I would agree with you. To do it as soon as possible is a no-brainer. What is as soon as possible, I am not qualified to say.

Now, you said that by 2 p.m. the total dam inflow had exceeded all historical records?-- Yes. Frightening.

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And do you - if the witness could see page 157?-- I mean, I did say - perhaps this is jumping ahead of you - in page 3 of my report, that an earlier beginning of gate opening could have reduced outflow, but only marginally, and to the best of my first order estimates of it, I suggest no more than ten per cent.

If you look at the entry for 2 p.m. on the 9th of January, so at that stage the lake level was 68.58 metres?-- Yes.

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And the total outflow was 1,386 CUMECS?-- Yes.

And the total inflow had risen significantly since 1 o'clock, hadn't it?-- Yes, it has obviously gone up in the order of 1,400 CUMECS.

And if the witness can now see page 64, annexure A? This is a model run for 2 p.m. on the 9th of January?-- Yes, yes.

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And this shows that on a with forecast rainfall basis, the lake level was still predicted to go close to 72 metres?-- With forecast, it is only a bit over 71. So perhaps 71.3.

I see?-- If I'm reading the same-----

I think you are right. It is about 71.3 metres?-- Mmm.

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And, see, even at this stage, I'm suggesting that given the rainfall conditions, it was foreseeable that W4 might be entered?-- I think that's stretching the point at that stage. I mean, that - the rain - that's the best estimate of rain, I presume, and I think all these figures are based on Bureau of Meteorology forecast. And that's saying with their forecasts included it won't go above 71.3, approximately.

That's on the basis that the forecast rainfall is accurate?-- That's their estimate, and I've suggested to you that their estimates are highly inaccurate, through no fault of their own.

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When you say they are inaccurate, they could be lower but they could also be higher?-- Absolutely. They have proved to swing widely, as I tried to indicate before.

I suggest even at this stage it was foreseeable that the lake level might rise about another 2.7 metres to 74?-- Well, that's heaping conservatism on conservatism. As I say, the operators are trying to walk the narrow band between protecting the security of the dam and protecting the downstream community. So-----

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I want to suggest to you that if the primary objective at 2 p.m. on Sunday the 9th was to prevent urban inundation, then the rational way to operate the dam would have been to close the rural bridges as soon as possible and to significantly increase releases?-- We seem to be going back over the same territory. You say-----

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COMMISSIONER: You have been asked a few hours earlier though in this instance?-- Sorry?

You are just being asked about a few hours earlier, though, in this instance?-- Oh. Well, as I have said of the previous occasion, whatever it is as soon as possible, I am not in a good position to estimate. But to go ahead and do what you

intend to do in the most expeditious way possible, is common sense. What is the most expeditious way possible, I am not in a position to say.

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MR RANGIAH: So does that indicate that you agreed with my proposition?-- Well, you tell me what you mean "as soon as possible" and I'll see if I can agree with your proposition, because-----

I don't think I can put it any more plainly than that?-- I can't give a more definite opinion then.

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Whatever is as soon as possible. I am just suggesting whatever period of time it took to close the bridges, that process should have started then, at 2 p.m., and-----?-- Are you suggesting to me that it didn't?

Yes, I am?-- Well, I don't know whether - whatever is the initial process in that. Let's say it is advising the Emergency Services people that this was the intention, I have not combed through the record in the degree of detail that would enable me to have an opinion as to how that process proceeded.

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COMMISSIONER: I think Mr Rangiah is asking you on what he's pointed you to about lake levels and predictions, and so on, should it have been set in train at that stage. That's all?-- Yes, you are in W3. The intention of W3 was to close the bridges. So if it were not in train, you might say that would be extraordinary. Counter to the whole strategy.

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MR RANGIAH: Thank you. I have nothing further.

COMMISSIONER: Mr Murdoch?

MR MURDOCH: Mr Shannon, I take it you've still got your report there, Exhibit 411?-- I have got my report, yes.

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Yes, okay. You say in your scope that the review is based on the contemporaneous report of the subject by the dam owner. Now, by the contemporaneous report, do we take it that that's the draft report of March?-- It was at the time that I wrote this. I perhaps used that term in the expectation that by the time this report was ready to be forwarded on to the Commission, or to the Director of Dam Safety, as is required under the Flood Operations Manual, that I may have seen the final report, but at the time I drafted this it was on the basis of the draft report, yes.

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Very well. Going into your report, in the section that deals with the operations of Wivenhoe Dam - that's on the second page - you will see that there is a heading "the transition". Got that?-- Yes.

And there are two subparagraphs under that heading. Now, see the paragraph "Just before 8 a.m., 8 January", et cetera, et

cetera, goes down to "gates were opened progressively." That paragraph?-- Sorry, this is under "the transition" - yes, yes.

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Under the transition?-- Yes, yeah.

What I would like to know is is that paragraph your interpretation of events or is that simply a liftout?-- These are my words. I don't believe I was plagiarising or even paraphrasing words from a report.

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So-----?-- If I were inadvertently, I wasn't conscious of it.

So you looked at the events and you formed the opinion that it was not feasible to invoke strategy 2, W2?-- That's right.

Have you seen the report of Brian Cooper?-- I have seen it and given it only a cursory read, I would have to say, because at the time of Brian Cooper's report, it was in the first - first peak of the flood and he was making a report of circumstances which were subsequently overrun by the second peak of the flood, I believe. So in my mind, at least, I thought Brian's report was premature for the overall event.

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Well, so that we know-----?-- That's no disrespect.

-----that we're talking about the same report, could I ask that we get up on the screen Exhibit 414, Brian Cooper's report at 12th of January 2011? That's the one you've seen, read?-- I couldn't confirm that in detail, I must admit. I didn't give it great weight, and I remember at the time I was in awe of Mr Cooper's ability to produce the report with such a short turnaround in the circumstances.

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In any event, you've read his report before you have prepared your report?-- I - I am honestly not sure now, when I think back on it, just when I became aware of Mr Cooper's report.

Well, it is dated the 12th of January 2011, and, as you've already pointed out, it was very much during the events?-- Yes.

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On his second page of his report, if I can take you to that, you will see in the middle of the page there is a lengthy paragraph and it is plain from that that when he wrote the report, he was of the view that for the last day or so before the previous day's big rise, strategy W2 would have been in place?-- Say that again? Strategy W2 only becomes relevant when the major inflow occurs, so strategy W1 occurs through all of the lead-up until the first major page inflow occurs.

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Let me be fair. Do you see that paragraph in his report?-- Yeah.

That commences with the words "Until the last day or so"?-- Yes.

Do you see that?-- Which he subsequently qualified to say it

meant considerably more than a day, I believe.

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And you know that he's also altered the reference from EL 74 to 68.5?-- Yes, yes.

You know all that?-- Yes.

But whichever way we read it, it appears that he was very much of the view that strategy W2 had been in place for a day or so? W2?-- Yes, yes. "Would be in place", that's not "had been" - "had been in place", I didn't read it.

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Well, he was writing after the event?-- Well, I am not sure that he is. When he is - it just goes to the point of where he was given the data to report on, he was given the data during the first event. I am not privy to when he's freeze-framed his reference point and referred his report to the situation as at that time and then what he might have anticipated later.

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Mr Shannon, are these matters very much subjective - and when I say "these matters", I mean these assessments as to whether it was W2 or W3 that were in place when you come after the event and make a retrospective evaluation?-- I am not suggesting at all that they are subjective but they can only be realised in the event. They are speculative rather than subjective, if you are trying to cast into the future. But when presented with the realtime situation, the manual demands what the manual demands, and the operators are required to do what the manual says within the discretion allowed to them.

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Can we take it that when you prepared your report you didn't start by first identifying the strategies as per the manual that were in place at particular stages of the event, and then assess whether those strategies, as defined in the manual, were appropriate at the time?-- I can't differentiate that. I read - the first document that I read when I accepted the brief, and even before I'd been formally commissioned, was the Flood Control Manual. So that was the first thing in my mind what was required. It is a bit of a case of walking and chewing gum. One can hold both of those things in one's mind simultaneously and see that the circumstances and the definition go hand in hand.

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And so far as your opinion deals with the inappropriateness of strategy W2, and I'm referring to the foot of the second page of your opinion, if you go to that, you see you have said, "Close reading of the manual is somewhat confusing and the resulting impracticability of strategy W2 is predictable". Do we take it from that that you're not a fan of the W2 rating at all?-- That would be a fair conclusion, yes.

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And you'd like to see it gone out of the manual?-- Yes. That - I'd have to say that's based - I personally was one of the designers of Wivenhoe Dam way back when and I know the - on average what condition - what contribution is made of - from Lockyer Creek and from the Bremer River and W2 doesn't accord with average conditions. I can appreciate that one ought to look to extreme possibilities, and that's just what W2 does, but I would have to say that it is worth considering whether it is more complicated than is necessary.

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And the reference in your answer to Lockyer Creek and the Bremer River and their contribution, do you mean that their contribution is notionally overestimated or underestimated?-- It would be generally less. It would make W2 not relevant.

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Nothing further, thank you.

COMMISSIONER: Mr O'Donnell?

MR O'DONNELL: You were one of the designers of the Wivenhoe Dam?-- One of them, yes, yes. I'm a - dare I say, I was - had a lot of less grey hair and I had people older and wiser who were leading the design exercise.

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And you considered at that time how the dam should be managed in terms of flood mitigation?-- When one is designing a dam rather than one is arranging for the operations one has to make certain assumptions about what might - might be necessary, and because of design process can't go on forever, there are limitations of the permutations and combinations that should be allowed for. With the benefit of hindsight when somebody comes along to write the flood control manual, given that you are faced with a set piece of infrastructure there are more possibilities that can be entertained but - however, the design process that doesn't allow-----

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And were you also familiar with how the - how the designers saw releases from the dam interacting with downstream tributaries into the river - Brisbane River, such as Lockyer Creek, Bremer River?-- Yes. There was another consideration, if I can alert you to it, that I was aware that a senior engineer in the Coordinator-General's Department at the time was convinced in his mind that the best way to operate the dam was in fact to have very significant pre-releases and that, in part at least, led to the radial gates having 10 metres of storage, which is a considerable amount of live storage against them, which enabled them to do that, even though that - by the time the design was settled that wasn't a preferred

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strategy because protecting the downstream residents was seen to be a precedent.

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And have you had some familiarity with the manual for the operation of Wivenhoe over the years?-- Not a great deal other than to be aware of it. Probably, you know, back in the early 90s I was reasonably aware of it. I drifted off into a government organisation that wasn't primarily responsible for Wivenhoe Dam in any way, shape or form, so-----

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I also saw you were Chairman of ANCOLD for a number of years?-- Yes, yes.

Is it fair to say - you've been talking about W2. Is it fair to say W2 you would see as a situation that applies where the main flood event is happening downstream of the dam-----?-- Yes.

-----where the major rainfall is downstream and the major flows are coming from Lockyer and Bremer into Brisbane River-----?-- That's right.

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-----and therefore you regulate your releases from Wivenhoe at rates which are below the naturally-occurring peaks downstream?-- Yes.

W2 isn't something that's applicable where the main rainfall event is in the Wivenhoe catchment?-- Exactly.

You agree with that?-- Yes. I think I said something along those lines, would only be applicable when - where the rainfall is predominantly below Wivenhoe - below the upper Brisbane, as it's referred to.

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So you could understand a flood engineer's thinking that if you've got a substantial flood event, you know, you were over your 68.5, if the main rainfall is in the Wivenhoe catchment, then a flood engineer just naturally thinks of W3 and doesn't have regard to W2?-- Oh, well, the manual dictates that he must, sort of thing, but, as I say in the report, it is entirely predictable on average that W2 won't be relevant. So it's not that he wouldn't be mindful of W2 but it is predictable that W2 won't be relevant in the circumstances, there will be a direct move from W1 to W3.

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Yes. Or, to put it another way, you wouldn't expect an experienced flood engineer to go through the mental processes of thinking, "Well, can I apply W2 here?" and then doing some sort of detailed calculation and then coming to the view, "No I can't, I've got to apply W3," the fact that the major rainfall event is occurring in the dam catchment, and the flows from Lowood and Bremer are quite modest compared to the releases being made from Wivenhoe even at the time thought is given to the problem, would tell the engineer it's a W3 event, not a W2 situation?-- It might suggest to him, but, I mean, in these circumstances I was - given the disasters that had happened around the Scenic Rim and over the Rim, I suppose, in Toowoomba, it was only when I went back and looked at the

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detailed data that I realised that the flows coming down Lockyer weren't as big as I might have anticipated, and so while in the generality I might accept what you are saying, based on general reports that I had picked up I might have thought that there was a bigger flow coming down Lockyer, in which case the flood engineers would have had to have been aware of that and-----

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Sure, all right. Let's have a look at some of the information available to the flood engineers, and I'm currently concentrating - or I want to concentrate on Saturday morning the 8th at 8 a.m. Now, do you have - make sure you've got - you've got the flood report there?-- Yeah. No appendices.

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All right, we will make some available for you. You've got the manual?-- Yes, I have the flood manual, yeah.

And do you have a table of figures called "Appendix A Model Results"?-- No, not appendix 1. You'd have to lead me towards that. Yeah, this is it, "Appendix A Model Results", yes.

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No, it's not-----?-- The tabular form of them?

Yes?-- No, I've got - these are outputs-----

We can make a copy available for you. In that document you've just been handed, if you turn to the third sheet, please?-- Okay.

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Now, you've seen this page before, or a page like it?-- A page like it, yes, yes.

Well, I'm interested in the Saturday morning. The closest time we've got here is, I think, 7 a.m., Saturday the 8th?-- Yes.

If you run across the page - you see at the foot of the page there are numbers for each of the columns?-- Just a moment. Yes. Yes, whereabouts?

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See at the foot of the page there are numbers for both of the columns?-- Right, okay. Interrupted my line marker now. Yes, yes, I see that.

If you go to column number nine?-- Yes.

Go up the column to where it intersects with Saturday morning-----?-- Yes.

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-----7 a.m.?-- Yes.

It's got the predicted Wivenhoe level at 68.8?-- Yes.

Now, if you just - I think you've checked already, haven't you, the lake - the level actually crossed 68.5 at 8 a.m. Now, the current predicted outflow from Wivenhoe was then 1480?-- Yes.

And if you go all the way over to column 21?-- Yes.

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You've got the current predicted peak flow in Lowood of about 530?-- Yes.

Column 23, the predicted flow in - at Moggill is about 690?-- Yes.

Just comparing 1480 to 530 and 690 tells you immediately that the naturally-occurring peaks at Lowood and Moggill are lower, significantly lower than the anticipated releases from Wivenhoe?-- Sure.

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And therefore W2 is simply physically unavailable at that time?-- So it would appear, yes. I mean, that's what can be concluded, that's right.

Yes. You said in your report the short-circuiting of strategy W2 was unavoidable, and by that did you mean that at the time the lake level crossed 68.5 W2 was simply unavailable-----?-- Yes.

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-----because the releases from Wivenhoe within - of themselves exceeding-----?-- Yes.

-----the naturally-occurring peaks at Lowood and Moggill?-- Yes.

And you would expect an experienced flood officer to see that immediately?-- Not to have been able to anticipate it without the data, but, having had the benefit of, I think it's the Bureau of Meteorology's reports on the flow data downstream of Wivenhoe-----

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Yes?-- -----would come to that conclusion, yes.

But a flood engineer who had these model results in front of him would see that immediately?-- Yes.

And would know from a comparison of the downstream flows compared to the - even just the then releases from Wivenhoe, that this - the major rainfall event was happening in Wivenhoe catchment, not downstream of Wivenhoe?-- Yes.

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So it didn't look like a W2 event, did it?-- No, no. If we can cut to the chase, references to W2 are fanciful.

All right. Thank you. As you read the manual and given your expert report also, when the lake level crossed 68.5, as you read it the manual mandated a transition to a higher strategy, didn't it?-- The transition - well, the transition strategy is W2. The model mandated a movement, W2's not available, to W3. Now, yes, they're not allowed to go in a step function from W2 to W3, so if you call that part - process a transition, yes, the model - the manual required a transition from-----

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Transition to W3-----?-- -----W1 to W3, yes.

At 8 a.m. on Saturday morning?-- Beginning at 8 a.m. yes.
After 8 a.m.

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And as you saw it the role of the engineer was then to apply the criteria required by W3 in managing the dam?-- That's - I answered previously to your colleague, as soon as reasonably possible, yes. Bearing in mind the limitations that you wouldn't want to rip the gates up immediately, you had to have a gradual or reasonable gradual increase.

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Yes. One issue that's been discussed is did the flood engineer on that Saturday actually apply W2 or did the flood engineer apply W3. Can I raise that with you. If you look in that table you've got and compare the rates of releases from Wivenhoe, in column 10, to the rates of naturally-occurring peak flows at Lowood and Moggill, columns 21 and 23, we can see that throughout that Saturday and into the Sunday the predicted peak outflows from Moggill - sorry, from Wivenhoe substantially exceeded the naturally-occurring flows at Lowood and Moggill?-- Yes, there is something suspiciously odd with the level at Lowood - or, sorry, the discharge at Lowood being constant at 530, or varying at most to 520 down - down to 520-----

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These are predicted peak flows, they're not actual flows, they're predicted peaks?-- Okay.

Which I think you will find is what is required to be considered under W2?-- Okay.

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And the - I can take you to the table of actual releases from Wivenhoe during that Saturday and Sunday, if you want to see it, but I think you will find that they exceed substantially-----?-- Right, okay.

-----the predicted peak flows at Lowood and Moggill?-- I take your point.

If that's the case then the decisions made by the flood engineers on the Saturday and Sunday as to what releases are inconsistent, wouldn't you say, with applying W2?-- Yes.

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Because they never sought to constrain releases from Wivenhoe by reference to the peak flows at Lowood or Moggill?-- By "constrain" you mean to reduce-----

Yes?-- Yes.

Now, can I take you to something else, please. In the flood report one of the appendices I want to go to?-- As I say, I don't have a comprehensive set of appendices so - I have one that's here.

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Have you got volume 3?-- There is another one on the box here. No, that's four. Two. Here we go. Yes.

Three, thank you. If you look at page 5?-- Yes.

That's directive number four?-- Mmm-hmm.

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Can I point out it issues on Saturday at 8.15, so it's 15 minutes after the water crosses the 68.5 line?-- Right.

The thrust of the directive is to the Wivenhoe gate operator to open up the gates so as to increase releases to 1247 CUMECS-----?-- Yes.

-----by 2 p.m.?-- Each gate is to be open another half a metre, yes.

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Yes. Now, Wivenhoe is then releasing around 900 at 8 o'clock in the morning, so it's opening up the releases by another third or so?-- I'm just checking from-----

Sure?-- -----the graphical output of this. Yes, yes, I can see how that's happening on the graph, yes.

Would you say that's consistent with conduct of the flood engineering managing the dam at the time that has noticed - has appreciated the water crosses 68.5, appreciated there's a requirement to transition to the higher strategy, and then decides to increase releases in accordance with the flood mitigation purposes of the higher strategy?-- This goes back to the as soon as reasonably practicable issue. It's obvious that the operator is realising that there is a need to move under strategy W3 to that higher level, yes.

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COMMISSIONER: Mr Shannon, I'm not sure it's entirely consistent with going back to that because the scenario Mr Rangiah was putting to you, I think, was taking out Fernvale and Mt Crosby?-- Right.

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Moving to a point where you do that, whereas this won't take out-----?-- No-----

-----those bridges?-- -----no, I appreciate that. No, that's up at 1900, the Fernvale Bridge, yes.

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MR O'DONNELL: The operator on Saturday morning, let's - if the operator's primary consideration was minimising effects on rural life through the operation of the dam?-- Not after it's passed 68.5?

Yeah, but let's say it passes 68.5 but the operator still thinks, "My primary consideration is minimising effects on rural life," there's no need in that situation to be increasing the releases from the dam to 1250, is there?-- Just run that past me again.

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Sure. It's probably a slightly difficult concept for you. Trying to look at what does the conduct of the flood engineer suggest he or she was trying to do. If the primary consideration of the flood engineer at that time was to minimise the effect on rural life, that is, not giving consideration to urban inundation at all, only considering rural consequences, there is no particular need to be ramping

up releases from the dam to about a third, is there?-- Well, you have - by going into W3 you have surrendered urban disruption as the primary function, so when you say there is no need, the manual dictates that that should no longer be the primary objective. 1

COMMISSIONER: Mr Shannon, I'm not sure you are getting the point. One of the questions here is was the way things were conducted on the Saturday only consistent with W - operating under W3 or could it equally have been consistent with a mistaken operation under W1?-- Right. 10

Take that as the question. So if you're looking at what was happening on the Saturday that would tell you which of those it was, never mind which it should have been but which it was-----?-- Oh, right, okay.

-----what Mr O'Donnell is asking you, I think, is is the fact that they went up to 1247 CUMECS a pointer to their having done W3 rather than W1? Is that fair? 20

MR O'DONNELL: Yes, Commissioner?-- Yes. Obviously there is a hiatus when the discharge gets to be around about the thousand CUMECS, which won't affect Mt Crosby Weir or Fernvale Bridge, and then there was a very gradual increase until the serious onset of the first floodwave then, so they are not considering the lower - you know, in other words, the - I don't know where it is, A, B, C strategies under W1, but moving to W3, yes 30

So that's how you interpret that action in directing the increasing of releases?-- Yes.

All right. Thank you. Can I take you to another direction that's issued on - still on that Saturday morning?-- Yes.

Could we go, please, to - in the same volume, if you look at page 66. Now, this is a directive in respect of the gates at Somerset, and you see it issues at 11.30?-- Yes. 40

So about three hours later that same morning. Just read the message to yourself?-- Yes.

Just if you assume - assume, if you would, it is the same flood engineer who issues both of those directives. The one we saw for Wivenhoe and this one for Somerset. Now, to understand that directive we should look at the manual regarding Somerset, so would you mind looking at page 39 of the manual?-- Yes. 50

We should look at strategy S2-----?-- Yes.

-----as mentioned in the directive. If you look at the box on the bottom of the page headed "Condition"?-- Yes.

It distinguishes between Somerset below a 100.45 and Somerset above 100.45?-- Yes.

And I think the directive is directing attention to Somerset has just exceeded 100.45-----?-- Yes.

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-----so we are in that box-----?-- Yes.

And the action required is to raise the crest gates of Somerset to enable uncontrolled discharge-----?-- No, not the crest gates, the sluice gates.

Sluice gates. And it goes on, "operations are to target a correlation of water levels in Somerset Dam and Wivenhoe Dam as set out in the graph below"?-- Yes.

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And the graph we see on page 40?-- Yes.

So is my - if I can give my layman's interpretation of this: once Somerset crosses the 100.45 the idea is you open up the gates of Somerset to allow uncontrolled discharge from Somerset into Wivenhoe?-- That's by definition controlled outlet from Somerset.

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All right. And looking at that graph, once the Wivenhoe level rises to 70 metres, from that point on you are to control releases from Somerset into Wivenhoe so that both lake levels rise in a controlled way, in a proportionate way in accordance with that angled line in the graph?-- Yes.

So you would interpret this gate directive we see for Somerset as the engineer saying, the engineer has noticed that the level of Somerset has exceeded 100.45?-- Yes.

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Is - noticed that Wivenhoe is still rising, decides to implement strategy S2, and the idea of the engineer is to maximise the flood mitigation storage benefits of both of the dams?-- Yes.

Now, the concept of maximising the flood mitigation benefits of both dams, the idea of that is - is this a fair summary - to make sure that the operator has the maximum storage left for a flood event in both dams? Is that the idea?-- That would be a key consideration, yes.

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Yes?-- I'm not - I mean, the hydrology of Somerset is considerably different from the upper Brisbane so I am not acutely aware of how - that hydrology, it's a for more concentrated rainfall in the Somerset Dam catchment typically, sort of thing, so, yeah, it rises more quickly.

Yes. And would you interpret the expressed aim of maximising the mitigation storage benefits of both dams as contemplating that the flood engineer thinks he or she has a substantial flood event on his hands?-- I might have thought that they are trying to act in accordance with the manual. Did they have a major flood event? It wasn't a minor flood event, but at that stage had it been no more than the first flood peak, as I've said before, it may have past by largely unannounced.

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Well, could I ask you this - put to this way: would you say that this is conduct consistent with a flood engineer who still thinks he's got a minor flood event on his hands and is still operating Wivenhoe under W1?-- No, not necessarily. He realises that there is still a serious flow, is what I read, into Wivenhoe from the upper Brisbane catchment, and realises they - as the manual dictates, that the two store - the flood storage must be used conjointly.

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The idea of maximising the flood storage benefits is consistent with seeking to minimise the risk of urban inundation if the - if further rainfall comes?-- While keeping maximum flexibility, yes, I suppose. I mean, storage in line - storage behind Somerset means that you have got more capacity to control the outlets through Wivenhoe. Once any flood storage is released through Somerset, the pressure on the releases from Wivenhoe are even more urgent, so increases the flexibility of discharges counsel stream from Wivenhoe.

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Thank you. Did you see, when you were preparing your report, the extent to which the flood engineers did regulate the interplay between Somerset and Wivenhoe as per that graph?-- There is a graph in the report that shows the variance of the actual behaviour of Somerset from that expected line, which shows significant variance from the expected line, both on the way up and in the way down. I have noted that in my report and made some comment on it.

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COMMISSIONER: Mr O'Donnell, I didn't take note of the time on that directive. Can you just tell me?

MR O'DONNELL: 11.30 on Saturday morning. It should be on top of the page.

COMMISSIONER: It's just I haven't got it in front of me and I just wanted to make a note, thanks.

MR O'DONNELL: Thank you. I'm interested in your review of the actions of the flood engineers over the three days, Saturday, Sunday, and Monday, from 8 a.m. when the water crossed 68.5. You had to address the decisions made by the flood engineers regarding releases from Wivenhoe over those three days?-- Yes.

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And whether they were in accordance with what the manual required operating under W3?-- With the discretion that is consistent with the practicalities of - yes.

40

And your professional opinion was that the decisions they made about releases were consistent with - or were appropriate for operating Wivenhoe under W3 on those three days?-- I could see no glaring inconsistencies, no.

From some of your answers before, I take it your opinion is the key thing is what they did, not what was in their mind in managing the dam?-- Yes. In doing reviews of things within the public sector before, I've always been tutored to look at the outcomes of things as a way of measuring the effectiveness. So one starts at the outcomes of things as a way of measuring whether there was some better and more efficient way of doing it.

50

So I take it your assessment was to look at things such as - still concentrating on those three days - were the decisions they made about releases appropriate to giving primary consideration to minimising the risk of urban inundation?--

When that was appropriate, yes.

1

Were they appropriate - where that objective was achieved, were they appropriate to giving secondary consideration to minimising impact on rural life?-- Yes.

Were they appropriate to meeting the other requirements of W3 such as limitations on flows and so on? You nodded. I think you mean yes?-- Yes. Sorry, yes.

10

And from some of your answers do I take it in your view, the critical question is did they achieve those objectives, not were they subjectively walking around thinking "W3" in their head?-- That would be the first measure I would look at. I was asked in my brief specifically to address whether it was in accordance with the manual. So in my mind, in accordance with my brief - and the brief was very tightly controlled - I really had to look carefully at satisfying the definitions of the different strategies.

20

Yes. I've noticed some of your answers before lunch were along the lines - tell me if I interpreted it correctly - from your - in your professional opinion, the key thing for the engineers was to have in mind the criteria to be satisfied under W3 or to be achieved under W3 and to actually achieve it in the decisions they made, rather than to be consciously thinking "I'm in W3" or consciously putting a label on the strategy they were applying?-- I didn't mean to imply that they would disregard it. Just as in my analogy about street signs and my house, I don't think when I get home: Did I come down the right street? I know that instinctively. I would have expected the dam operators, who had been dealing with in this day in, day out, albeit in less stressful circumstances, to have more or less inculcated what the conditions were that accorded with the different strategies.

30

Therefore you might not expect them to be openly expressing to each other, "We're currently W3"?-- No.

Or writing it down?-- No more than I might say it my wife, I will be home at such and such a number, such and such a street this evening.

40

Thank you. Can I take you to something else, Mr Shannon. You were shown a situation report on Saturday at 6 p.m. Do you still have that?-- Have I got it, have I?

Yes, please?-- No, I can't say I can lay my hand on it.

COMMISSIONER: We can show it to you on the screen, Mr Shannon. Will that suffice, Mr O'Donnell?

50

MR O'DONNELL: Yes, Commissioner?-- Sorry, the 6th. Yes, okay. 6 p.m. on Saturday the 8th; is that the one you're referring to?

Yes, please?-- Yes.

Your attention was drawn to the last heading on the page about midrange forecasts?-- Yes.

1

I want you to have two other documents. There's the summary of model runs you've been handed, which is a copy of Exhibit 22?-- Yes.

That's a loose group of pages. You'll need that. And there's a model I want to show you. That's appendix 2 of the flood report. If you'd turn to page 224?-- Yes.

10

Could I ask you to assume that the model at page 224 is prepared by the same engineer who puts out the situation report, and they are separated by about three hours?-- Right.

So the model is on Saturday afternoon at 3; the situation report at 6. If you'd just look at the model for a minute, see if we can follow it. You see it's-----?-- The estimated inflow.

20

-----inflows for the dam excluding Somerset?-- Yes.

You see it shows three peaks in the inflows?-- Um hmm.

A peak of about 2000 CUMECS?-- Um hmm.

On about roughly the 7th, Friday?-- Yes.

A peak of just over 1600 CUMECS on Saturday just after 11 a.m.?-- Yes.

30

It anticipates the third peak just under 1400 CUMECS on about Tuesday?-- Right.

The evening of Tuesday, the 11th. Maybe in the morning-----?-- Yes, early the 12th perhaps, yes.

This is prepared at 3 p.m. So if you notionally imagine where we are at 3 p.m. in that blue line?-- On the 8th?

40

On the 8th?-- Yes. Close to the second peak.

Would you say about the - where the blue line crosses 1200 CUMECS?-- On the way down, yes. Oh, well, no, it's - at 3 p.m., so the line drawn up is presumably at noon, I think.

No, the line drawn up, I think, is at 11 a.m.?-- It's a graduation, is it? It's 00 hours, so it's midnight.

Oh, I see what you mean. All right?-- Yes.

50

So at 3 p.m.?-- Okay. Yeah. Right, I'm with you.

You'd say about the 1200 - where the blue line crosses, 1200 CUMECS?-- Yes.

So the inflows were before, on this scenario?-- Yes.

So we've got a situation where the inflows have peaked and they are now falling. It's expected on this model they will fall until-----?-- Just after midnight on the 10th.

1

That's right. So they'll start to rise sometime Tuesday morning, getting up to a peak probably about Wednesday morning?-- Um hmm.

Is that a fair approximation? Now, can we compare that to the situation report and just look at some things there?-- Yes.

10

If we go up to the heading "Wivenhoe full supply 67", please?-- Yes.

See it mentions at 6 p.m. on Saturday Wivenhoe is at 68.65?-- Yes.

So we're just over the 68.5 level, about 150 millimetres?-- Yes.

20

The dam level is rising slowly, currently releasing 1250 CUMECS?-- Yes.

It reports, "River levels upstream of Wivenhoe Dam have peaked and are now receding"?-- Yes.

If the river levels upstream of Wivenhoe are receding, you would expect the inflows to Wivenhoe to decrease, wouldn't you?-- Well, depending on where they are talking about. The river levels upstream of Wivenhoe, they may be considerably up the catchment. I'm not familiar with where they are referring to there.

30

If we assume they are the river levels - the rivers that feed into the Wivenhoe Dam?-- Well, the river valley is on a slope and there are stream gauging stations well upstream of the lake itself, and they have yet to be - if it were that level they are referring to, they are yet to be reflected in the lake level.

40

Would you put that comment together with the model though. Would it suggest to you that it's reflecting what's in the model, that is, that the inflows are dropping?-- Yes.

So that's the current situation. Then if we scroll down on that situation report to the forecast scenario, the opening sentence talks about possible increases to releases, given high likelihood that there is significant inflows in the next few days. Then it talks about the interaction with runoff from Bremer and Warrill Creek as event magnitude will require the application of W2?-- Right.

50

Then goes on to talk about projections based upon the forecast rainfalls suggest flows up to 1200 CUMECS will emanate from the Bremer catchment. Now, does that seem to fit with what we see in the model?-- Any reference to W2, I would immediately raise a flag.

You've raise a flag based upon the conditions applicable on Saturday, the 8th, wouldn't you? Because by Saturday, the 8th, the flows - naturally occurring flows at Lowood and Moggill were well below the Wivenhoe releases?-- Yes, but we're above 68.5 here. We're at 68.65, so we have gone beyond W1. 1

Quite. We have. But if you look at that model, if the inflows are dropping as per that model, you could well be dropping back into - dropping the lake level back below 68.5 very quickly, couldn't you?-- Yes, but there is a different section in the model that applies to the falling leg of the flood and how things ought to be managed afterwards. The only thing that makes that not immediately applicable is the fact that another flood wave came along and took over from the falling limb of the first flood. 10

But the flood engineer on Saturday at 6 p.m. doesn't know that?-- No, sure. 20

Let's concentrate on what's-----?-- Well, blanking out the future, he would be led to believe that he is looking at closing - bringing the storage down to a full storage level.

That's right. Which takes you back into - takes you below 68.5?-- Yes. But I'm saying in the flood manual there is a different provision for how you manage that down. There's reference to the need to drain it in a reasonable time.

If you look back to that model, let's say that the rainfall event comes on a Tuesday as per this model. Do you see the model?-- Yeah, okay. Now you're starting to confuse what you actually know with what - in my mind, you are starting to confuse what you actually know with what's highly speculative. 30

I'm suggesting that the flood engineer who writes the situation report has, a couple of hours earlier, produced this model. And you see it contemplates further rainfall on the Tuesday leading to steep inflows into Wivenhoe on the Tuesday?-- Yes. 40

And it's contemplating, when you look back at the situation report, on the Tuesday the situation of the Bremer will be quite different from what it is on Saturday. It's contemplating if rain comes on the Tuesday as per the model, the Bremer will then be running about 1200 CUMECS?-- Again highly speculative.

Maybe, but that's the model. And it's contemplating that if that occurs, we might be in transition into W2 on the basis that with 1200 CUMECS coming out of the Bremer?-- Sorry, W2 is something that happens on the way up, not on the way down. 50

But under the model, if the inflows to Wivenhoe dry up on the Saturday/Sunday?-- Yes.

You drop back to below 68.5. If the rain comes on the Tuesday, you'll go back over 68.5?-- Yes, I see what you mean.

But on the Tuesday it's different from the Saturday, because on the Tuesday you've got this large flow in the Bremer of 1200, and therefore you might be able to use - deploy W2 on the Tuesday?-- Need to invoke W2.

That is, to regulate your flows out of Wivenhoe so as to piggyback on the peak flows at Lowood and Moggill if you get that substantial flow out of the Bremer; do you understand?-- Yes. If you got a less substantial flow in the Bremer, that's right.

10

Yes. And do you have that table of model results, Exhibit 22?-- Yes.

Just look and see on the third sheet-----?-- I'm not comfortable with where you've led me here. Because as I've say said before, the predictions - the Met Bureau's predictions proved to be highly unreliable. And I know that commonsense would dictate that you are - you act in order of precedence, if you like, using the data of existing or fallen rain. In other words, rainfalls that are coming - that are coming into the dam for sure. Here, this is highly speculative, and I would think it therefore is in a grey area rather than in black and white. It is not something that the flood engineers would be regarding with the same degree of seriousness as with the flows that they know are coming towards the dam.

20

Quite. And you see that heading in the situation report is "Forecast Scenario"?-- Sure.

30

"Midrange Forecast"?-- I'm not saying they would not have considered it at all, but-----

The author is not saying this is what's currently happening. The author is saying this is what might happen as per the midrange forecast?-- I'm not sure what a midrange forecast is. I don't think the Met Bureau issued low-, medium- and high-range forecasts.

40

I think it means a three- to five-day forecast?-- Midrange in terms of time; not in terms of intensity. Right. Okay.

Does that make sense to you, three to five days?-- Yes.

It's saying what might happen in three to five days?-- Sure.

It's not saying it's about to happen?-- No.

50

Can I just go to the summary of model runs that we have, the third sheet?-- Just a moment.

Column 15?-- I don't have the benefit of going - that's peak inflow in the Bremer?

That's right, peak flows in the Bremer?-- The headings aren't on the same page, which makes it more difficult. Yes.

See that the then predicted peak flow in the Bremer was 14. That's on Saturday at 6 p.m.?-- Saturday?

Six p.m.?-- On page 3, you said?

Yes?-- Yes.

Saturday is 1800 hours predicted peak flow?-- Page 3 only has Monday to Wednesday on the model results that I have.

10

Let me see what you're looking at. That's it. If you turn to the third sheet?-- Oh, the third sheet rather than - I beg your pardon. Which is page 2. That's what confused me. I was on page 3 rather than-----

I see, sorry. If you look along the bottom of the page, it has handwritten numbers?-- Yes, the numbers are on this one. I was on the next sheet.

20

You see in column 15 the then predicted peak flow out of the Bremer is 14?-- Yes.

And if you go two sheets on - don't worry about the page numbers?-- Yes.

This is the models with the forecast taken into account?-- Right.

It suggests at the same time, Saturday, 1800, the then predicted peak in the Bremer was 520?-- Yes.

30

Now, the discussion in the situation report about midrange forecast was talking about the situation where the flows out of the Bremer would be of the order of 1200, which is quite a different situation than was prevailing on the Saturday. On Saturday-----?-- They Predicted it for Tuesday then or-----

No, just listen to my question?-- Yes.

40

I'm just pointing that out on Saturday, the 8th, when the flood engineer's writing this report, the then predicted peaks out of the Bremer for that - at that time was around 400 to 500?-- Yes.

Well below the then releases from Wivenhoe, and therefore W2 is simply unavailable?-- Um hmm.

But the author is also performing this modelling based upon the three- to five-day rainfall forecast. It's contemplating a new rain event or a significant rain increase on the Tuesday into Wednesday, and it is contemplating at that time the flows out of Bremer could be of the order of 1200 CUMECs?-- Um hmm.

50

Now, if that occurred, that would be a situation where the flood engineer could transition into W2?-- Yes.

And piggyback on the peak flows downstream so as to minimise

the risk of urban inundation?-- Yes.

1

Do you see that might be a quite different situation from the one currently prevailing on the Saturday?-- Yes, yes.

And therefore the concept of transition to W2 could be something some days ahead, Tuesday or Wednesday; not something the flood engineer is contemplating doing on the Saturday or soon after the Saturday?-- This is all speculative.

10

Yes?-- What they might be considering.

That's right. But you see it's consistent with the flood engineer thinking that he is then operating the dam - that is, on the Saturday - under W3. If the inflows continued to fall to the dam, the level would drop back below 68.5; maybe on Tuesday or Wednesday it might rise above 68.5; and at that time they could transition to W2. Does that make sense to you?-- That's possible, yes. I couldn't imagine that that's at the forefront of somebody's mind. When they are dealing with a flood and they are thinking at the forefront of their mind that - what might happen in three days' time. First of all, they need to think about what's happening here and now.

20

Quite?-- In the next day, and less importantly in the next two days, next importantly again in the next three days.

But these comments are only made under the forecast scenario heading?-- Sure.

30

So?-- It's useful data, but it has to be put in its context. What I'm saying, it is a much lower order context-----

Quite?-- -----than what the present situation is.

Thank you, Commissioner.

40

MR AMBROSE: It's fair to say that any flood engineer would know that you couldn't be in two strategies - W strategies simultaneously?-- Absolutely. There's been some mention of high W1, low W2, yes.

I'll show you the flood event log appendix 2 on Sunday, the 9th, at 3.30 p.m. There's a reference to a conference. We'll bring it up and show you?-- Right.

50

Even the most fundamental of flood engineers would know you can't be in two simultaneously?-- I made comment on this before.

That's right. The statement there is more likely, is it not, in your view, to be understood to not mean that at all. They couldn't mean something as silly as that?-- It's a nonsequitur, yes.

1

It might indeed purely and simply be a reflection on what is happening on the ground?-- I don't quite understand what you're implying.

I'll explain to you. Rather than trying to convey an impression that they thought they were simultaneously in two strategies, they might think the very fact at this time, 3.30 on the Sunday, all but the last two bridges, Mt Crosby weir bridge and Fernvale, had gone, and that would, in terms of what's happening on the ground, suggest a position at about the top of W1: about W1E?-- Yes.

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So as an expression of what in fact is happening on the ground, when all the bridges but those two are gone, it might look in layman's terms, shall we say, to top of W1E?-- Yes.

And simultaneously, the effect of what is happening is that the impact on rural life is being minimised?-- My interpretation of going past the impact on the rural area is that you have cut the bridges. The cutting of the bridges and minimising impact on the rural areas is meant to be the same terminology.

10

That's right. It is as - the impact is as minimised as is possible, in terms of when you look and see what is happening on the ground?-- Well, what is happening on the ground is condensed back to what bridges are still open to allow the populations that might need them to use them.

Mmm. Thank you.

20

COMMISSIONER: Mr Burns?

MR BURNS: No questions.

COMMISSIONER: Mr Sullivan?

MR SULLIVAN: No questions.

MR MacSPORRAN: Nothing, thank you.

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COMMISSIONER: Ms Wilson?

MS WILSON: I have no questions. May Mr Shannon be excused?

COMMISSIONER: Thank you, Mr Shannon, you are excused.

WITNESS EXCUSED

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MS WILSON: I call Neville Ablitt.

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NEVILLE GEORGE ABLITT, SWORN AND EXAMINED:

1

MS WILSON: Is your full name Neville George Ablitt?-- It is.

Are you presently employed by Queensland Bulk Water Supply Authority, Seqwater, as a Principal Advisor and Flood Officer?-- I am.

10

You've prepared a statement for the Queensland Floods Commission of Inquiry?-- I did.

Can you have a look at this document, please?-- I have got it in my hand.

Can you have a look at this document as well. You have got one in your hand but we will show you another one?-- That's all right. Right.

20

Is that your statement that you prepared?-- That's my statement, yes.

Madam Commissioner, I tender that statement.

COMMISSIONER: 1,122.

ADMITTED AND MARKED "EXHIBIT 1,122"

30

MS WILSON: Now, you were a flood officer and you were on shift during the period from 6 January 2011 to 19 January 2011?-- Yes.

And if we look at paragraph 5 of your statement, it sets out the shifts that you worked?-- Yes.

40

I am interested in - for you to assist me in the - at the end of a shift and when another flood officer comes on?-- Yes.

Is there a handover?-- A brief handover, yes.

And what occurs at that handover?-- We more or less give a status of the update of the alert stations in particular. I mean, you understand our main role as a flood officer is to monitor the alert stations. There are approximately 160 alert stations, 80 stream and 80 rain, and that's our main role because that information goes into the model that the flood engineers use. So our main job at handover is to give a status report on those and a little bit of a brief update of where the log is and other things, but it is literally ten minutes.

50

It is ten minutes?-- Yes.

Do you also - is there also a flood engineer handover?--
There is.

1

Do you participate in that?-- No.

Do you listen to that?-- It - it is happening around us. It is a small room and it happens around us but we're not part of it. If that's-----

You can't hear what's being discussed in that handover?-- Oh, yes, you would, yes, yes.

10

At any of the handovers that you were in-----?-- Yes.

-----during the period from 6 January to 19 January, did you hear any discussion of a strategy pursuant to the operation - the dam operational manual, that is W1 to W4?-- I am not familiar - sorry, not familiar is the wrong word. Those terms aren't normally used within the flood room.

20

Well, that's not an answer to my question. Did you hear those terms?-- No.

In none of the times you were on shift from 6th of January to the 19th of January?-- Not that I recall.

If I could just ask you to - the process of record keeping in the Flood Operations Centre, what are the records that are kept?-- The records that are kept is a sign-on and sign-off log for people coming on and off shift.

30

Yes?-- There is an Excel spreadsheet which is a blow-by-blow record of phone calls and any other relevant thing that might happen, a directive or a situation report perhaps. I think the situation report's not, more directives. But anything that happens. Mainly phone calls. Then there's the - the flood engineers send out situation reports, they send out directives, and the other thing that happens is the - let me think for a minute - directives, the situation reports - oh, the - there is an email but we - the flood operators normally aren't involved in those but there are emails to and from the flood engineers.

40

And the document that you - what you are discussing, is that the flood event log?-- The flood event log, as we term it in the room at the time, is normally the Excel spreadsheet, the blow by blow as things happen.

Perhaps if the witness could see exhibit 23. This is the flood event log, is that the case?-- That's the compiled flood event log.

50

Does this document here record information coming - all information coming in and out of the Flood Operations Centre?-- I - I can't answer that question because I didn't compile it.

When - do you have - do you put any entries into this

document?-- I put entries into the Excel spreadsheet which I have seen in this document.

1

Does the Excel spreadsheet that you work on record all information coming in and out of the Flood Operations Centre as far as you know it?-- Well, emails not - aren't captured but all events, like a phone call, phone call in and out, those sort of things that aren't trailed elsewhere go into that log.

10

Who records it into that log?-- The flood officer.

That is the flood officer's role, is it, to record - to keep the Excel spreadsheet?-- Up to-----

Up to date?-- Yes.

And accurate?-- My understanding. That's what I do, yes.

Now, this Excel spreadsheet, is it in the same format as the document that you are looking at?-- Very similar.

20

Does it have the categories in it?-- Yes.

And who puts the category title in there? For example, we see Thursday the 6th, the first entry, on the 6th of January 2011 at 7 a.m., we see a category and under that situation report. Who would put that in?-- I think I said that the situation report would be a separate document to the Excel spreadsheet.

30

Okay. And then there is - to come up with this document there is a compilation that occurs?-- Yes.

Who does the compilation?-- Not me.

When do you know when that compilation is done?-- Well, after the event I understand but, sorry, that's - I understand that.

During the flood event as far as you know, how many Excel spreadsheets were in operation or being used?-- There is only one current - my recollection is there is only one current, but I think it got to be too big and I think it might have been cut into bits.

40

And would flood engineer or flood officer or flood engineers and flood officers be working on those two documents, or how many - how many documents did it get cut into?-- Well, I don't know, I'm sorry.

Well, let's go into your personal knowledge. Were you aware that there was more than one Excel spreadsheet in operation?-- I was only working on one Excel spreadsheet at any point in time.

50

While you were working on one, was another working in the Flood Operations Centre working on another?-- I can't answer that question. I don't know.

So working along this flood event report, we see initials. Is that in the Excel spreadsheet that you were working on?-- Yes.

1

And is it the case that you put your initials in beside the entry as you make the entry?-- Yes.

Besides from the Excel spreadsheets, are there any informal working notes?-- I use informal working notes when I'm doing the monitoring of the alert stations because it is easier to keep track of groupings, and having finished doing the task I throw those notes away.

10

And the - what happens to your documents, these informal work notes?-- I throw them away.

Were you aware whether flood engineers or other flood officers had any working notes?-- I couldn't answer that question. We operate in separate desks.

20

Now, obviously there are computers in the Flood Operations Centre?-- Yes.

How many were there?-- You are asking a nerd - not a nerd, sorry. There is screens. I don't know about computers.

Screens?-- Yeah. I am guessing and say four but there may be five.

Okay?-- The flood operations room doesn't just operate for the Wivenhoe, Somerset, North Pine; it actually operates for Scrivener Dam in Canberra and it operates for north - the dam - sorry-----

30

COMMISSIONER: Ross River?-- Ross River. Thank you, Ross River Dam.

MS WILSON: If you wanted to send an email from a computer in the Flood Operations Centre, how many computers had that capability?-- You mean send an email?

40

Yes?-- I assume - no, I don't know. I don't send emails from the Flood Centre but I assume all the computers could but I don't know that answer.

And you are assuming that there was five sets - computer sets that had a screen and a keyboard that were accessible?-- Yes.

Assume that or do you know?-- Well, I can remember four but, as I said, there is a Ross River computer and a Scrivener computer that aren't aligned with the job that I do.

50

When you use a computer do you have to log on to that computer?-- Yes.

And how do you log on to that computer?-- Do you want me to tell you the password?

And if - once you've logged on is that computer then open for anyone to access?-- Yes.

1

And at the end of the shift do you log off the computer?-- I think so but I can't swear to that. I - sorry, can I explain, if I can, briefly? I've been in this project for 15 years-----

Mmm?-- -----and originally we have to use your own name and password. Then they brought in a general one for four flood operators, and I am not sure when the transition went from having a personal ID to a general ID. I have a suspicion that on that time it was a general and I think I probably didn't log out.

10

So there was just one password-----?-- Yes.

-----logged in and then all the flood officers-----?-- Yes.

-----could use that computer?-- Yes.

20

And flood engineers, anyone in the - anyone in there?-- Yes, yes.

Okay. Can the witness be shown Exhibit 1,051? Mr Ablitt, you see that this is from the duty engineer?-- This is an email?

An email?-- Yes.

Are you familiar with that email account?-- No.

30

Have you ever used that email account?-- No.

Can you - can we open up this document, please, that's attached to this email? Can we just scroll down to give Mr Ablitt - show Mr Ablitt this document? Just stop there. Mr Ablitt, have you seen this document before?-- Yes.

And when have you seen this document?-- Solicitor showed it to me.

40

Sorry?-- Our solicitor showed it to me.

Was that just recently before giving your evidence?-- No, it was a week ago.

Okay. Prior to your solicitor showing it to you a week ago, have you seen this document?-- No. This is the compiled document. No.

50

No. And this sets out lines when it appears that strategies W2, W3 was engaged?-- Um-----

I'm just asking you to look at the document?-- It says that, yes.

Yeah. So prior to a week or so ago you'd never seen this document, is that your evidence?-- No. Absolutely.

So then is it fair - you did not create this document?-- No.

Do you know who created this document?-- No. No.

COMMISSIONER: Do you know anything about it at all?-- Well, only since a week ago.

MS WILSON: If we can go back to exhibit 23? And if we can go to the entry at 3.30 p.m. on the 9th? Mr Ablitt, can you see that entry 3.30 p.m.?-- Yes.

10

"Duty engineer conference"?-- Yes.

"Held at the Flood Operations Centre"?-- Yes.

The next column says "situation report". The next column has some initials "NGA"?-- Yes.

They are your initials?-- Yes.

20

Did you create this entry?-- It appears so, yes.

But did you create it?-- Sorry, I put my initials there and I put the - I would have started an entry - an entry but not that entry.

I don't understand, Mr Ablitt. What are you saying?-- Well, as I said in my statement, the words used in that entry are not my words but I would have - I would have put a heading in - the Excel spreadsheet log is very succinct. It makes a statement like there was a meeting, there was a - it doesn't elaborate.

30

Mmm?-- So I would have put the time, I would have - I probably didn't use the word "situation report". I might have said "meeting" or something. I would have put my initials and I would have put a very brief summary of what happened. It was not that record that's shown on the screen.

40

Okay. I still don't understand but perhaps if we can ask some more questions it may become clearer. There is a column there that says 3.30 p.m. on that entry?-- Yes.

Did you put that in?-- Probably - oh, well, I believe so.

Then we have a duty engineer conference held at the FOC?-- I would indicate that I probably would have put that down, yes.

"Attended by RA, JR"?-- Yes.

50

"TM with JT on conf phone"?-- Yeah.

"At this stage operating at the top end of W1 and the bottom end of W2"?-- I would never have used that terminology.

So did you create this entry of the words that are contained in that column?-- I would have put some of those words in and

the others words have been added afterwards.

1

Which words did you put in?-- It is too hard - too long ago to remember but the first two sentences are mine.

Okay. But you - you - so "duty engineer conference held at FOC", that's yours?-- Yes.

"Attended by RA, JR, TM with JT on conf phone", that's you?-- Yes, yes.

10

And you are telling me that you did not write at this stage "operating at the top end of W1 and the bottom end of W2"?-- That is not the terminology I would have used so I doubt that - doubt very much that it is my writing. Or my words, sorry.

So you doubt that it is yours, it could be yours. Is it yes or no these words?-- The answer is no.

The answer is no, those words are not yours. Okay. "Storing approximately 300,000 ML at present above Wivenhoe with an additional 500,000 ML expected to flow into the dams from rainfall on the ground." Are they your words?-- None of the rest of the words are mine.

20

The only words then in this entry that is yours is "duty engineer conference held at the FOC attended by RA, JR, TM with JT on conf phone"?-- Yes.

Is that what you're telling me?-- Yes.

30

The rest of the words are not yours?-- Exactly.

And are you saying that the rest of the words were added at some stage?-- Apparently. I have no knowledge of that but it would appear so.

Those two sentences that you say that you wrote, when did you write those?-- At the time of the entry, 3.30 p.m.

40

And when did you notice that those extra words had been written?-- A week ago.

You didn't notice it before a week ago?-- No, my duty - my duty at the flood centre ceases at the end of the event.

COMMISSIONER: Do you remember that afternoon and that meeting?-- There were several meetings, but if I am remembering correctly, yes, yes.

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Who was around? Were there any other flood officers?-- I - there would have to be reference to the log-on/log-off sheet. It is too long ago for me to actually remember. At one stage we were operating single shifts and when things got serious, we double shifted and I can't remember-----

All right. If we were to assume this is before the double shifts?-- Yes, then it was myself and the flood engineers

only. They were called in for a special meeting.

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MS WILSON: And can you tell me who the flood engineers were?-- The flood engineers-----

On that shift at 3.30 on the 9th?-- Not without reference to the log - to the log-in book, sorry.

COMMISSIONER: It is not a matter of a shift, is it; it is just the fact-----

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MS WILSON: They were there.

COMMISSIONER: -----except for Mr Tibaldi who was on the phone.

MS WILSON: Mmm.

COMMISSIONER: If the entry is right.

20

MS WILSON: Yes. "Attended by RA, JR" - RA is Rob Ayre?-- Rob Ayre, yes.

JR is John Ruffini?-- John Ruffini. Terry Malone and JT on the conference phone.

Do you know whether any of those three who were there, those flood engineers, wrote this entry?-- No, I don't know.

So except for those first two sentences you can give me no assistance about who wrote that entry?-- No.

30

Can we go to the entries of 12 a.m. on the 9th, just scroll up. 12 a.m. on the 9th, Sunday the 9th, and if we can scroll across? There is three entries 12 a.m., 1 a.m.?-- Yep.

And 4.30. Your initials appear in the right-hand column. You did not make those entries?-- They are the ones in my statement that I said I didn't.

40

Yes?-- No, I didn't make those entries.

How could this happen that your entries are beside - your initials are beside the entries when you weren't even there?-- I - I didn't compile the report.

There was an Excel spreadsheet in operation during the flood event?-- Yes.

And there was another one because it got too unwieldily. That's your evidence?-- My understanding is, yes.

50

You have - you can't give me any direct evidence of that?-- No.

Can you assist me in any of the compilation of those Excel spreadsheets?-- I am sorry, no, I can't.

At the end of the flood event, was the flood event log passed around through the Flood Operations Centre for flood engineers and flood officers to ensure accuracy?-- No. Sorry, I should qualify, not to me.

1

Not to you?-- Sorry.

If I can take you to your statement?-- Yes.

If I can go to paragraph 6?-- Yes.

10

You - this is - you can recall persons who visited the Flood Operations Centre?-- Yes.

You recall Rob Drury of Seqwater and Peter Allen were also present at some time when you were there?-- Yes.

Can you give me any more details of that?-- Rob Drury came in from time to time, remembering I was on various shifts, and I can't remember specifically but Rob Drury was just keeping an eye on things and making varying visits, relatively short, just to make sure everybody was doing what they should be doing and everything was happening as it should. I didn't - all I did was be cordial to Rob, I didn't - I am not involved in discussions. He communicates with the duty engineer.

20

When he visited can you give - can you tell me what he did when he did visit the Flood Operations Centre?-- Well, he communicated with the duty engineer giving current status who needed to be communicated elsewhere outside the centre but I wasn't directly involved in the discussions.

30

If you can see paragraph 5, which sets out the shifts that you worked during this time, was it the case that Rob Drury would come in on each of these shifts at various times, or was it just a one-off?-- No, I think it was sporadic but it wasn't every shift.

It was-----?-- Remembering some of my shifts were at night.

40

So it was not once but it was more than once?-- Yes.

And you can't tell me when?-- Yes.

Peter Allen?-- One occasion only that I recall on my shift.

COMMISSIONER: Were these visits logged? Were there log entries to what they said to the flood engineer?-- I didn't - I didn't participate in the conversations with the duty engineers and the visitors and I would have presumed - well, if I had done the right thing, and I think I would have, I would have put an entry in to say that they made a visit at that time to the flood centre, but not a report of the conversation, just a record of the visit.

50

So you think you have recorded Mr Drury's visits?-- I can't answer. I am sorry, I don't know. I can't remember. I can't recall that.

All right.

MS WILSON: If I can take you to paragraph 10 of your statement? Have you got that?-- Yes.

And this is 4.27 on Sunday the 9th of January 2011 where you heard a flood engineer, who to your best recollection was Terry Malone, take a telephone call from the Brisbane City Council?-- Yes.

10

Can you tell me what this is about?-- At that stage things were getting fairly serious and with the heavy rainfall event that was happening upstream, I think everybody who was involved in the event, whether throughout knew that things were going to have to ramp up, shall we say, but there was - that phone call - that one in particular, I remember. If I am - from councils asking - asking - well, not asking, as I said, I wasn't on the phone, but I just remember the conversation - I only hear one half of it, obviously - but there was representations being made to try and keep the bridges open because I think the - well, I shouldn't speculate. Council had their own reasons for wanting to keep the bridges open.

20

And is this based on what you overheard?-- Yes.

If we can go to Exhibit 23 and the entry in the flood event log, on Sunday the 9th of January, 4.27 p.m., what you are referring to at paragraph 10 of your statement is that the entry in the flood event log that you are referring to?-- 4.27, Sunday - can you move that across? I am sorry, I have missed the question, sorry.

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You've set out in paragraph 10 of your statement-----?-- Yes. 1

-----and understanding of a conversation where the Brisbane City Council was making strong representations to the flood engineer to try to maintain a flow to keep the flood vulnerable bridges open as long as possible?-- Yes.

At 4.27 we have an entry in the flood event log on Sunday the 9th?-- Yes. 10

Your initials are beside it?-- Yes.

Is that the conversation that is recorded in the flood event log?-- I believe I made that entry and some of that information would have been relayed to me from the duty engineer at the time, which appears to be Terry Malone, and I would have, to the best of my ability, done it word for word as it was relayed to me.

Okay. Were you aware that a flood event report was published on the 2nd of March 2011?-- I knew a report was being made because you have to do one to send one to the dam regulator, I believe, it's a statutory requirement, but the actual dates, doings, I've never had anything to do with. 20

Were you aware that peer reviews were asked to consider how the Wivenhoe and Somerset Dams were managed during the 2011 floods?-- I think I became aware of that after the event.

Were you involved in that process-----?-- Not at all. 30

Thank you, Madam Commissioner, I have no further questions.

COMMISSIONER: Mr Rangiah?

MR RANGIAH: I have no questions.

COMMISSIONER: Mr Murdoch?

MR MURDOCH: None, thank you. 40

COMMISSIONER: Mr O'Donnell?

MR O'DONNELL: Mr Pomerence was taking the witness but there may be other counsel cross-examining before us. We were elevated up the batting order just for the experts.

COMMISSIONER: Yeah, okay, so that no longer applies, fine. Mr MacSporran? 50

MR MacSPORRAN: One thing you are able to say about the entry of 3.30 on the Sunday is that you would have made some of those entries?-- Yes, I would have made an entry and I believe the first two sentences or two parts of that look like something I would have done, yes, so at the time - and you've got to remember it was a long time ago, but that's the sort of

thing I would have done, yes

1

And if you were to make any entry at all for that meeting would you not give a summary of the - what occurred at the meeting?-- Probably, yes.

But you don't recall doing so on this occasion?-- There's a chance, without knowing the full story, that a sentence may have been put in there that has been overwritten by a larger embellishment.

10

I see, so you think you may have written more words than those you've identified from the entry but that they in turn may have been overwritten later?-- Yes.

And when you say "later", you mean you can say that because you didn't-----?-- But it wasn't done at the time.

Yes. You didn't deal with it?-- No.

20

Right. Now, also the - can we have the sheet up again, please, Exhibit 23? In the category column do I understand you to say that is - that column is not routinely in the spreadsheet when you make your entries, that is a column that appears when a compilation is done after the event-----?-- No, no.

It is there?-- It is there, yes.

I see?-- Yes.

30

So - but are you saying you didn't make any entry in that column at the time?-- Not - I don't think I would have put the words "situation report". I may have put another word. I don't know what that word was.

Because-----?-- Might have said "meeting".

I see. Because you know, don't you, that the categorisation of that entry as "situation report" is simply wrong?-- I would never have - I don't recall ever using that term in that column.

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No, and you know that you wouldn't use that terminology because it doesn't fit the entry, does it?-- Probably right, yes.

"Situation report" has a particular meaning-----?-- Yes, that's right.

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-----in the Flood Operation Centre?-- Yes, exactly, yes.

And we see them routinely referred to in that column-----?-- Yes.

-----and we see the style of what constitutes a situation report being something quite different from a meeting, for instance? Are you nodding, you have to say-----?--

Sorry-----

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-----for the reporter-----?-- -----I agree with you.

And for a meeting, what would be the terminology you would use in the category column to record a meeting?-- Meeting.

Sorry?-- Meeting.

Just "meeting"?-- Mmm.

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When the word "correspondence" is used what-----?-- It's an all-encompassing. It can mean - some people, and I think I use "phone" for phone call but other people use "correspondence" for correspondence, and sometimes you get a bit muddled up, and if there's - if somebody above you has used "correspondence" and you've done a cut and paste you end up with "correspondence", but generally I would use "phone call" for phone call, "correspondence" would be a fax.

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All right. Thank you.

COMMISSIONER: Mr Burns?

MR BURNS: Thank you.

Mr Ablitt, do you have Exhibit 23 there? The entry you were taken to, the afternoon conference?-- Oh, yes. Yes.

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Just go down the page a little. See the entry there for 4.15?-- Yes.

Did you make that entry? Can you see it?-- Yes, I'm just reading it. It's doesn't all appear on the screen at the once so-----

Do you need a hard copy?-- No, no. Can you just move it across just a bit? Yes.

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You made that?-- I believe so.

The effect of it is Mr Malone calling the Somerset Regional Council-----?-- Yes.

-----to advise current strategy, et cetera?-- Yes.

Maintain flow in the Brisbane River?-- Yes.

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So that the Fernvale Bridge and Mt Crosby Bridge can be kept open?-- Yes.

"However, future rainfall could well impact on those roads remaining open"?-- Yes.

"Closure next Tuesday is a real possibility at this stage"?-- Yes.

He was giving them a heads up; would you agree that?-- It's not my call, sorry.

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You're the - you just record the entries?-- Yeah.

All right-----?-- What would have happened is because I - it's a - it's not - it's a closed line I can't - it's not an open line-----

So you're just hearing what he's saying-----?-- No, no, no, he would have got off the phone and would have said those words or words similar to that and I would have written down what he was relaying to me. I'm basically the - the note-taker.

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What, after the call?-- After the call, yes.

All right. So he has the conversation-----?-- I would have been aware he was talking - I might have started it while he was on the phone-----

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All right?-- -----but, if I can use the word, guts of the conversation-----

All right?-- -----would have been relayed to him - to me afterwards by-----

Okay. Go to the next entry, 4.20, did you make that entry?-- It's got my - yes.

30

Again just read it to yourself. Are the effects the same as the previous entry except that it's-----?-- A cut and paste, by the looks of it, yes. So that - so again I would have said - he would have made the same - he would have made the same message, probably using similar words but not the same, but the context of the conversation was the same so I have used a cut and paste.

No, that's quite all right. Only on this occasion it's the Ipswich City Council-----?-- Yes.

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-----is that right? And then 4.25, is it-----?-- Mmm-hmm.

-----did you make that entry?-- Yes.

And that's Mr Malone calling the Brisbane City Council?-- Yes.

Message left?-- Yes.

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4.26, did you make that entry?-- Yes.

Again calling the Brisbane City Council?-- Yes.

Leaving a message. Different person this time?-- Yes.

That person appears, from the next entry at 4.27, to have returned the phone call a minute later?-- Yes.

And you then made the entry at 4.27?-- Yes.

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And, in fact, as we read that entry, it has the same information as was conveyed to the Somerset Regional Council and the Ipswich City Council but for the last sentence; is that right?-- Yes.

So again, "Current strategy. Maintain flow in the Brisbane River," so that the bridges could be kept open, the two - one at Fernvale and one at Mt Crosby. Are you following that?-- Yes.

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But, "future rainfall could well impact on those roads remaining open"-----?-- Yes.

COMMISSIONER: I think we can work it out, Mr Burns, it really is the same except for the last sentence, as you said.

MR BURNS: Yes.

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WITNESS: Yep.

MR BURNS: So the last sentence, "Flow in the lower Brisbane potentially might reach its 3,000 CUMECS by next Wednesday or Thursday"?-- That's right.

Right?-- Mmm.

Is that the information Mr Malone conveyed-----?-- Yes.

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-----to your knowledge?-- Yes.

All right. The bit about - in your statement about the thrust of the conversation from the council making strong representations doesn't make the note. There's no-----?-- No.

Or doesn't make the entry? You haven't recorded that?-- No.

But, in any event, the information that was conveyed to the council was the same as Somerset Regional Council and Ipswich City Council but for the addition of the last sentence?-- Yes.

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All right. Thank you.

COMMISSIONER: Mr Sullivan?

MR SULLIVAN: No questions, thank you.

COMMISSIONER: Mr Ambrose?

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MR AMBROSE: No questions.

COMMISSIONER: Mr O'Donnell?

MR DUNNING: Your Honour, I was going to ask some questions of this witness. I will only be about 10 or 15 minutes, does your Honour want me to make a start?

COMMISSIONER: Look, yes, do-----

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MR DUNNING: Certainly.

COMMISSIONER: -----and - Mr O'Donnell, did you have questions or not?

MR O'DONNELL: Yes, we do, we do, but he's our employee, so we should go last.

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COMMISSIONER: That's fine.

MR DUNNING: Mr Ablitt, my name is "Dunning" and I appear on behalf of the Brisbane City Council. First of all, can I ask you to explain so the Commissioners, please, a little better - I won't say "a little better", a little more fully exactly how these notations are made by flood officers, by yourself. What I would like you to do is I would like you to describe the room. I would like you to describe how typically you would make a record of a telephone conversation?-- Right. The room is situated facing west with, I think, as I said before, four computer screens lined up that way. Duty engineer's sitting at one, I'm sitting at another one, not quite within hand's reach of each other-----

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All right, can I just ask you to pause there. Give us a perspective of the size of the room by comparison to this room and a perspective of the size of the desk by, say, comparison to the desks that we're sitting at?-- Those two glassed-in areas over there, plus the corridor this side, and possibly from the door to the wall, is probably the size of the operational flood room.

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COMMISSIONER: Are you going to give an estimate of that?

MR DUNNING: I was going to say an eighth of the current courtroom?-- No, that's too - no, that's too big.

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COMMISSIONER: Can you give us dimensions, just for the record, because somebody looking back will have no clue?-- Strike. It's - well, it's probably - remembering that the flood room has an additional room in it for the - attached to it for the Scrivener, not "Scrivener", sorry-----

Ross River?-- Ross River Dam area, so it's a separate room, we don't go in there. At the other end is a closed computer room with all the refrigerated computer stuff in it so it's separate. The actual operational area would be, I'm absolutely guessing, three metres across by - strike, say seven metres long.

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All right, that gives us some idea. We don't really need to know for certain?-- It's fairly confined.

MR DUNNING: All right. And the size of the desks, again just-----?-- Normal desk.

Right. Normal-sized desks. Now, then can I - sorry, I interrupted you. Can I ask you then to explain to the Commissioners, please, how it is that you came to make, for example, the records in relation to telephone calls?-- How do I do it?

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Yes?-- The phone rings or he makes an out - or the duty engineer makes an outgoing call, or I make an outgoing call, or receive an incoming call. When the - when the thing gets hectic I often have a blank piece of paper that I write down the time and I make - I might make the entry - like, if I'm making the phone call I can't make the entry at the same time, so I'll actually make the entry following - following the phone call. Or if the duty engineer is making a phone call and I'm doing something else I'll make a note on a piece of paper and enter it within minutes. And I'll put the time, because I make a note of the time, and the - who the call from to and I will put the - a very brief precis of the phone call, unless it's an important one, where the duty engineer has made the call and he will then get off the phone and he will actually say words that I will type in, and to the best of my knowledge or best of my ability I will do that word for word. It is not checked by him.

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Certainly. And we don't need to go to them, but to give some illustrations, if you put a call through and the person is not there, then you make simply a very brief entry that records that-----?-- Yes.

-----but if you have a call where any dialogue of consequence, any information that's passed one to the other, you endeavour to make a record of that?-- Yes.

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All right. Now, you have - Commissioner, I was going to move on to some other things. I'm happy to go on for another five minutes or so if you wish-----

COMMISSIONER: Sorry, will you finish in five minutes or so?

MR DUNNING: No, no, I will be about 10 or 15 minutes, I think.

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COMMISSIONER: All right. We will adjourn till 9 a.m. tomorrow. We will need to get you back then, please, Mr Ablitt.

THE COMMISSION ADJOURNED AT 5.00 P.M. TILL 9.00 A.M. THE FOLLOWING DAY

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