

# Transcript of Proceedings

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THE HONOURABLE JUSTICE C HOLMES, Commissioner

MR JAMES O'SULLIVAN AC, Deputy Commissioner

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IN THE MATTER OF THE COMMISSIONS OF INQUIRY ACT 1950

COMMISSIONS OF INQUIRY ORDER (No. 1) 2011

QUEENSLAND FLOODS COMMISSION OF INQUIRY

BRISBANE

..DATE 06/02/2012

..DAY 63

THE COMMISSION RESUMED AT 9.00 A.M.

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JOHN LAWRENCE RUFFINI, CONTINUING EXAMINATION:

MR CALLAGHAN: Mr Ruffini, at the start of your evidence yesterday I make it clear that when the word "strategy" was being used - by me, at least - it was a reference to the strategies W1, W2, W3, W4 in the Wivenhoe manual; you understood that?-- At the time, yes. I was a little flustered yesterday, a little nervous yesterday.

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Let's start afresh, and perhaps you can clarify. Because you did say yesterday at 5385 when you first came on during one of the strategies, the W1 strategies, and during that shift we started to transition into the W3 strategies?-- Yeah. I guess what I wasn't clear about yesterday was that when I came on to the shift, Terry Malone had started producing a spreadsheet which had, if you like, a record of the releases - the release strategy - not strategy. Sorry. The release pattern, if you like, that he'd proposed for the next period moving forward. Now, during that period after I took over, I reviewed that spreadsheet and reviewed the releases that would happen over the next period. Now, within that spreadsheet it had it starting to lift flows during my shift, but at the end of the shift it's getting towards the 68.5, which is the transition into W3. So when I took over in terms of that, then we would have been W1 strategy. At the end of the shift - towards the end of the shift after Rob took over, it would have - the lake level would have hit the 68.5 and you would have transitioned into the W3. But what I was wanting to say is that you asked - make clear is that do I today I have a direct, clear memory that at that time did I say - did I write down anywhere that I was in W1, did I write down anywhere that I was in W3? At the time, no, I didn't. I didn't write those down. But what I was pointing to is that in the situation report I had written a little bit - there was a bit in there about the downstream boundary and what was happening at the downstream end, so that was - so I looked - so there was that bit. And when I look at those operational spreadsheets and I look at the drain pattern that we're going to after that, then that sort of fits in with that proposition. But I was saying I don't - I didn't want to say that yes, I had a direct - I can today recall exactly - for that - there are very few periods now twelve months on where you can say in this period can you exactly recall on that day at that time what you were doing. At this point on I don't, no.

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Can you answer this: at any stage during that shift which concluded at 7 a.m. on the Saturday, did you turn your mind to any part of the Wivenhoe manual 8.4?-- I would have to - can I have a copy of the manual?

Yes?-- I've got a copy here myself, if that's all right?

That's the manual which was in force at the time?-- Revision 7. I've revision 7 now.

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Yes?-- So revision 7.

And 8.4?-- Yes.

You can flick through your own copy. The question is at any time on your shift did you turn your mind to any part of 8.4?-- Yes, I believe I would have.

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You believe you would have?-- Well, as a matter of normal operating practice we would turn our minds to those issues, yes.

Sorry, can you say that whole sentence again?-- As a matter of practice, that's - when you're looking at the operational spreadsheet and using it in practice, they are the things - they are the things that you're looking at and considering when you are looking at the spreadsheet as to what the outcomes are.

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Do I apprehend from your earlier evidence that you don't have a conscious recollection of doing that during this shift?-- I would have. I would have, but what I'm - I can't recall this - I can in general tell you what my practice was in terms of when I go on shift and what I do. I can look at the spreadsheet, and I could give you a description about what I would have been thinking about at the time. But if you're saying today can I remember exactly what I did on that day, then no, I can't.

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What would you have done - which parts of that chapter would you have referred to on the shift that we're talking about?-- Would it be possible for me to get a copy of that spreadsheet up to talk to it?

Yes. Which one do you want?-- If I could just refer to my notes? I believe it should be SDWD-201101071800.

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COMMISSIONER: I have no clue whether my Associate can find that, Mr Ruffini, but we'll see if we can track it down?-- In the Mark Babister - in the stuff, that exhibit from Mark. It was in-----

MR MacSPORRAN: Commissioner, I think that's the exhibit I foreshadowed the other day in some questioning. I think it's 524, attachment 34. It contains those spreadsheets, I think.

COMMISSIONER: Thank you.

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MR CALLAGHAN: Can you identify it by run number?-- No, this is the - this is the raw one that's preserved that's actually got the date and time and the last time modified. That is what I was-----

What is the date and time and last time modified of the one you are looking at?-- 8.15 a.m. on Saturday, 8 January.

8.15 a.m. on the Saturday?-- Yes.

Is that after you've left your shift?-- I was sort of just leaving at that time, yes. That was the last time it was opened.

That was the last time it was open?-- It was the last time that was - when it was opened for the last time.

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I'm looking at appendix A1 of Exhibit 1060, which has - I might get that up on the screen. If we can just scroll one page down. Can you see there - just go up a little, sorry. You can see the headings in the columns there. There's "run date" and "run", and we have "run 8, Friday, 3 p.m." and "run 9, Saturday, 7 a.m."; is that right?-- Yeah.

Are you telling us there was a run at 8 a.m.?-- No, I'm saying that was the last - that was when the spreadsheet was closed down and not used again.

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I see. So-----?-- It's the same - It's probably the same one.

As which?-- As the - I haven't checked it, but I'm assuming that that's - what did you say? That 7 o'clock one.

Seven a.m. on the Saturday?-- Yeah, I think.

Which is when you left your shift?-- Anyway, that's - yeah. But that's the spreadsheet that's consistent - one of them - in principle - in principle. If you can get me up one of those spreadsheets and I can talk to it. It's just that those run numbers-----

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I can get up the 7 a.m. one. Is that what we're talking about?-- The only reason I was - in our requirements when you're saying look, was the contemporaneous stuff, stuff that hasn't been changed, and I just - that's why I went back to the ones that - I had a look at the ones that are preserved in the Flood Operations Centre, and they haven't been changed or annotated or modified in any way, so that's why I was sort of wanting to refer to that one, because I'm pretty confident that that's the one that refers to the one I was using at the time.

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Do I understand that it was the predicted lake level as per the model run - or as per a model run which informed your thinking that there would be a transition in strategy to W3?-- The release pattern that was in front of us - the release pattern that was in front of us was showing that we would hit that 68.5, that transition point, sometime - you know, sometime on that Saturday morning, okay? So that was-----

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Is it-----?-- Sorry?

MR O'DONNELL: No, he hasn't finished.

No, he's going to - yes?-- Okay. The model run that was in

front showed that it was - the model run - the predicted model run was showing that - the predicted model run and the release patterns presented in the spreadsheet had a release pattern had the model run hitting 68.5 sometime - sometime in the morning - sometime in Saturday morning.

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There is a specific model which predicts the lake level; is that correct?-- There's a - sorry, where there's a specific-----

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There is a specific part of the model which predicts the lake level?-- In that particular spreadsheet, the operational spreadsheet, takes - we run the no rain forecast and the rain forecast, and this one particularly was a no rain. That rainfall input gets put into the operational spreadsheet.

Yes?-- Now, in that operational spreadsheet the gate operation rules are put in for both Somerset and the gate operational releases consistent with the strategy trying to work it are put into that spreadsheet. You then go and look at - you then examine that spreadsheet as to thinking about what you're trying to achieve in operating the dam.

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But are you trying to achieve a particular lake level?-- Am I trying to achieve a-----

Yes?-- What do you mean by that?

That's not part of what you are trying to achieve, is it?-- No.

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What are you trying to achieve?-- You're trying to achieve several things within the strategy - as in yes - within the strategy you're working; in other words, those objectives that you are trying to achieve, whether it's keeping bridges open, protecting the urban areas. So those - that hierarchy of strategies and protecting the dam that you're looking at.

Yes?-- You're looking at those. And the other one is that you are - within that - the other important component in doing that is the drainage time. You want to - you want to store water in your flood storage and you want to release it, and release it at such a rate that you don't achieve those objectives. But importantly, you want to be able to empty your flood storage in a reasonable timeframe in that seven-day drainage.

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Can we perhaps come back to my question about 8.4-----?-- Yes.

-----of the manual. Your evidence, as I understand it, is that you would have turned your mind to it because that's the practice; is that right?-- That's right, yes.

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To which parts of 8.4 would you have turned your mind during your shift that ended at 7 a.m. on Saturday the 8th?-- Okay. The-----

I don't want to have to cut you off, but I'm just asking you

to identify parts of 8.4?-- Parts of 8.4.

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Parts of 8.4. Which parts would you have turned your mind to?-- Okay, I would have turned my mind to the levels, about where we were. I would have turned my mind to-----

Sorry, which part of 8.4 am I reading from?-- Do you want me to - do you want me to - I'm just not quite sure how to answer. So you want me to just say a section?

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You've got 8.4 in front of you?-- Yes.

You're saying you would have referred to this during that shift?-- I know what's in here, so yeah. I wouldn't have got the book out and looked it up, no.

If you know it, it should be easy. Just tell us which parts of 8.4 you would have referred to during that shift?-- Okay. Well, we would have - during that shift we would have - I would have considered - I would have thought about what strategy - where were the - I would have thought about - let me think about this. I would have looked - when I came in, I would have looked at that spreadsheet that was given to me and sort of said okay, we're heading to that transition at 68.5.

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COMMISSIONER: Mr Ruffini, I really don't think you are answering the question. You're just being asked about which parts of 8.4 - not the spreadsheet - which parts of 8.4 you would have had regard to?-- The definition of the strategies and what's in them-----

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MR CALLAGHAN: Sorry, page and paragraph?-- So it would have been, you know, page 24, I guess, 25, 26, 27, 28 at that stage I would have been considering, and also pages 22, 23, yes.

With the benefit of having the manual in front of you, are you able to draw attention to any specific part of those pages between 22 and 28 inclusive to which you would have had regard during that shift which ended at 7 a.m. on Saturday, the 8th?-- Can you say that again, sorry?

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With the benefit of having that document in front of you?-- Yes.

Are you able to draw attention to any specific part of pages 22 to 28 inclusive to which you would have had regard during that shift which ended at 7 a.m. on Saturday, the 8th?-- I would have had - I would have had regard to some of this spreadsheet stuff.

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Which spreadsheet stuff are we talking about in 22 to 28 inclusive? Where do we see the word "spreadsheet"?-- Sorry, as in flow chart, sorry.

Flowchart?-- On page 23, yes. So when I was looking at that information, I would have said where are we - at that point when I took over, where was the lake level.

So the flowchart on page 23. Anything else?-- Yes, and then that leads you to looking at - this isn't physically what I did, but in terms of that you would have - start is what - is Wivenhoe lake level likely to exceed 68.5? So at the time I'm there, you know, as I said, the practice that we'd been adopting is to not transition until we hit the - hit the particular lake level, so that would have been the first thing in there. I then - I would have then - the release pattern that was there and had been given to me, I would have gone and sort of said where was the lake level exactly when I came on. I would have gone then to pages 24, 25, 26 and sort of said well, it's below 68, it's in W1. So I'd go and I would have checked out as to whether - looked at the releases and how they related to the - you know, to the - to those strategies. The situation report that-----

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Sorry, you are straying from the question now. Which parts of - you've referred to page 23. I understand that. During that shift, to which parts of pages 24, 25, 26, 27 or 28 would you have had regard?-- Okay. What I want to say is there was a strategy - there was an operational release pattern in train when I came in, and now that had had considerations to these lower level objectives that are in W1A, W1B, W1C and W1D, I think, so basically that release pattern was reflective - where we were was a function of some of those considerations that had gone on for these lower level objectives within W1 when I came on shift. The pattern that's in there I would have then - you know, I don't - I would have looked at it and digested, tried to understand-----

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Looked at what?-- Sorry?

Looked at the pattern?-- The release pattern. There was two things. The situation report that would have described and the - I would have had discussions with Terry at handover. So there's a situation report that described the reason that they were - the reason that they had - the reasons by the - the reasons for at that time holding the water back and releasing it and not starting the release, as to when it was going to happen and going forward. So I would have had to look at that and get that in my mind because-----

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COMMISSIONER: Mr Ruffini, we understand that, that you did look at the situation reports and spreadsheets and so on. All you are really being asked about is the manual. You may have gleaned we're pretty interested in the application of the manual. So if you can just tell us which bits of that section 8.4 really factored in your really thinking about on that day, on that morning?-- That's why I would like to have the spreadsheet up, so I can sort of see exactly - it would have been - for these ones here - and if I can refer to that - at the start of when I took over, I would have had a look at where the lake level was and worked out which - had a look at which one of these W1C, D and E, where it lied in that. I would have looked at the pattern that we had at that particular point in time and seen that it was uncomfortable, that that fitted within that spectrum. That's what I would have done. Then I would have looked and said well, here's the

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thing in terms of the release pattern which is taking you over that - the lake level is going to be over that threshold, and just going forward and say well, look, is that drain down pattern - in terms of that proposed thing at that time, is that reasonable timing for a W3 kind of thing. 1

MR CALLAGHAN: So you've answered my question-----

MR MacSPORRAN: Commissioner, it might be quicker - Mr Ruffini has on a couple of occasions referred to this spreadsheet relevant to the period we're talking about. He has, as I understand, it revisited those spreadsheets to get a sense of what was happening on the day to assist him to explain his state of mind at the time. We've emailed the Commission. We've been given a disc from the Commission as an extract of that data that Mr Babister, I understand, had to do his analysis. Those are the spreadsheets I understand Mr Ruffini wishes to refer to. It might be a lot quicker, with respect, if we have him have access to that data to see if he can explain his position. 10 20

COMMISSIONER: I have a bit of difficulty with that, because he's actually being asked about the manual, not the spreadsheet. And it seems to me perfectly possible to answer the question without looking at the spreadsheet, because he's just being asked, What are the aspects of the manual that you would have had in mind? Not, What were the exact figures in front of you at the time?

MR MacSPORRAN: It's not really a question, with respect, to what the exact figures are. It's really a question of what the trends revealed and the material were, as I understand Mr Ruffini's point. It's a matter of refreshing his memory from the day that - if he had document open in front of him to assist him to articulate what was in his mind, that will relate presumably to the question of the manual requirements. 30

COMMISSIONER: Mr Callaghan, have you got the answer?

MR CALLAGHAN: I was about to - perhaps if I ask the next question I was going to ask, it might solve things. 40

Mr Ruffini, have you answered the question that I asked you as best you can without referring to the spreadsheet?-- I'm not sure. I guess what I'm - you know, the things that - as I said, I'll say it again. The things that I would have looked at when I came on, I would have looked at - if you had the spreadsheet in there, I would have said here's the lake levels, and then I would have referred to these levels and strategies about where the lake level - where we were with lake levels. So during my shift I'm looking at that. The release pattern, that sort of - that I'm proposing - that was given to me and then I futurely endorsed and went out there was proposing that we would move to - after the shift, or very soon after the shift, you would hit that 68.5 and move to a - move to a W3. Now----- 50

COMMISSIONER: So is this you telling Mr Callaghan whether



you've answered the question as best you can?-- Well, I didn't quite recall everything I'd said, that's all.

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So you're repeating it, effectively?-- Maybe, yeah.

All right.

MR CALLAGHAN: Do I understand, though, that whatever reference you may have had or would have had to the manual at this time, you did not make any record of such considerations of the strategies under the manual? You made no record of any strategies under the manual?-- If you're saying did I write down "W1" or "W3" anywhere-----

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Yes, that's what I'm saying?-- No.

Did you-----?-- But I did write down the - there is a spreadsheet-----

Okay. Did you tell anyone at any time or did you talk in terms - at any time did you talk in terms of W1, W2 W3 with anyone?-- I don't have a direct recollection of that.

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When was the first occasion upon which you told anybody that you were going to - or that you could see that there was going to be a transition to W3 on - that whilst you were on your shift you could see there was going to be a transition to W3?-- I would have - while I wouldn't have spoken - you know, talked in-----

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No, the question is when was the first occasion upon which you told anybody that whilst you were on your shift you could see that there was going to be a transition to W3?-- I would have had - I would have had conversations with Rob at handover, Rob Ayre, about moving past that threshold, I believe. You know, how can I put it? That's normally what we would have talked about, and I believe I would have spoken to him about that in there, and I believe I would have even had a conversation with Terry when Terry handed me over the spreadsheet initially that these things were in play. And when I look at the fact that we had spoken and written about the release rates, and we've got - on my situation report I'm talking about flooding impacts in Brisbane and giving some indication about what that might be, I think that that sort of indicates to me that that's probably what I would have been thinking about, yes.

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Probably what you would have been thinking about, did you say?-- It indicates to me that that confirms my, you know, my feeling that that what I was - well, not feeling, that confirms that I believe that's what I was talking about at that time. 1

It confirms that you believe that's what you were talking about. Okay. I'm asking-----?-- It's just that I'm getting tied up in that, you know, people expecting oh, you've written W1 and W3 here and because you can't pull something out that says yes, I'm there and that. Yes, it's a little bit - I know, we should have written it down. 10

Do you say that there would have been, and I appreciate you're not necessarily saying that there was, but do you say there would have been a conversation with Mr Ayre that during the hand-over of shift on that Saturday morning in which the term W3 was used?-- I definitely believe I would have talked about exceeding the threshold and I probably would have - yes. Yes. I think so. 20

You think so?-- Well, I can't - yes. I haven't written it down, how can I prove it.

Have you discussed this question with Mr Ayre subsequently at any time, this question as to whether there was any reference to W3 at or around the time of the hand-over?-- The-----

Have you discussed it with Mr Ayre?-- Well, we - when the strategy - when the strategy sheets were prepared. 30

When the strategy sheets were prepared, what are they?-- The manual - when the manual - I don't recall having any direct conversation but when the manual - when those sheets came to us, the executive summary ones and, you know, I think for the report. John had put all those together.

We're talking about the March report?-- The march report.

Yes. Okay. And when that was prepared?-- And that was, you know, a joint effort. 40

Yes?-- In terms of putting that report together.

Yes?-- I came in late on the end of the review bit. You know, we were reviewing that. So at that period all that information had been put together about those sort of things and, you know, around - and I had, you know, through that process and looked at that evidence and deduced that in there so, you know----- 50

Sorry, you looked at that evidence and - I didn't hear you?-- I looked at the - when all the - because it hadn't been written down, John had assembled everything in the strategy spreadsheet.

John Tibaldi?-- Not in the strategy spreadsheet for the report.

Yes?-- You know, that section 2 and we were asked to review it as part of that thing. So I looked at that and, you know, it came up with what my recollections of that sort of thing were and confirm that. So-----

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COMMISSIONER: Mr Ruffini - sorry, Mr Callaghan, I heard you say-----?-- It's just that - like we were all involved in that - what I'm trying to say is we were all involved in that process of putting it together so there may have, you know, there may have been - I'm not sure, I can't say whether I, you know, we didn't, you know, so we would of had to as part of putting that together, discussed all the event. That's all.

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What I thought I heard you just say, "I looked at that evidence and deduced it in there"; is that right?-- No. I tried - I used the information that was down there to try the spread - you know, all the information that John had put together to try and to try and inform myself about what the state of mind I was in when I was making those decisions. In the absence of having written it down, you know, in the absence of explicitly having written it down, that's what I did.

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I'm just asking about whether I heard you correctly. Did you say "I looked at that evidence and deduced that in there" or have I just misheard you?-- Well, I didn't - deduce is probably the wrong - maybe I didn't express that correctly.

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But that's what you said, is it or isn't it, I'm just asking you?-- I don't know.

MR CALLAGHAN: Can I suggest that you said, "I looked at that and came up with what the recollections were" or with what my recollections were, I'm not sure, but you looked at that and came up with what something recollections were, were those your words a moment ago?-- I don't know. I'd have to - I don't - what I'm trying to say is that when that report was being put together, the information that was available - the information that was available at the time was all assembled into one location. When I was reviewing that, I looked at the spreadsheets and the things that I was using at the time when I was making those decisions and came up with my own assessment as to whether I believed that that was accurate or not.

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And did you discuss that with Mr Ayre?-- I believe that all of us would have discussed it at some stage, yes. I can't remember but, like, at least in the edit process, your edits - you know, in the commentary on there I would have made mention of it but I don't have any direct recollection of the conversation but-----

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All right. Just on that transfer on that hand-over - I'm sorry, I'll start that again. As part of your thought processes or what they would have been on your shift, which

concluded at 7 a.m. on the 8th, can you just explain to us the work that went into or would have gone into the decision that the preparation was for transfer to W3 and not to W2?-- Sorry?

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You've told us in evidence on oath?-- Yes.

That you were, during your shift, preparing to start with - during that shift you started to transition to W3, that's your evidence, is it not?-- Correct. Yes.

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Tell us about what was involved in the decision - or what would have been involved in the decision to go to W3 rather than W2?-- It had to do with the drain time, in terms of the - because W2 was controlled by the flows, you know, the naturally occurring flows in the Lockyer Creek, moving to W2 you wouldn't have got enough discharge out to actually get it - get a reasonable drain time. So that's why the higher, going to W3, and the higher discharge, that's why the release pattern had it going to a higher - higher release rate to get that drainage within seven days.

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And all of that was, or would have been part of, the thought process undertaken by you during your shift; is that correct?-- Yes. There were-----

Is that correct?-- That was part of the - in - I would have thought about those sort of things, yes.

And there was more, is that what you were going to say, there was more involved than just that?-- Yes. There was also, you know, previous runs that Terry had done which had looked at Burton's hole which also didn't mean drainage performance.

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So all of those considerations would of had to have been undertaken in order for you to be preparing to transition to W3 rather than W2?-- Yes.

There would of had to have been some active engagement between your mind and that data, those statistics, in order to make that decision?-- Yes.

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Yes. And that's not something that you can just intuitively guess, that's something you have to carefully check by reference to the data, I take it?-- Well, by reference to - you'd be referencing the model runs and that.

Yes?-- Yes.

There's a bit involved in that?-- Yes.

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Yes. And that would have been done carefully?-- I hope so. Yes.

Yes. All right. Would it have been clear to you from that point on, after having done that work, that for the short-term at least, W2 was of no further relevance?-- Well, it depends. Like you could get - you could get a big flood - a bigger

flood come along in the Lockyer Creek. So for example - similar to what happened, I guess, a few days later but at a much bigger level because - this is essentially - it was a little bit of a, I think a, problem with this version of the manual in that-----

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No. We're getting off track?-- Anyway - sorry. I'll keep my track. So, for example, if you did have - in the course you did get some rainfall happen and you had a lot more flow happen in the Lockyer Creek and that flow was big enough, such that it was going to be exceeding - the naturally occurring flow there was going to be exceeding the releases that you were making under W3, then you - and you could reduce your rates, you could reduce your rates, you could reduce your rates down and still get a seven-day drain, you might consider a W2 strategy.

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As at the time of your shift-----?-- But that wasn't in play then.

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That was not in play. The scenario you've just alluded to is just complete speculation?-- Well, no. The rainfall system was moving south, if you looked at the forecast rainfalls at that particular time. We did have, you know, we had future rain falls so it was - it depended on the movement - we had a very saturated catchment. We had a very saturated catchment. So the catchment was going to be very responsive to rainfall. So half the catchment comes in below the dam. So, you know, in some ways you want to keep your - you want to empty your storage, you know, your stored water in the seven-day period but you want to do it at such a rate that you're keeping that as low as possible not to increase the risk of flooding downstream because you've got such a responsive catchment.

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All right.

COMMISSIONER: Mr Ruffini, you've confused me. I think you started off answering this question by saying the W2 scenario wasn't not in play, that is a lot of water coming down the Lockyer, and then you seem to go on to say about the saturated catchment and then talk about that?-- Sorry. What I'm saying, that point when I made that decision, while it potentially is but it isn't, like in the data that we're modelling and we were using at that time no, but then that situation-----

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All right. The possibility exists but it wasn't-----?-- That's it.

-----something that was actually happening that you were worried about it?-- That's it.

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MR CALLAGHAN: So that's one aspect of what would have been apparent to you and as at the time you left the shift anyway, it was apparent to you that W1 was going to be moved out of in the short future, in the short-term?-- That's right. We were going to hit that 68.5.

All right. Have you ever heard of the phrase a Ruffini-ism?--  
No.

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Never heard that?-- No.

Your colleagues have never described anything that you might  
say as a Ruffini-sm?-- Not in front of me.

No?-- I'm sure behind my back.

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You haven't even heard that in recent times?-- I did have a  
call from a friend who sort of said, "How are you going?", and  
he sort of mentioned the phrase "Ruffini-ism" and I said, "You  
can't tell me anything".

All right?-- So - yes, that was the only time I heard it. He  
said, "I'd been quoted".

Yes. And it was quoted in the context of a note made of the  
meeting at 3.30 p.m. on the 9th?-- Mmm.

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Which is Exhibit 23. I'm sure you've had your attention drawn  
to this entry in the-----?-- It was-----

-----log?-- Yes. It was one of the ones when we - I gave my  
original statement. We were asked what our recollections were  
at that time.

You were and you confirmed that that entry corresponded with  
your memory of the meeting; is that correct?-- I said I  
didn't remember the details of what was spoken at that meeting  
but, you know, basically the general thrust of it was probably  
okay.

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Specifically you said, "I can't recall the exact words spoken  
at this meeting"?-- Yes.

"The description provided is consistent with my recollection  
of the meeting", do you agree with that?-- Yes.

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And it's still consistent with your recollection of the  
meeting?-- Well, consistent in terms of - as I said, I don't  
remember the details of - sorry. I can read that but I don't  
remember, you know, I don't remember, you know - I don't  
remember the exact words that were said.

Well, I'm sure you've had your attention drawn to the fact  
that there is an entry there which says, "At this stage  
operating at the top end of W1 and the bottom end of W2"?--  
Correct. Yes.

50

And I'm sure you've got an explanation for why it could be,  
given your state of mind when you left your shift, that that  
entry could refer to W1 and W2, am I right?-- Well, the only  
thing that I can think of is that, you know, in terms of that  
people - because it really can't.

It really can't?-- Well, it can't be W2 but, you know, in

terms of, you know - sorry. Referring to when I left, W2 wasn't in play. I've just come into the - I think at this stage I'm in off-shift. I hadn't, you know, I'm in off-shift and I've just come into this. Yes. Yes. I've just come into this to have a quick meeting with it. I probably haven't familiarised myself with all the stuff that's going on. So, yes. I mean, it's just inconsistent because at the bottom it's talking about, you know, 1,603,000 lower Brisbane which is obviously, you know, inner W3. I don't know. The W1 might refer to discharges, like I don't - I can't really say.

1

10

W1 might refer to discharges?-- Well, I think there's been a whole lot of misconception about - that, you know, just because you're at a high level strategy then you should be somewhere - you should be exceeding the maximum discharge that's in a - no. That's in one of these earlier ones. Look, I don't know.

Sorry, your point being there that the W strategy does not necessarily indicate anything about discharge rates; is that right?-- That's right.

20

Right?-- Well - sorry. As in that in isolation, without considering the other things.

No?-- Doesn't necessarily inform you where you are.

It's a really inefficient way of trying to describe what release rates are or might be?-- Sorry?

30

It doesn't convey anything. To say W1 by itself, to say "we're in W1" doesn't convey anything by itself about what the release rates might be except for the fact that there's a maximum of 1,900; is that right?-- That's right. I mean - say that again? I think that's right.

You think that's right. I thought that was the point you were trying to make?-- The point I was trying to make-----

There's a misconception that we're all labouring under a misconception about what these strategies meant?-- What I'm saying, that just because the strategy has a maximum discharge rate stuck to it, stuck to it doesn't mean - you can't define a strategy necessarily by discharge.

40

Just so?-- Yes.

Yes?-- You've got to look at - because if your objective is keeping urban - minimising urban risk.

50

All right. No, you're straying from the point. You can't define a category by reference to discharge-----?-- Alone.

-----alone. And the opposite is also true. You can't define a discharge by reference to a strategy?-- You can't define a discharge-----

By using a term W1 or W2, it doesn't necessarily convey

anything about the rate of discharge; is that right?-- If W1 will give - W1 will give you an indication of a maximum limit.

1

Yes?-- That's about it. That's what I would say, you know, like if I said W1 then you'd say well, there's a maximum. You'd know that if you were ever over a certain rate - if you were over the 1,900 release then that would be a W1, is that what you mean? Yes.

Yes. So your explanation, if you have one, for the use of W1 and W2 in this entry is what?-- Well, look, I'm speculating. I don't know.

10

I thought you said a moment ago W1 might refer to discharges?-- Yes, but you've taken me through logic which doesn't seem to make sense to me.

That's right, isn't it, that wouldn't make any sense?-- Yes. I don't know. I mean, look, as I said, I don't recall the exact sort of thing but it doesn't-----

20

All right?-- It doesn't make sense. It just - you know, it doesn't make sense to me that.

All right?-- Given where I was, it was - I didn't write it. You know-----

There's two things. It doesn't make sense, you agree with that, if the manual was being applied correctly it doesn't make sense?-- No. It does make sense with the whole - it's inconsistent with the end part of it which says 1,603,000 in the lower end which was clearly managing to the, you know, the W3 objective.

30

All right. And the other point is that you did not - you are not - this is not a Ruffini-ism?-- Well, I have-----

They're not your words?-- Look, I have no recollection of writing it in.

40

Or saying it such that - mentioning it?-- I don't recall that.

All right.

COMMISSIONER: Could I just ask you why is 1,600 cumecs and 3,000 cumecs in the lower Brisbane inconsistent with W1?-- Because, you know, in W1 - because in 3,000 cumecs you really - at this point you're over 68.5 and you're really - 3,000 cumecs, you're really managing - you're starting - you're over 68.5 and you're managing towards that lower - you know, really that lower objective.

50

But that last sentence doesn't say anything about 68.5. It just says, "Reduced to contain the flow to 1,600 cumecs" that's within W1, isn't it?-- Yes, but there's no explicit consideration about that controlling any downstream flows in W1 containing them to any levels.



Well, just tell me what it is about 1,600 cumecs in the mid Brisbane and 3,000 cumecs in the lower Brisbane that I can find in the guide to strategy 1 is not permissible?-- What I'm saying there to me, as a duty engineer, that's reflective of us talking about - talking about what's happening in Brisbane and is consistent, in terms of the situation reports preceding that, that are talking about the impacts in Brisbane.

10

All right. Thank you.

MR CALLAGHAN: That meeting was before you and technically due on-shift; is that correct?-- Correct. Yes.

Did you stay around until your shift started?-- I don't recall. It's not my - I tried very much - you know, having been through the '99 event and made the mistake of not sleeping, in general I try to be pretty disciplined about when I wasn't on-shift, trying to get sleep.

20

Okay?-- Because it's a long period and you get tired if you don't do it.

All right?-- But can I say this: I don't know.

Okay. Can we move forward then to the 15th of January and I can - perhaps if we've got that exhibit open we can go to the entry at 11.30 a.m. There was a request by Mr Drury for a summary of the Operations Manual, and it's clear from that that Terry Malone was to prepare it; is that correct?-- If it's written there, I assume so.

30

And we have an Exhibit 1,050?-- So what time was that?

That entry was 11.30, the request from Mr Drury, but the email that I'm showing you is 1.02 p.m.?-- Okay. Now, I just need to check, have you got the duty roster so I can check when I was on and-----

40

Yes. We can?-- A copy, please.

I believe you were coming on at 7 p.m. on Saturday the 15th?-- At, sorry?

7 p.m.?-- Right. Yes.

You were coming on to duty then?-- Yes.

COMMISSIONER: Mr Malone was on duty this day, as far as I can see from my notes?-- Mr Malone was on duty and I was coming on at 7 o'clock. Yes.

50

MR CALLAGHAN: That's right. At the change-over at least, or at sometime after you started your shift, did you become aware of the fact that Mr Malone was - or had prepared a summary for Mr Borrow's purposes?-- I had no real recollection of that.

Can we open the document. Do you have any recollection of seeing this document?-- Just scroll down, please.

1

Have you not been taken to this document in recent times by your own lawyers?-- No.

So looking at it now, do you recall seeing it back on the 15th of January?-- No. I have no recollection of really seeing it, going through it or-----

10

Or discussing it?-- When it was an email at 1, so I would have been asleep.

And that's why I asked you was there any conversation at the hand-over or whether subsequent to coming on-shift-----?-- Not that I can recall. I mean, in general there was a roundabout - I think around about that period with, you know, Seqwater had started to, you know, prepare a - I'm aware they had started to prepare a brief and things like that. You know, I was, you know, pretty busy with other stuff. You know, I had started with, you know, my role, in my, you know, normal role, my real role, I was managing the Hydrographic Support Centre of the Department which was out at Rocklea which got flooded.

20

All right. I understand you were busy?-- Yes.

Your shift started at 7 p.m. that evening we've agreed, 15th of January?-- Yes.

30

At least when you came on-shift, were you made aware of the need for a report to the Minister?-- I was made aware that I was - I knew there was something going on but I also was made aware, you know, I wasn't going to have an involvement in it.

Who made you aware of that?-- There was a meeting early on and, you know-----

Well, tell us about this meeting. Who was there?-- I just recall there was a meeting that went on quite early on in the piece.

40

In the Flood Operations Centre?-- No. It was like a little room off the side. There might have been a telly - telephone conference.

Right?-- I wasn't really scheduled to be in the meeting but like it kind of - like I got - I got kind of hooked into it and then they said, look, you know, this is a, you know - my role, which is just in terms of the Flood Operations staff, and this was a brief stuff that was an Seqwater thing and they didn't really need me involved and I was quite busy at the time. I just didn't have the time to do any of - any of - be involved in anything extra other than, you know, the stuff I had to do for the Flood Operations.

50

Might that have been at 2 p.m. on the Sunday?-- I'm not - what's that?

Saturday, I am sorry. Might that have been on Saturday the 15th, a phone hookup meeting?-- Am I - have you got - am I on shift then?

No, you started at 7. Might you have been there earlier?-- What time was that again?

10

Two?-- Possibly. There would have been - it was quite a small - there weren't - my recollection is there wasn't a lot of - I think Peter Burrows might have been there or Jim Price. It was sort of quite small.

You suggested it might have been a phone hookup and-----?-- Not like it was a room. As I recollect there were a couple of people there in a room and it could have been that, yeah.

20

There is an entry for 2 p.m. for a phone hookup to discuss a report for the Minister by close of business Sunday. You are not, I think, recorded as being present but you think you may have been in or around it?-- What I am saying is I think around about that time, in that while I was in, it was sort of like - you know, it was sort of saying, you know, this is a - you know, they're going to do the bulk of the running in terms of the preparation and that.

Okay. And "they are going to do the bulk". "They" would be who?-- It's a SEQ Water thing.

30

Right?-- It's not anything to do with me.

Nothing to do with you but-----?-- Well as in, you know - as in they are not asking me to be involved in the drafting or bloody you know - sorry. Or, you know, given my other time constraints they are not going to put an extra burden on me to have to be engaged in that process.

40

Do you recall at least being involved in the checking of reports subsequently?-- No, I didn't - wasn't involved in the checking of that. I think I got cc'd in on a few things or, you know, to there but I didn't - I don't recall, you know, specifically being asked to do anything there and I certainly didn't do anything because I certainly didn't have the time to do it.

Alright. Still on the 15th can I show you Exhibit 1052. We will open that up. Do you see that's an exhibit called "Strategy Summary Document" - an e-mail filed on the Strategy Summary document and have you at least seen this document in recent times, the one with the bright yellow lines on it?-- In terms of preparing for this-----

50

Yes?-- -----I did review my e-mails and I saw that I was cc'd on this e-mail.

Yes, well, this one that we are looking at now-----?-- I'm sorry, cc'd - I was in on the distribution list, sorry, yeah. But I wasn't involved in preparing it or vetting it or doing anything with it.

1

Do you recall even seeing it?-- It was in my e-mail box so, yeah, I guess. No, I - you know, so - look, it's in the e-mail box but - it's there, so I would have got it but I don't recall actively doing anything with it or having any discussions about it or seeing it, yeah. But I'm sure, you know - like, it was there, so I had to - I can't imagine I wouldn't have opened it up and at least glanced at it.

10

Do you not recall having a particular interest in this attachment?-- Not off the top of my head, no.

Even if not on the 15th, a couple of days later do you recall showing some interest in this attachment?-- As in?

Any interest?-- I would have to look at the e-mails and see - you know, see - you know, I can't recall me doing anything with it. I may have - I don't know. I mean, I may have - no, not off the top of my head.

20

You were on duty from 7 a.m. to 7 p.m. on the 17th, I would suggest to you?-- Correct, yep. Sorry, I-----

Do you agree with that? The 17th?-- I will take your word for it, yep.

30

We will get it up, page 35 of Exhibit 24, and get you to agree. I am talking about the 17th of January from 7 a.m. till 7 p.m.?-- Yep.

Do you agree with that?-- 17th of January, yep.

Alright. Do you recall whether anyone else was on duty at that time?-- Not off the top of my head.

So you would have been the one accessing the duty engineer e-mail account at that stage; is that right?-- No, there was a fair few people in the room that had been actively starting to prepare things and so there was a fair bit of activity in there.

40

Can I show you an e-mail sent at 1.03 p.m. on the 17th?-- Yep.

From the duty engineer account to Rob Drury and Peter Allen at 1.03?-- Yep.

50

Attached to that e-mail was the strategy summary log in question?-- Yep.

Do you know anything about that?-- I don't recollect anything about that.

You don't recall any need for Mr Drury or Mr Allen to see a copy of that summary?-- No. It would be only if somebody had asked or something or if someone had kind of said something. But, you know, I've got no - I don't have a recollection of sending this e-mail. I'm not saying I - you know, it's possible.

1

Alright. I want to show you another e-mail from that same date whilst you were still on shift, 6.06 p.m. I am sorry, I will tender that, the one which I have just shown you.

10

ADMITTED AND MARKED "EXHIBIT 1076"

MR CALLAGHAN: This is an e-mail at 6.06 p.m.-----?-- Yep.

-----in which this strategy summary was e-mailed to you?-- Right.

20

To your own DERM email account?-- Yes.

From the duty engineer account?-- Yep.

Does that refresh your memory?-- No. I mean, it's possible. I said it's possible but that's-----

You have no explanation as to why, at 6.06 p.m., on the 17th, when you were on shift, that very strategy summary is being e-mailed to you, to your own account?-- No. No, I don't.

30

No explanation?-- Like, I could have sent it. I could have sent that for my own information.

There are two options. Someone else sent it or you sent it?-- That's right. And both of those are possible.

Could you contrive any scenario in which someone else might have been sending it to you from that account while you were on shift?-- There are people in the room. I don't know who they were sending it. They might have been sending it to other people there but, you know, as I said, there was a lot of - there was a lot of activity going on at that stage, there were a lot of people in and out of the ^ ch flood room.

40

You have since looked at that document in some detail I take it?-- What document?

50

The strategy summary document?-- No.

The attachment?-- No.

Even in preparation for this hearing you haven't been taken through it?-- No.

Do you even know its significance?-- No.

The bright yellow lines and the annotations and the category column?-- I haven't - I haven't gone through it.

You are not even aware now that it contains descriptions as to when various strategies under the manual were engaged?-- Can I have a look. Oh, yeah. Alright.

But is this the first time you have seen that?-- No, I've - I did see it. As I said, it was e-mailed to me, so I've probably - I've probably seen it before. But as I say, I wasn't involved in its preparation, I wasn't - I wasn't involved in, you know, any detailed assessment of this.

10

Do you think you probably did see it at or around the time it was e-mailed to you?-- Possibly. You know, yes - I mean, I've opened it up and if it was me that sent it to me, then I've probably - you know, probably ask Peter, ask Rob if, you know, it was me that forwarded it or sent it on.

20

It's fairly obvious-----?-- But I - sorry.

Looking at the document, it's fairly obvious what it purports to record in terms of changes between strategy, is it not? The bright yellow lines are let's say a clue?-- Yeah, but I don't know who put this together, who prepared it and I haven't been through this in detail but I will take your word for it.

When was the first time you became aware that this document existed with bright yellow lines on it?-- I don't recall, you know, seeing this document. I wasn't involved in its preparation. So I don't have any, you know, direct recollection about when I first saw this document but, you know, it might have been around this time when it was emailed to me, if I have opened it up and looked at it, but yeah.

30

You would agree, wouldn't you, that it would take only a cursory glance at the document, from your point of view, if you looked at the entry for 9 p.m. - 9.04 p.m. on Sunday the 9th, which is highlighted with a bright yellow line, to know that, by your reckoning, that was mistaken. You would agree that's obvious?-- I will take your word for it, yeah.

40

MR MACSPORRAN: If it could be specified why it is that he would know it's mistaken. What's on the screen doesn't include the far columns I don't think.

MR CALLAGHAN: No, I think the bright yellow line is - and the time is-----

50

WITNESS: Look, all I can say is I haven't reviewed this document. You know, I wasn't asked to review it. I don't know the status of it, whether it's in preparation, who's looking at it or any of that sort of thing. So, you know, while that's there, I may or may not have forwarded it on to people but, you know, as I said, I didn't - I wasn't actively engaged in developing, or fixing up, or doing anything with

this document.

1

I haven't suggested to that you were, Mr Ruffini. I am just asking you to agree that the effect of the document is obvious and so far as you must have known, the first time you saw that document, whenever it was, by reference for your state of mind, that entry must have been an error. Do you agree with that?-- Yes. That's the - sorry, the - yeah. The one you are talking about, yep.

10

I tender that.

ADMITTED AND MARKED "EXHIBIT 1,077"

MR CALLAGHAN: It follows from your answers, I would suggest, that you don't recall discussing that document with anyone?-- Look, I don't recall at the time. I mean, as I said, if it was it would have been in a very cursory way because I wasn't, you know, directly involved in its preparation or what was the end use of that document. As I said, at that time I was very occupied with my other duties, so I wasn't really focussing on reviewing this sort of information and doing this sort of thing at that point in time.

20

You were aware as at the 15th, I think you have agreed, that there was a need for a report to be prepared but that was going to be a SEQ Water responsibility as far as you were concerned; is that right?-- That's right, yeah. I was aware they were, you know - exactly, you know, what it - you know, aware they were doing stuff and aware they were busily beavering away on doing something but in terms of the details and that, you know, I don't think I had a real of lot of detailed information there - detailed knowledge of what was the content and stuff like that.

30

I will show you Exhibit 1,053?-- Yeah.

40

This was an e-mail to you and others sent by Mr Tibaldi?-- Mmm.

Attaching a draft of the report for your comments?-- Yep.

Do you recall receiving that?-- I see it's in my e-mail but I have no recollection of doing anything with it, adding any comments to it.

50

Look, I would suggest to you that between that first draft, 9.10 p.m. on the 15th and the end of the 16th of January, there were four drafts of that report sent to the duty engineer account in Exhibits 1,065, 1,067, 1,069, 1,070. I can show you all of those but the question is whether you saw or at any stage discussed - start with that. Did you ever see a draft of the report to the Minister?-- No.

Have you ever seen a draft of the report to the Minister?-- I have as a part of preparing for this. 1

Yes?-- I have gone through the duty engineer accounts and I saw that there were some thing's in there.

As at January of 2011 do you say that you did not see at any stage, any stage in its preparation or even after it was completed, the report that was prepared for Minister Robertson?-- I don't recall seeing anything, I don't recall - I have no recollection of being involved in it. As I said, I had a few of these e-mails but I don't - you know, I don't - I don't recall directly - you know, I wasn't directly involved. 10

What about discussions with Mr Tibaldi or any of the others - with Mr Malone or Mr Ayre, about its accuracy or what it was being used for, or any discussions at all at or around this time, 15th, 16th, 17th of January, about the report?-- No.

Nothing at all?-- Not that I can recall. 20

COMMISSIONER: Mr Ruffini, if a colleague sends you a document for comment, you will open it, won't you?-- Well, in the context of the timing of what that was, it's at the end of the event, you know, we were pretty bugged, I've got a whole lot of - you know, I am under pressure to get the gauging stations that had been destroyed in the flood back in operation, I have got a site that's been under water and, you know, fairly destroyed. So I am under pressure to get that, you know, up and running, cleaned out, get the spare parts moving out and getting the network up and operating. So at this particular point in time I have got a whole lot of other pressing things. So while, you know, in the context of this this might be important for SEQ Water, my mind and my tensions are actually - you know, were getting all this pressure that - you know, the wet season's still on, get the gauging stations out and running and we've got to get the spare parts, we've got to get those stations up and running. So it means I've got to get the site up at Rocklea, up and operating and that gear out. So a lot of energy and focus at that time is, you know, poured into that task. Now, I know you say, "Oh, it's a little slack. A colleague sends you a document," but like, you know, I am exhausted, I've been working for over a month and, you know, we have got to get that - I am under pressure to get that other stuff done. 30

Alright, I do see the context?-- so, you know, you got to see everything. 40

This other context is the context of the brief and to the Minister which is no light thing either, is it?-- Quite frankly, you know, during the event people are asking us to produce stuff and do that when you have still got full dams and things like that, just put a real lot of undue pressure on the team to do things that you knew there were going to be bloody errors in. So, you know, this craziness about that - which is why, you know, in my statement I said, "Look, for God sakes in future let's have some proforma staff. Let's have, 50



you know, briefings so people" - you know, before that. So they have training, they understand what we put in it so that we don't have this crazy situation where you get people who have been flogged for over two months are asked at short notice to do stuff when you know there is going to be bloody mistakes in it. 1

Alright, but I don't think you have really addressed my question which is the context in which you are being sent this document four times is a pending briefing to the Minister. Is that something that is not really of any moment to you or is it an important thing?-- As I said, you know, very early on in the piece I was told, "You got these other things to look after. It's not really your baby." So I didn't put a lot of energy into it. That's why. 10

Right. Thank you.

MR CALLAGHAN: Let's move then to another report and that is the March report. We understand that it was prepared by - or that Parts 2 and 10 in particular were prepared by Mr Tibaldi; is that correct?-- Sorry? 20

The March report?-- Yeah.

The executive summary, Part 2, Part 10, that's all prepared by Mr Tibaldi?-- That's the - sorry, Part 2 is the-----

Part 2 is the flood event summary?-- Yes. 30

Part 10 is the management strategies and manual compliance?-- Yeah, I think so, yep. That would be right, yep.

You have previously indicated in Exhibit 43, page 45, that you went through the main body of that report?-- Yep.

And you went through the compliance with the manual part pretty well; is that right?-- That's right, yep.

And you endorsed the manual compliance section of the report as being accurate?-- Yes. 40

Do you have any reason now to think that it's not accurate or that it may not be accurate?-- No.

Do you agree that the report purports to be, in section 10 at least, and elsewhere, a record of what actually happened at the time of the January flood event?-- Yes.

It purports to record strategies which were actually engaged for the purposes of operating the dam at that time?-- Yes. 50

You understood the manner in which Mr Tibaldi was writing the report and that is to say he was going back, looking at the data and working out what the strategies must have been?-- Working out what the strategies must have been?

Yes?-- I am thinking what he did was - what he did was saying that, "Here's what happened. Now, what strategy does that match up with?" You know, "Is this what we are doing?" Is that what you are saying? 1

Well, you tell me how you understand Mr Tibaldi was writing a report? I mean, just to go back, he obviously wasn't there for the whole period?-- Yeah. What John told us as he said, "Look, I'm going to go back to scratch and get all the information that was around. I am going to assemble it all in this there," because he was taking the job quite seriously about saying, "I want to be clear about saying what strategy we are in." So he went through and he sort of - and he got all the information together, put it into the summary spreadsheet and then using that information, he processed it to say, "Does this match up with" - "This matches up with this strategy." 10

Yeah, did it match up with the strategy, not did it match up with your recollections as to which strategies were engaged. He didn't ask you that?-- He asked us to confirm whether we thought what - he did that independently and then he came to us and said, "Does this match up with" - "Here's the information I have got. Here's what I think I've done. Here's what I think it is." And he asked us to go away and see if we - if that I guess matched our recollection and whether we agreed with that or not. 20

What did you say in response to the query as to whether or not it matched your recollection?-- When I reviewed it I thought what he had written was accurate. 30

Did you say, "Yes, that matches my recollection."?-- Did I say, "That matches my recollection"?

Yeah. That was the question he asked you?-- Well, yeah, I would think - did I - yes, I think that - well, obviously, yeah, I would have said that, yeah.

So you told him, "Yes, that does match my independent recollection"?-- That matches my recollection, yeah. 40

So it wasn't the case that you looked at it and came up with what your recollections were?-- No. Well, I don't remember at the time as to - like, if he didn't remember - are you saying, okay, if we didn't remember at the time exactly what we were doing. So, yeah, so you are saying - let me get this right. You are saying are we-----

I am not really saying anything. You are telling the story. As I understand it, the story so far - or this part of it?-- Yeah. 50

Is that Mr Tibaldi asked you whether this matched your recollection and-----?-- Words to that effect, yeah. He just asked us to confirm the accuracy of what he had written and as I said, I looked at the material, I looked at, you know, the spreadsheets that I had been using and things like that and

said, "Yeah, that matches my" - you know, jogging my memory.

1

Yes?-- You know, the contemporaneous material that I had. I said, "Yep, that's looks reasonable. That looks"-----

And which contemporaneous material was that?-- The spreadsheets and the situation reports and the stuff we sent off to BOM and that sort of stuff.

The Flood Event Log?-- The Flood Event Log was in the report, to look at, yeah.

10

Did you look at that to confirm that it matched your recollection of what was in place, which strategy was in place at the time?-- I would have, I would have, but, you know, there wasn't a lot in the Flood Event Log. It wasn't recorded in there.

It was in one place. At 3.30 p.m. on the Sunday there was reference to W1 and W2. You agree with that? I have taken you to that this morning?-- Well, there was some reference of the W1 and W2 but-----

20

And that doesn't accord with anything that is in the March report, does it?-- Well, that was - the interpretation of that was, you know, not correct.

Did you point that out to Mr Tibaldi?-- I don't recall.

What about the situation report at 5.58 p.m. on the Saturday? That has a reference to moving towards W2?-- I don't recall what I said about that bit, no.

30

You said a moment ago that Mr Tibaldi I think said to you something to the effect that he wanted to be clear about the strategies which were engaged; is that correct?-- Yeah.

Did he say why he wanted to be so clear about it?-- He wanted to be accurate I believe.

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Did he say why it was so important for it to be accurate?-- Not to me. It was just part of our reporting process, yeah.

Is it always part of the reporting process to go through an event hour by hour and record which strategies were engaged at which time?-- I think this one - because of the - you know, the high profile of this there was a lot more in it. There was a lot more detail in this than any previous other report. Like, a lot of other reports were a lot more, you know, compact.

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How long have you been involved in the preparation of reports even if you didn't prepare them yourself, checking them and-----?-- You know, every event since 1996 I guess.

Okay. And was it the case that it was known amongst the four of you that this event was going to be examined like no other?-- We were very keen to make sure that we accurately recorded the event.

Well, you were keen to - it was clear that Mr Tibaldi was going to be going through the event hour by hour to determine which strategy was in place at which time; is that right?-- Yeah, I guess.

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And certainly if you didn't know that before he was doing it, it was apparent to you when you saw the draft?-- Yes. I think they had their own internal people, because I guess the change with this one too. It's like previous - under previous versions of the manual, the report was the report of the senior duty engineer controlling the event. The change that happened in this version of the manual was that the report became Seqwater's report as opposed to the senior duty engineer controlling the event. Up until that time, all previous events that I'd been involved - up until the change in this manual, all those other events that I was involved in, it was the senior duty engineer when I had - controlling the event when I had the role that was the primary author of this. So in this case there was this other layer of stuff that went on, which was that, you know, as it's an Seqwater report, which is somewhat different.

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COMMISSIONER: Can I just ask you, in the October 2011 flood event, who was the senior duty engineer that would have been in charge of that report?-- Rob.

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Ayre?-- Mmm.

MR CALLAGHAN: Did you have any discussions with Mr Tibaldi about particular difficulties that he was having in working out which strategy was applicable and when?-- No. As I said, during that whole period of time, my - I just didn't have a lot of time to put into it. Like, I didn't put - I had nowhere - because I-----

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You can probably answer my question directly: did you have any discussions with Mr Tibaldi about it - about difficulties that he was having? Did he raise with you problems that he was having in the course of preparing it?-- He may - well, I don't recall him bringing up any. It was more along the lines he just wanted to go away and just make sure it all - he had it, you know, to a reasonable mature level before, you know, I guess I got engaged in it. But he didn't - no, he didn't - I don't recall directly having conversations that he had any difficulties or things like that. He was just going through this data - you know, data compilation exercise.

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You don't recall any discussion with him about certain difficulties he was having with the concept of W2?-- I recall there was a bit of - I think he was mainly talking through that with Rob, as the senior duty flood engineer in terms of - Rob Ayre.

You were aware of those conversations taking place?-- I was aware there was some background stuff going on in terms of some of those discussions, but I wasn't engaged in them actively, no.

What were you aware of then?-- I just knew that they were talking, you know, there were things they were talking about in that space.

10

How did you know that? You must have been in communication with them?-- Just, you know, they were - you know, when I was in, they'd just - you know, overheard things in the flood room, that's all.

So you would have overheard some of the concerns which were being discussed about W2?-- No, I'd just, you know, I'd just have this recollection that there was, you know, some, you know - you know, the issues, and I think it goes back to the creation of the manual, that this version was - had issues in that space about, you know, the - that inconsistency, yeah. There was an inconsistency in transition.

20

So far as you were concerned though-----?-- Yes.

-----it was always clear to you that the transition was going to be from 1 to 3, was it not?-- That's right. That's because I had the clarity in terms of, you know, I think the better specification that existed in the old manuals, where, you know, I think the mistake in this was writing this up as a transition strategy, when it in reality 2 and 3 are parallel strategies.

30

But this was - the clarity of your view on this topic was present in your mind even at at least 7 a.m. on Saturday, 8 January, was it not? There was no doubt in your mind when you left your shift that the transition was going to be from 1 straight to 3?-- Well, to my way of thinking, you know, I wasn't - you know, when I look at the data - when I go back, I look at the data-----

40

I'm not asking you to go back and look at the data. I'm asking you about your state of mind on Saturday, 8 January?-- As I've said before, it's over a year ago and what I can and can't remember in terms of the specifics. But if I go back and I jog my mind and go through what my thought process would have been in terms of looking at that contemporaneous information that's in front of me, then I would have - you know, then there is, I think, some logic in my mind about that transition, yeah.

50

Did you not at any stage say something along those lines to Mr Tibaldi while he was preparing the report?-- I don't recall.

You didn't say anything like-----?-- As I said, to me it was - you know, I got engaged when the drafts were fairly mature.

All right?-- Not, like, actively engaged. While I was there and thing I parked most of my energy into that process right towards the end. 1

You've explained your understanding of the way Mr Tibaldi prepared this report, and you've been around, as you've just indicated, for quite a while. These reports are submitted to Mr Allen for his approval; is that right?-- That's correct.

Have you been involved in the process of submitting them to him in the past?-- Yeah. Yeah. 10

And have you discussed - ever had discussions with Mr Allen in which the method adopted to write these reports has been canvassed?-- Over the historical - over the period?

Yes?-- It would be in terms of the - what do you want - you know, we've had discussions, and I guess this is even during the development of the manual times about the format, and what's the requirement, and that sort of stuff, yeah. 20

The method has always been understood, so far as you're concerned at least, that normally you get to the end of the event, you get the data, and then you look back and you work out what the strategies must have been; is that right?-- If it hasn't been written down, yes.

Well, has it ever been written down?-- I would have to go back and have a look at the '99 report and what we had written in logs and things like that to sort of see that and fresh my mind on it. 30

Thank you.

COMMISSIONER: Can I just ask you, Mr Ruffini, that process by which Mr Tibaldi prepared a flood event report with the strategies in it and then asked you whether it matched your recollection, did he sit down with you with a document, or how did he do it?-- The way he did it, at some point when the draft was reasonably mature, that's when we sort of - the process was we'd go into the flood room, and there'd be - there was a computer with the draft document on there, and then we could - because to review it properly, you also needed all that other material that I spoke about. So you - effectively you really needed to be in the Flood Control Centre so you had access to all that relevant material. We - when I did it, I would open it up, I would look at those - look at what he had written, and then I would check - check in terms of all that relevant data to make sure the numbers and things were right, and then I would sort of - I'd go through the logic, have the manual there and say does that sort of - is that correct inasmuch as I could, remembering what I did, you know, what I was trying to remember, what I was thinking, and what I did at the time when that was - that was on. So that's what I did. 40 50

What did you have the manual for?-- I just wanted to check, you know, that what he was writing was, you know - because he

was, you know, he was writing it in very specific terms about, you know, there was this happened, and that happened, which is sort of a little bit more than we'd normally do. Like, it was - if you look at some of those early reports, they were a lot more concise. They weren't as verbose and they didn't go into probably providing a whole lot of the other details. So there was - from my point of view, there's a lot more detail in it than a lot of those early reports. So I just - I was just getting my head around what he had written.

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I just don't quite understand what you were using the manual for. That's what I was trying to get to the bottom of-- From my point of view, he was saying certain things about the manual and, you know, given - because it was the compliance section as well, so I was just, you know, looking at it and saying; is that right? Does that make sense? Because I just wanted to be accurate in my recollection of all the detail that he was quoting.

10

And what did you do about checking the strategies he had cited-- Well, as I said, what I did when I - the process I did, I looked at - I would get up the - firstly, I had my situation reports and see what did I write? What was I telling people at that time? You know, I'd look at the spreadsheet to say, you know, now, is what's been said here consistent with that? And then I would say what do I recall? What's my recollection of - what's my recollection of what I was doing at that particular point in time? So, you know, in the periods that - do I recall, and does that make sense, and would it make sense that - does it make sense? Does it gel with my - whatever I can recall at that time? And to my way of thinking, I agreed that that was - that did make sense and it was - it was consistent with, you know, at the time when I reviewed it what I was - what I could recall. Now-----

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So how did you confirm it for him? Did you give them anything in writing, or did you just tell him? What did you do-- No. Well, he was just saying look, if you don't disagree - if you disagree with it, like, put edits on there. And it was also made very clear to us that we didn't have to sign the report, like, if we didn't agree with it, if we didn't - if we didn't think that it was an accurate reflection of - accurate reflection of the event. So yeah.

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All right. Thank you.

MR CALLAGHAN: There is one further statement, Mr Ruffini, that you prepared dated 30 January; is that correct-- Yes.

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I'll tender that state.

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COMMISSIONER: Exhibit 1078.

ADMITTED AND MARKED "EXHIBIT 1078"

COMMISSIONER: Mr Dunning, do you have any questions?

MR DUNNING: We don't have any questions, thank you.

COMMISSIONER: Mr Rangiah?

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MR RANGIAH: Could the witness see the situation report for 1 a.m., Monday, 10 January. Does your name appear at the bottom of that report?-- I've got a copy here. Can I-----

COMMISSIONER: Yes, and it is on the screen, Mr Ruffini, whichever is easiest for you?-- Yes, it does.

MR RANGIAH: Did you write that situation report?-- Yes, I did.

20

If you have a look under the heading, "Wivenhoe Dam, full supply level 67 metres AHD"?-- Yes.

Do you see that in the second paragraph, the last sentence?-- Where is that, sorry?

In the second paragraph under the heading "Wivenhoe Dam"?-- Yes.

The last sentence reads, "Given the rapid increase in inflow volumes, it will be necessary to increase the release from Wivenhoe during Monday morning"?-- Yes.

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Have you got that?-- Yes.

Then the next sentence says, "The objective down operations will be to minimise the impact of urban flooding in areas downstream of the dam"; do you see that?-- Yes.

You wrote that?-- Yes.

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And did you mean what you wrote down?-- What do you mean?

You wrote it. Was it true?-- Well, the objective of the dam, you know, we were - you know, at that stage we were, you know - it's - you know, maybe the English isn't great, but we were in the process of minimising. We were actually doing it, yeah, minimising it.

You didn't write that the objective for dam operations is to minimise the impact of urban flooding in areas downstream of the dam, did you?-- It's poor English, yes.

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Well, it's not just poor English; it's an accurate reflection, isn't it?-- No it's not.

Of what the situation was?-- No, it's not.



What this means is that the objective for dam operations would, at some time on the Monday morning-----?-- No, it doesn't. Doesn't mean that at all.

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-----be to minimise the impact of urban flooding?-- No. We'd been doing that for quite some time prior to this. And I'm sure if you go to some of the earlier situation reports, you'll see someone with better English than me that's reflected it better.

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Could the witness see the situation report for Monday, 10 January at 6.30 a.m.?-- Yes.

Again under the heading "Wivenhoe Dam", do you see in the third paragraph under that heading again it says, "The objective for dam operations will be to minimise the impact of urban flooding in areas downstream of the dam"; do you see that you wrote that?-- Yes.

And again you were saying that the objective would in the future be to minimise the impact of urban flooding in areas downstream of the dam?-- No, what we're saying now is the objective we were running then and will continue to be is that objective.

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But you didn't write that that was the objective then and it would continue to be that objective, did you?-- That's poor English, sure. But you can go to the spreadsheets at that time and have a look if you want, and it's clear that we were doing that.

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What I'm suggesting is that it's accurate use of English?-- At 6.30 in the morning, I'd been on for twelve hours, I'm an engineer and my English is crap; I'll admit to that.

COMMISSIONER: Your language in Court is not good either, Mr Ruffini. You might try and refine that as well?-- Sorry?

Your language in Court?-- Sorry. I apologise, your Honour. Look-----

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MR RANGIAH: Well, look at the paragraph just above that. Can you read that? Is there anything wrong with your English in that paragraph?-- No, I guess not.

So it's only that particular sentence, "The objective for dam operations will be to minimise the impact of urban flooding in areas downstream of the dam", that reflects some poor grasp of English, doesn't it?-- Is and wouldn't be. It's meant to convey that we are doing it and we will continue to do it. It's not meant to convey something that says we are not doing it now and we will be doing it in the future, if that's what you're saying.

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Could the witness see Exhibit 21, the manual, page 21. I'm sorry, could you go over to page 22. Do you see that in the third paragraph it says, "The strategy chosen at any point in time will depend upon", and then it refers it various things.

Do you see that sentence?-- Yes.

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Now, the use of the word "chosen" there means that the flood operations engineer on duty has to choose a strategy; is that correct?-- Yes.

So do you agree that when the flood operations engineer is on duty during a flood event, that engineer is required to make a conscious decision as to what is the appropriate strategy to apply?-- Yes.

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And at the beginning of that page it says that there are four strategies, W1 to W4, used when operating Wivenhoe Dam during a flood event; do you see that?-- Yes.

And that indicates that engineers are required to actually use the strategies when making decisions about the operation of the dam, doesn't it?-- Yes.

And that requires engineers to make a conscious decision as to which strategy they are in at any particular time; do you agree with that?-- It requires you to understand clearly the objectives you are managing to, yes.

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And understanding those objectives requires you to make - or to consciously know what strategy you're operating under; do you agree with that?-- Yes.

Thank you, I have nothing further.

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MR MURDOCH: your Honour, might we bring up Exhibit 1036.

Mr Ruffini, Jim Murdoch is my name. I'm counsel for the Mid-Brisbane Irrigators' Association.

Your Honour, I hope I'm not the victim of getting exhibit numbers wrong. I'm interested in the schedule of flood event log entries.

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COMMISSIONER: It doesn't look like this one. Which version are you talking about; the one that you've shown to other witnesses, or something else?

MR MURDOCH: No, it's schedule of flood event logs entries, situation reports and technical situation reports on 8-9 January 2011. Report on operation of Somerset Dam and Wivenhoe Dam, 2 March 2011.

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COMMISSIONER: The March report.

MR MURDOCH: Yes. I apologise, your Honour.

COMMISSIONER: Is this the document, Mr Murdoch, that's on the screen now?

MR MURDOCH: It is, your Honour.

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Mr Ruffini, you were on shift, obviously, at Saturday, 8 January at 6.32 a.m.-- Yes. Yes, that's correct.

And your shift formally was rostered to go to 7 a.m., but you said, as I understand it, that you hung around until about 8.15 that morning?-- I think so. Yes, I think I might have, yes. Well, I said that that spreadsheet that I was using was closed at 8.15 and, you know, if I'd physically - it was me that had physically done that, then it would have been 8.15. But it could have been that it was sort of opened and Rob was looking at it, but, like, generally, you know - yeah. Yeah, I'm not sure. But go on, yup.

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So far as the strategies under the manual of operation - operational procedures are concerned - and I'm talking about the Wivenhoe strategies, the W strategies, were concerned - which particular strategy was in operation at 6.32 on Saturday, the 8th?-- We hadn't kicked - at 6.32? At that stage I don't believe we'd - I would have to - I don't believe we'd hit 68.5 yet, but I would have to look at the - look at the - look at the record. I think they happened a little bit - as it says, a little bit after. So you'd still be - until you hit 68.5, you would be in the W1 strategy.

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Do you know which of the W1 strategies it was?-- You would be in the top end, because you'd be in the W1E.

W1E?-- Yeah, because you'd be over 68.25 by then. More than likely, yeah.

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And if we go down to the item - the second item under 6.32 a.m., see there's a reference to situation report?-- Yes.

In the description column, the second heading there is "impacts downstream of Wivenhoe"; do you see that?-- Yes.

And if we go to the foot of that description item, there's a note there, "Somerset Regional, Ipswich City and Brisbane City Councils have been advised of the Wivenhoe operating strategy"?-- That's right.

40

How were they advised?-- By an operating strategy, what is meant in that context is not-----

Excuse me, sir, I asked how were they advised?-- They would have - I would have to look at the - there are a number - I would have to check. But, like, at that stage there were people on the situation report distribution list that were advised through that. There were phone calls - phone calls to the various councils that would be recorded in the event log that were - because there were, of course, bridges and things and that, there was closures and that happening, there would have been activity in terms of - in the event log that would be recording those sort of things. The process for the various - the various identified controlled points for the controllers would have been contacted as part of that process.

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Well, is your short answer that you don't at this time know what the means of contact was?-- Well, no. It's through phone calls and through distribution situation reports and through also - through the grid manager coms, there would have been stuff advised out there in a broader context as well.

And who-----?-- And the flood room's direct contact also with a lot of these ones is also on - there is a communications protocol that is established after the October events which sort of - and discussed with the various councils and things about what needed to be said when, and that protocol would have been in place and followed. It was in place and was followed.

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Who was it who actually performed the act of advising those three councils?-- I would have to look in the log and see the entries. It could have been - during - yeah, I'd have to look in the - the ones that happened on my shift, I would have been advising them. There is specific actions that the Flood Operations Centre is responsible for, and there's specific actions that the protocol that was established through the grid manager was responsible for communicating certain elements. So I would have to look at those documents and do that, yeah. But I also think it was also through the - Seqwater had some arrangements with the local irrigators and things like that as well that they did which are outside the formal - you know, I wasn't - we in the Flood Control Centre - Flood Operations Centre wasn't directly involved with those communication - that part of the communication package.

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Let me just clarify. That item that I took you to about the three local authorities being advised of the Wivenhoe operating strategy, that appears to be a record of something that occurred during your shift?-- Yes.

Now, were you personally involved in advising all or any of those local authorities of the Wivenhoe operating strategy?-- The strategy when we - when - in that context, strategy is about the releases, not in terms of strategies as W1, W2, W3. Strategy in this thing is in terms of the sequencing of the releases and proposed releases that need to happen.

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COMMISSIONER: Mr Ruffini, that might be helpful but the question actually was, were you personally involved in communicating them?-- I would have to look at the event log and look at in terms of the phone calls that were made to comment on that but I would be happy with whatever's recorded in the event log to be - in terms of phone calls made out of the Flood Control Centre to be an accurate record - to be probably a reasonable record of the things that I would communicate.

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MR MURDOCH: Your evidence has been you are very experienced in participation as an operator?-- Yes.

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During flood events in the Operations Centre?-- Yes.

That is your evidence?-- Yes.

As a matter of general practice, have you participated in the advice advising of outside bodies, such as local authorities, of the operating strategy for Wivenhoe as events progressed?-- There is - as I said, after that October 2010 event, there was a communications protocol that was established that because - which is different, I guess, to events that happened before that because of a lot of perceived issues that happened there. There was a distinct array of communications, the way they wanted that communication to happen, and that's what we followed during the event plus in the normal course of events there are the various things that we have to do, particularly if you're closing bridges and things like that, to get people informed. So there's a raft of things that we need - that's in the context of this. That refers to those communication protocols and what we had to communicate.

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Are you able to explain why, when communications as to Wivenhoe operating strategies were made with the relevant local authorities, that they weren't informed of which particular grading of operating strategy under the manual was to be invoked?-- We never had that discussion in all the time that I've, you know, since '96 and operating. What people are interested in is what they actually have to do, you know, what they need to know. They need to activate their plans. If you give them a - so they need to know, you know, at what time is such and such a bridge is going out. They need to let us know and again we'll say, here's the releases we're planning. You've got X which is going to be impacted, can you get that closed in time and whether they have to get signs up and things like that. So they're - in terms of the nature of the communication, historically that's always been what's done and we've done that. As I said, post that October event there was a protocol, in terms of that was arranged, for those communications they had to do.

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Under the emergency action plans for the dams there are also specific things and specific people that we need to call and I think a lot of that is covered in the report, in terms of those communications and how those obligations were met. Seq would of separately had some other arrangements with people that they - that are outside the responsibility of the Flood

Operations Centre to communicate and you'd have to talk to people like Rob Drury about those sort of things.

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If we go to 7.51 a.m. on Saturday the 8th of January, and bearing in mind that you've said your shift ended?-- Yes.

But you think you hung around until 8.15?-- That's right - well, yes and no. Yes. I understand what you're saying, yes.

I notice that there's another notation under the description part "Somerset Regional Council, Ipswich City and Brisbane City Councils have been advised of the operating strategy"?-- Yes.

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Do I take it that you don't know the nature of that advice?-- You'd have to ask Rob that.

And you'll see the next item is for 8.10 a.m. and there's a notation in the description column, "Engineer 1 advised dam operator 10 Wivenhoe Dam on directive fall and discussed strategy". Now, were you party to that discussion?-- No, not that I can recall. As I said, you know, I'm a bit flexible in that when I - as I said, well, yes. I could have been - may or may not have been there. I know I sort of said 8.15, but that was when the spreadsheet, that I guess Rob could have closed that down, but nonetheless - but I'm not quite sure what you're getting at.

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Look, the item is written as if in that instance-----?-- If you're asking me well - is your question - does-----

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COMMISSIONER: Mr Ruffini, just stop for a minute?-- Sorry.

Let Mr Murdoch ask you the question, that would be best.

MR MURDOCH: Look, there was a suggestion in the description that there was a discussion. Would that to you indicate that there was a telephone-----?-- Probably.

-----or a radio communication?-- Not being there but the normal context for that sort of entry, right, would be that, you know, we'd ring up the guy at the dam and say - and you'd issue the directive and what you would tell them when discuss strategy in that context means that we would say, we're sending you this directive now to open gate, you know, X to Y, over the next, you know, over the next - and because they like to sort of plan about what's happening, they want to get prepared, and we might say, look, we anticipate that over the next 12 hours of this shift we might have 10 gate movements, you know, and they're either going to happen all in a hurry or you probably expect one an hour and things like that and ultimately we're probably going to get up to, you know, a discharge of something like Y by the end of the shift. You might say by the way, there is - you know, we're thinking the situation may or may not change.

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So in the context of a discussion with the operator, it would be explaining to them, you know, pass this directive, how many

can you think, and that just sort of helps them to get their day organised and their shift organised and get into mind about - a mindset about, you know, how busy it is because it's also, you know, you want to know well, can I have a, you know, is it an opportunity for me to be asleep or they might be, you know, wanting to do a little - they might have a little bit of work that they can be doing if it's not going to be too busy.

1

The dam operators are persons who one would expect to have a knowledge and familiarity of the manual of operating procedures for flood mitigation at Wivenhoe Dam?-- No, not really. They're technical officers. They receive some broad training - sorry, they do in a sense that they receive some broad training and they're technical officers but look, you can, you know, get one of them in here and ask them but, like, we don't - we don't sort of talk in those sort of terms necessarily with them. This is really - their stuff is really about, you know, their primary focus is on opening and shutting the gates.

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So you issue them with what appear to be formal directives?-- Correct.

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And you have a discussion explaining the basis for the direction and what might be coming as the next step or steps, that's what you've said?-- Yes.

All right. But you don't, in that, take them into your confidence in relation to which of the strategies under the manual you are applying or may be likely to apply?-- Not as - we wouldn't talk - we won't talk about it in - we wouldn't have talked about it - because it doesn't really mean anything to them. We would talk about it in terms of - the way we would talk about it is in terms of - we'd talk about the objectives that we're currently managing to. So we would be telling them, look, we're trying to keep this bridge open but we think that - but, you know, we're now talking - we talk to them in terms of how we talk in the situation reports. We map it into their language, in terms of something that's meaningful to them.

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Wouldn't it be simpler to tell them what strategy under the manual you're applying at any given time?-- Why would that be? What they're interested in is - their focus is on what gates they're opening. The useful information to them is how much work am I going to have in the next 12 hours and what am I trying to do. That's got to be their focus.

Nothing further. Thank you.

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COMMISSIONER: Thank you. I think Mr Sullivan, if you would go next?

MR SULLIVAN: Thank you. Might the witness be shown Exhibit 1,054, please. Just have a look at this, Mr Ruffini. We have the wide shot and can you identify what this appears

to be to you?-- This is part of the gate operating spreadsheet - part of the operational spreadsheet that we use in the Flood Operations Centre.

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And is that an important tool for you whilst you were on-shift in a flood event?-- This is - in essence, it's the primary place where we do all our work, in terms of taking the information out of the model and doing all our, you know, doing all our examination of various strategies happens within this spreadsheet - sorry, various operational release rates to meet the strategies happens in this spreadsheet.

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Can we have a look, if I draw your attention to the top in the heading section there is "Somerset" and there's "Wivenhoe"?-- Yes.

I'd like to draw your attention to Wivenhoe, in particular. Towards the right of that section do you see there's two green subheadings "Cal lake level" and "Rec gauge boards". Could you just explain what those two columns are?-- The calculated lake level, that's the lake level that's calculated from the simulation model. In other words, we put in the information off the rainfall run-off models that have been calculated in the flood operations system. They are imported into this model. We then put in all the gate operating rules. So we put in what's happened to date and we put in, if you like, the estimated - or the release strategy - the release rates that we believe are needed to happen after what we call a time now into this spreadsheet. Now, a water balance is done through these - and it also has the same information for Somerset, so Somerset releasing into Wivenhoe. So therefore the calculated lake level is the, if you like, is the - when you do that Maths, when you do those water balance sums, water in, water out, that gives you that result in lake level.

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Thank you. Now, looking at the second sub-heading, "Rec gauge boards"?-- That is the - physically that is what came off the manually read gauge board that the staff at the dam read.

And how does that information get to the Flood Centre?-- It's faxed and emailed into the Flood Centre.

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And then if we have a look, for instance, on that very - on the first page, you'll see that there's a black entry for 2 January 2011 at 9 o'clock?-- Yes.

And 67.10. Now, generally who puts that in?-- It would generally be the engineer on duty or it could be one of the flood officer assistance that is on duty that may do that.

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Was it your practice generally, to put it in yourself?-- Generally I put it in myself, yes.

Can I ask you - or could I ask the Exhibit now to go to the period which shows 8 January at 8 o'clock. Now, it may be a bit difficult for you just to look at that without a ruler?-- I can see it, yes.



One way is at 8 o'clock?-- I've got a bit of paper.

1

You can see that halfway between Somerset and in the Wivenhoe there's a number of increments?-- Yes.

Eight o'clock meets number 16 there or there's a 16 or is it 18?-- Eighteen, yes.

And 7 o'clock, 17 and 16?-- Yes.

10

So if that assists you looking across, can you tell me at least if we can go from about 5 o'clock through to 7 o'clock, just look at the different figures in the rec gauge boards there?-- Yes. From five, 68.45, 68.46, 68.48 and then at 8 o'clock, 68.42.

Following your practice, is it likely that you put those figures into this document?-- Yes, it is.

And was-----?-- Well, up until - definitely up until I went off-shift and then probably oncoming - Rob probably did the 8 o'clock one.

20

Now, in terms of a move between W1 and W2 or W3, is lake height in Wivenhoe important?-- Yes, it is.

Was that a matter you appreciated on the morning of the 8th of January 2011 whilst you were on-shift?-- Yes, it is.

COMMISSIONER: How often do you get those lake heights when they come in, by fax or email, whichever it is?-- Generally we request them on the hour. We also have an automatic gauge that automatically records height. So there's the automatic - which is the issue we had a lot of problems with in the first hearings about that failing. So we know what the movement is but generally - particularly when we're busy they'll be on the hour. If it gets really busy we can ask for them more frequent or if it's slower less frequent.

30

Does the spreadsheet accommodate the automatic gauge, accepting you had problems with it?-- Normally they'll be the same, normally they'll be the same, and this is just looking at the confirmation - this is just looking for confirmation. The issue with the gauge, where it is, is that the gauge is also used for water supply, so it's got quite a large travel, in terms of the thing, so you do - you just - and if the calibration shifts or changes you want to know. So that's why it's just general practice that, you know, while the accuracy of those gauges is within probably normal instrumental accuracy, we do like to always have a manual confirmed to make sure the information is correct.

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50

All right. But in the ordinary course did you have a column that said "Automatic gauge" or not?-- That's just there in the system and we can look it up.

Okay. Thank you?-- So that cold system - all the rainfall data and that, that's there and you can just look at that

automatically. Yes.

1

All right. Thank you.

MR SULLIVAN: Now, I appreciate that you've given evidence that there was a spreadsheet you referred to previously?-- Yes.

Was that in addition to this operational document?-- No. This is probably - this is at a later time but this is the same sort of thing but just at a different period of time. It's obviously a later period of time, yes.

10

So when you talked about your recollection about the transition or an appreciation of the transition, was the dam height important in relation to that aspect?-- Yes.

And can I ask now that if we take the witness to the Flood Report at appendix 2, containing the Situation Report at page 13, please. Could I ask you to look at page 14 at the top under the heading "Wivenhoe full supply levels to 7 metres AHD". Can you identify in there whether you made reference to the lake height at Wivenhoe?-- Yes.

20

And what were your observations in this report, Situation Report?-- 68.45 at 6 o'clock.

And what was happening to the lake, in terms of this level at that stage?-- It was rising steadily.

30

Now, in terms of the transition between W1 and either W2 or 3, what's the importance of that information?-- The importance of that information is that you shift - at the point when you go over 68.5, the emphasis on your primary, you know, your emphasis shifts to consideration of urban flooding.

COMMISSIONER: Mr Sullivan, I'm sorry I don't want to cut you off if you're in the middle of a train of things-----

MR SULLIVAN: Sorry, your Honour.

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COMMISSIONER: -----but I'm just thinking about the morning break but if you want to-----

MR SULLIVAN: I'm happy to take the morning break.

COMMISSIONER: Okay. Twenty to by that clock.

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THE COMMISSION ADJOURNED AT 11.20 A.M.

THE COMMISSION RESUMED AT 11.41 P.M.

1

JOHN LAWRENCE RUFFINI, CONTINUING:

COMMISSIONER: Yes, O'Sullivan.

10

MR O'SULLIVAN: Thank you, Commissioner. If we could get back on the screen, please, the flood reports and we are at appendix C, page 14. Thank you. Before the break, Mr Ruffini, I had taken you to the top of that page and under the heading "Wivenhoe Full Supply Level At 67 Metres AHD" and we were looking at those two paragraphs. Do you recall that?-- Yes, I do.

20

I was asking you and you identified that there was a recording about the Wivenhoe level?-- That's correct.

And there was a discussion about what was happening in relation to that level?-- That's right. That's correct.

I believe I had asked you the question about your recollection at that time, what that meant to you in terms of leaving W1, going to a W2 or 3?-- Correct.

30

And again what was your understanding? What's your recollection?-- My recollection is that, you know, we're hitting a 68.5 and we are transitioning and we were moving to the next strategy at that point.

Sorry, I interrupted you there. Now, 68.5 in the manual, is there an option not to leave W1 for when you reach 68.5 or is that something which is mandatory, imposed upon you in effect?-- No, you have to.

40

I think you identify when there's a changeover you gave some evidence that you spoke to Mr Ayre?-- Correct.

Is it correct that you gave evidence and spoke to him about the dam height in relation to the Wivenhoe Dam? Was that your recollection?-- That's my recollection. As I said in evidence, this is what I can exactly recall and the stuff that when I have reviewed material, I had a thing, that's my best understanding of it.

50

Let's go to it. And thank you for that. In relation to what you actually recall, the positive recollection, do you positively recollect speaking to him about the Wivenhoe Dam level?-- Yes, definitely about the dam level and I have a recollection and we would have - definitely would have gone through the spreadsheet, yes.

The situation report we are looking at, do you have a recollection, a positive recollection, that you went through the situation report itself?-- Yes. Yes, for sure.

1

Quite apart from your positive recollection, what was your practice at a changeover?-- I do it every time. There's not a time I wouldn't do that.

Are you aware of Mr Ayre's background?-- Yes, I am.

10

What level of experience would you say, to your knowledge, he has in relation to managing dams?-- Rob has a vast professional experience in managing dams and both he and myself were intimately involved in a massive - in a large comprehensive study in the early nineties which effectively set the - set these rules. We did all the modelling to establish the rules and established the risk profiles as part of a large modelling exercise.

When did that occur?-- That occurred in the early nineties. It was a three year study - three, four year study.

20

In that sense is it necessary - well, I won't ask that question. Can we go to the dam operation manual then, please. Exhibit 21. Can I ask you to go to page 27, please. Before we look at the document, strategy W2, is this a fair assessment: that it's a strategy which deals with a situation where there is significant downstream flows in the Bremer and the Lockyer?-- Yes.

30

Where the lake level's over 68.5 and below 74?-- That's correct, yes.

What W2 is essentially about is tapering your releases from the dam so that they don't exceed what is the predicted natural peak at Lowood and at Moggill?-- That's correct.

If one has a predicted natural peak of a thousand CUMECS at Lowood and Moggill and the release is 500, you can taper the release with the real release which is going on contemporaneously but not to exceed that thousand CUMEC level; is that correct?-- That's correct, yep.

40

There was reference - I think the Commissioner asked you this - that a W2 situation wasn't in play here, was it?-- That's correct, yes.

Not when you were ending your shift at least?-- That's right, yes.

50

I think you have identified that there was an issue about the draining the dam, the seven day period, but the predicted peak, natural peak at Lowood, was about 530 CUMECS?-- That's correct. It was around that mark. That's correct at that stage, yes.

At that stage eight to 900 CUMECS was already being released from the Wivenhoe Dam?-- Correct.

So in that respect W2 simply wasn't an option at that stage, was it, because you couldn't achieve W2 because of the releases from the dam?-- That's right, yes.

No further questions. Thank you, Commissioner.

COMMISSIONER: Mr Burns, would you have any questions?

MR BURNS: Mr Ruffini, situation reports are typically prepared towards the end of a shift?-- That's correct. Unless it's very, very busy and there was a lot happening, then there would be more frequent ones, yes.

Are you familiar with the practice, in the case of the preparation of a situation reports, of using the previous one as a bit of a template?-- I guess that may have - yes, that happens. That would happen, yes.

When you come on a shift you read-----?-- You read the old one and you may cut and paste bits and pieces, yes.

Could you look at appendix E, page 23. That is the flood report. Have you got it there? It's situation report 13?-- Yes.

Page 24 in fact. I beg your pardon. Do you see that?-- Yep.

The paragraph commencing, "The objective for dam operations". Do you see there?-- Yes.

You were taken to that by Mr Rangiah and asked about the language employed there?-- Yes. That's on - sorry, what date was that again?

The 24th?-- Sorry, scroll up a bit, sorry. Yep. Okay, yep. Go on.

Can you go to the situation report 12 which is 9 o'clock on the Sunday evening, and in particular page 21, and look at the last paragraph?-- Yes. Yep.

You were not the author of that report, were you?-- Scroll down a bit further. No.

Mr Malone?-- Yeah, too, I think it's - yep.

Going back to that, would you have read this report when you came on shift?-- That was - sorry. Scroll up. Was that the immediate one before it or-----

Yes?-- Yeah, I - yes, if he was handing over I probably would have, yeah. I would have. If it was the handover one, yes.

Look at the bottom of the page, page 21. Do you see that first sentence there, "The objective"?-- Yes.

1

Is it possible that you've copied and pasted from that report to put into your report situation, report 13?-- It would be possible, yes, I guess.

Can you recall doing that?-- Not off the top of my head.

Did I understand your evidence to be that you have been a duty engineer since 1996?-- Correct.

10

So some fifteen years? Over fifteen years?-- Yes.

You have mentioned in your evidence some prior flood events, in particular towards the end of 2010?-- Yes.

So far as of the Wivenhoe Dam is concerned, over that 15 or so years, how many times would you estimate that you went to a W2 or W3 strategy?-- Oh, definitely in '99, which is quite a big flood. That was in play. The flood in October was quite a big flood, would have gone over that threshold.

20

COMMISSIONER: When you say October, you mean October 2010?-- October. Yeah, yeah. Look, I would have to look it up but a few, but not many.

MR O'SULLIVAN: In addition, do I understand from your statement and evidence given at this inquiry earlier that there are simulated exercises that are part of manual reviews or training?-- That's correct, yes.

30

Is that the case?-- Yes.

Does that involve all duty engineers?-- Usually does, yeah.

That's on an annual basis?-- Oh, I think - it's meant to be on an annual basis but I think the application of that has been a little bit patchy, yeah.

40

When it has occurred, do you recall there being simulations concerning W2 or W3?-- Yeah, but just recognising that these are a little bit different to the way - or the W3, that this one is slightly different to the earlier versions in the manual but having said that, there were - if you like, a lot of those simulated events were - the biggerish - like the '99 event or a '74 event style one, so that would take it into that context but there wasn't one that - I mean, there was never one that took us into the W4 territory, yeah.

50

Perhaps I can ask the question in a different way?-- Yes.

Were there simulations where you were required, as the person managing the water in the dam, to focus on urban inundation as a primary consideration?-- Yes.

Was that a feature of each review that was done or was that part of your training?-- I think that would be a common element in most of those but, yeah, because you - there is no point if you don't really get up, but I would have to go and exactly - the answer is "yes" but I can't specifically say how many, what or-----

But over the fifteen year period-----?-- Yes.

10

-----you have been involved, you have said it's not been regular or it's been a bit patchy?-- That's right.

But it's occurred a number of times?-- And the other thing is in the - in the big study that we did in '94, that was primarily the major purpose of doing that in that we - you know, we did a whole range of scenarios, design storm scenarios that looked retesting the rules as they were then. Part of that study was also, you know, writing up - there were the Hegerty Weeks program to simulate it. That was the dam operations that were written and that was rewritten and formulated into a part of a - an automated program. So all of that was tested. In that study I did a lot of work in terms of getting a lot of familiarity with various operating rules and that, yeah.

20

Sure, but in terms of simulations where duty engineers would be run through their paces and particular strategies-----?-- Yes.

30

-----that occurred a number of times?-- Yes.

Over the fifteen year period?-- Yes.

Including where the exercise involved protection against urban inundation as a primary consideration?-- Yes.

Alright. In terms of the contemporary flood storage at the Wivenhoe, that's compartmentalised, isn't it, in the sense of it's water above a certain level in the dam that's available for flood mitigation?-- That's right. You know, in both Wivenhoe and Somerset they both have a defined flood storage component.

40

Let's just stick with Wivenhoe. I will see if I can step you through this. So at 67 metres, everything below that is water supply?-- Correct.

Between 67 and 68.5, that's in effect a water compartment reserved for W1 strategy?-- Yes.

50

Do you agree with that?-- Yes.

Would you agree that there's approximately 170,000 megalitres in the W1 compartment?-- Something like that, yes.

Then above that, once you get past 68.5, between that level and the 74 there's another 742,000 megalitres in that compartment?-- Yes.

1

Which is reserved for W2 or W3 mitigation?-- Correct, yes.

Or strategy?-- Yes.

And then above that again we get to W4, but I just want to you concentrate on the two lower levels?-- Yep.

10

So combined we have something like 910,000 megalitres and the bottom portion of which is 170,000 megalitres?-- Correct.

Is that right?-- Yep.

Could I take you to Exhibit 23, which is the flood event log. The entry I want to take you to - you were asked some questions about that before by Mr Callaghan. It's the 3.30 p.m. conference on Saturday, the 8th of January - sorry, I beg your pardon, Sunday, the 9th of January, 3.30 p.m.?-- Should I be getting something up on the screen?

20

It will come. Do you see the entry there that Mr Callaghan took you to?-- Yes.

3.30 p.m., duty engineer conference. You were in attendance?-- Correct.

You were taken to the second sentence, amongst others, but some time was spent on the second sentence?-- Yes.

30

At this stage operating at the top end of W1 and the bottom end of W2, alright?-- Yes.

I would like you just to focus on what follows: Storing approximately 300,000 megalitres at present above Wivenhoe?-- Yes.

We are talking about the Wivenhoe Dam I assume?-- Yeah, that would be correct. Yeah, I assume so, yeah.

40

Would I be correct in assuming that "above Wivenhoe" means above 67 metres?-- Yes, that would - and you would easily look at the lake level there and confirm that.

I know you don't have a perfect recollection of the conference, I am just seeing whether you can assist as to what may have been said and what the entry means?-- Yep.

50

"Above Wivenhoe", it would be safe to assume that that's above the full supply level?-- That seems fair, yeah.

There's 300,000 megalitres above. Would you agree that puts you, just on that observation alone into W2 or W3 territory in terms of compartments?-- Correct, yes.



Then continue on with an additional 500,000 megalitres expected to flow into the dams from rainfall on the ground. Alright?-- Yes.

1

So this is rain that has fallen?-- Mmm.

We have heard a lot of evidence about the calculation of runoff rates and saturation levels and factors of that nature but this is an estimation, is it, by your understanding, of what the modelling would show in terms of volume of water to be expected to run into the dam?-- Yes, that would be correct.

10

Is that right?-- Yes.

If that modelling is all accurate, you will have 800,000 megalitres, less what's released?-- That's correct.

Is that right?-- Yes.

20

It's talking about 300,000 in the dam at present, you are already in W2 or W3 territory?-- Yes.

But at the bottom end of that?-- Yes.

Do you agree with that?-- Yes. Oh, yes.

You've got 742,000 megalitres to play with above 170,000 megalitres?-- Yes.

30

And then another 500,000 expected?-- Into the dam. So that would be into both dams.

And then you would need to look at release rates and whatnot to work out what the volume would be after that had all come in?-- And the flood storage in Somerset Dam.

Certainly. I know I am ignoring that aspect?-- Yes.

But just purely concentrating on the Wivenhoe here for the moment. Have I got any of that wrong?-- No, it seems all right.

40

Then the note continues to consider the rainfall system and it talks about what may be coming but it hasn't fallen to the ground?-- Yeah, that's right.

Is that right?-- Yes. Yes.

Thank you.

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COMMISSIONER: Mr O'Donnell.

MR O'DONNELL: Just on that note while you have got it there, when you enter that meeting at 3.30, did you know what was the then level of Wivenhoe Dam?-- At that point in the meeting? Because I was coming - I wasn't on duty, I was coming in there, probably - I'm not sure whether I refreshed myself with the details or not when I got in there or whether they were mentioned, so, you know, I probably wasn't current when I first walked in there if that's what you're saying.

1

During the meeting did you become aware of what was the level?-- During the meeting? I would have thought that it would have been mentioned during the meeting, yeah, but I can't recall.

10

The reference you just saw to 300,000 megalitres, that of itself would tell you the level was over 68.5, wouldn't it?-- Yes, it would.

Because you think of 67 to 68.5 as temporary storage of about 190,000 megalitres?-- That's correct.

20

So you are well above that?-- Yes.

So in your mind that would trigger a recognition that you're well above W1?-- I would expect so, yes.

Did you have an understanding during the meeting of what strategy was in use in managing the dam at that time?-- My understanding at that point was that we were focussing on the urban inundation. The urban inundation objectives were in play.

30

Do you have a recollection that that was your understanding during the meeting?-- Yes.

Can you recall what lead to that understanding?-- As I said, I haven't - the - getting something else. Could you repeat that question, sorry?

Do you have a recollection of what was your understanding during the meeting as to what strategy was being followed at that time in the management of Wivenhoe?-- I believe it was W3, yes. We were managing for the downstream movement objectives, yeah.

40

You can actually recall that being your understanding at the time?-- Right now, today, twelve months on, do I have an exact recollection, you know, that we would, you know - I'm - I couldn't say definitively that - I couldn't say - like, if I look at this information and I look at this thing, then yes, I can sort of say I can, you know - I recall, like, the first time I looked at this in general I believe this stuff's right, in terms of that context, but I - do I definitively say, you know, I can think W3? In my mind at the moment, no, but, like, if I look at that and I look at the information around it, then I would say yes.

50

So that's, you indicate, the dam's been managing in accordance with W3?-- Yes. 1

Can I suggest that's for a couple of reasons. One, the reference that 300,000 megalitres of the dam flood storage has already been used up?-- That's correct, yes.

A second is it discusses the risk of flooding in lower Brisbane?-- Correct. 10

Suggesting that a major consideration is risk of urban inundation?-- Mmm.

The third is the - do you see the second last sentence commencing, "If required, releases from Wivenhoe Dam will be reduced to contain the flood in Brisbane at 1,600 CUMECS and 3,000 CUMECS in lower Brisbane ." Now, the Commissioner said to you why isn't that consistent with W1? Doesn't that sentence indicate that the strategy is to constrain releases from the dam so as not to produce a greater flow in Brisbane than 3,000 CUMECS?-- That's correct. 20

In other words, it's constraining the flow - releases from the dam by reference to the impact on the urban area?-- That's correct, yes.

If one was operating in W1, your primary consideration is the effect on rural?-- That's right, yes.

Downstream of the dam, not impact on urban areas at all?-- That's right, yes. 30

Doesn't that suggest to you that that's a clear reference to a primary consideration of avoiding urban inundation?-- Yes, it does.

I have finished with that flood log.

COMMISSIONER: Mr Ruffini, just going back on that, if you were in W1 and you were approaching the upper limit of 1,900 CUMECS, presumably you would think about downstream impact in any event, wouldn't you?-- Would you change - are you saying would we change - it's just that there's some physical constraints about whether you'd - because it's just not about the release rate, it's also about how wet the catchment is below it. So the considerations - the considerations - urban - there's this kind of perception that the only thing you worry about is that release rate and that release rate is the sole cause of flooding in Brisbane but part of the philosophy of operating is that you really - when you have a saturated catchment like this, you really want to - you really want to keep your releases as low as possible if you think there's going to be - to emptying your flood storage within a seven day drain if you want to stop the chance of urban flooding downstream. The closer - the higher you make those releases to that three and a half thousand urban limit the more likely you are to get - the less rain you will need in a storm downstream to tip it over and cause urban impacts. So in that 40 50

you don't necessarily, in these high strategies, be wanting to be releasing up to the maximum of what a particular release rate would be.

1

Yes, I understand that?-- Yeah.

And I accept that logic?-- Okay.

I am just suggesting to you that if you were in W1 you would still be thinking about those things surely, what a higher release rate would do?-- You may be thinking about them, yes, but whether you are constrained to operate to do anything about it is - and it's also quite - it would be quite an unusual circumstance I think, that you would get that; that you would actually be - because if you are actually having to release it - because remember it's a seven day drain. So if you are getting into a situation where you are receiving a seven day drain, which means you must - to release it, then actually having to go up on to that is think - usually you probably only - you are only going to get that sort of thing when you are probably transitioning to a bigger flood. I think it will be transitioning through to a bigger flood. It's hard to see because it's such a big volume and if you take that discharge rate, say seven days, at sort of - at 2,000 is a large volume and it's probably - it will go over those - it will go over that flood limit from a W - for that W1 limit. So it's unlikely that you are going to get that other than a transitioning through to a larger event.

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Alright. Thank you. I understand.

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MR O'DONNELL: The meeting of the four flood engineers - sorry, I'll start again. Some of the other witnesses have referred to a W1 flood event as a relatively small flood?-- That's right.

Is that how flood engineers think about things?-- That's correct. The strategies are designed to transition from one, to the other, to the other, as a continuum. And the reality, if you end up in a W1 flood, the flood just doesn't grow to a bigger flood.

10

What was the situation you were facing at 3.30 on the Sunday afternoon? Is that what you would regard as a flood engineer as a small flood?-- It wasn't a small flood. It was building, and we had forecasts for more rainfall, so we knew we were on a building flood still.

You've got, I think, roughly 900,000 megalitres of floor storage capacity within Wivenhoe?-- Correct.

20

A third of that had been used up?-- Correct.

So you've only got two-thirds to play with if the situation gets worse?-- That's right, yes.

Is that what you regard as just a small flood?-- No. As I said, that's a - we've got a significant flood on.

It's the situation, isn't it, where your primary consideration is what's going to be the urban impact of this current flood event?-- That's correct, yes.

30

Was that the thrust of the meeting on the Sunday afternoon?-- Yes, that's what we were saying.

And you have an actual recollection that was the primary consideration discussed in the meeting; the urban impact of this flood event?-- That's why - in essence, that's because that situation was developing and happening. That's why the meeting was, you know - the intent of the meeting. As I said, I can't recall direct exact words and things like that, but yeah, that's a good representation of the need for the meeting.

40

Thank you. I've finished with that log entry for the moment, so you can close that up, thank you. Can I go back in time to the Friday night/Saturday morning shift. I know you've already been asked a number of questions about this, but I've got a couple of things I wanted to explore with you. You gave an answer earlier that when the level crosses 68.5, you have to transition; the flood engineer has no choice?-- Correct.

50

Now, do you get that from the manual?-- It's in the manual, yes, but I have those - that sort of figures in my head, yes.

Can I show you the manual?-- Yes, all right.

Can I take you directly to page 26?-- Yes.

1

The last sentence on page 26?-- "If the level reaches 68.5 AHD in Wivenhoe Dam will switch to W2 or 3 as appropriate", yes.

Did you understand that during the January event as the manual compelling a transition to a higher strategy if the water level actually crosses 68.5?-- Yes.

In other words, it's not an election by the flood engineer. The manual says if the water crosses that level-----?-- You're in it.

10

-----automatically transition to the higher strategy?-- Yes.

You said also that you had had that experience several times before?-- That's correct, yes.

You said the water level had crossed 68.5 in the '99 flood event?-- That's right, yes.

20

You said the October 2010 flood event?-- Yes.

Can I suggest it also crossed during one of the December 2010 flood events. 31 December it reached 69.93?-- Yes.

Does that ring a bell?-- Yes, it's a reasonable - it wasn't big, but it was, you know, a sizeable event and in reality we had four events in a row before - including the 2011.

30

And you were a flood engineer involved in each of those events?-- Yes.

As was Mr Ayre?-- Yes.

Mr Malone and Mr Tibaldi were involved in the October and December 2010 flood events?-- That's correct, yes.

And you knew from those prior events that there was - it was obvious to you, wasn't it, during the January 2011 flood event if the water crosses 68.5, that's a significant event. There is an automatic transition to a higher strategy?-- That's correct, yes.

40

You recall now that being your thinking towards the end of your shift on that Friday night/Saturday morning?-- I think that would have been my thinking, yes.

You also said the practice we have been adopting was not to transition until we hit 68.5?-- That's right, yes.

50

So the practice was not for the flood engineer managing the event to make a decision in advance of the - a decision to transition to a higher strategy in advance of the water reaching the level, but to allow the water to reach the level where you get an automatic transition?-- Correct.

That practice had been employed in previous flood events, had

it?-- Yes, that's true.

1

The ones we've mentioned?-- Yes.

You said also that - I'm sorry. You said also in answering some other questions that during that shift you had recognised that when the transition occurred, that is, when the water level got to 68.5, W2 would be inapplicable?-- Correct.

Some questions were asked of you that the recognition that W2 would be inapplicable was - sort of a substantial exercise in working that out. Do you remember questions along those lines?-- Yes.

10

Could I explore that with you a little bit more?-- Sure.

Towards the end of your shift Wivenhoe is releasing about 890 CUMECS?-- Correct.

The downstream flows naturally occurring at Lowood and Mogill are well below that, aren't they?-- That's correct.

20

And you had that information available to you?-- Yes, I did.

In your operational-----?-- Spreadsheet.

-----spreadsheet?-- Mmm.

Which you were working on during your shift?-- Yes.

30

A simple comparison of the figures would tell you that W2 would be unavailable?-- That's correct.

Wouldn't it have just been obvious to you?-- I believe it would have been, yes.

You didn't have to do any complicated calculation or working out?-- No. No.

COMMISSIONER: Why would W2 actually be unavailable as opposed to not operating at that time? In other words, if you're releasing 890 from the Wivenhoe, and say 500 is coming out of the Lockyer, why can't you move to W2 and drop back to 500? I'm not asking whether it was a good idea; just what makes it impossible to do that?-- Because you wouldn't drain the dam in seven days.

40

So that's a practical reason. It does not follow though, does it, that it is impossible just because there's more coming out of the dam than there is out of the Lockyer at any given time, for you to go to W2?-- In this particular case if you said could you transition to W2, then what that - to do that you would have to facilitate a ramp down. You'd actually have to ramp your releases down significantly. And when you ramp your releases down and then you go - and then you look at the requirement peak lake level, you know, drain in seven days from the peak, which you've got to do, you would exceed that threshold.

50

Look, it's not an automatic unavailability. You have to think about the considerations of whether it's a good idea or not; wouldn't that be the case?-- If it's going to - if it's going to violate the drain, then you know you haven't got enough flow in Lockyer going down to actually - for it to be a viable strategy. It doesn't mean that in, say, 18 hours' time if you've got a massive storm over the Lockyer that pushed that discharge up and you got - you know, you had a reduced flow in Wivenhoe going down, that that balance mightn't have changed back.

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Yes. All right. What you're saying to me suggests that you think about what the situation is, and because of the problems about draining down, you're not going to go to W2. But you think about it, don't you?-- Yeah, you do. Conceptually the way - I think the wording in some of the earlier manuals was better. But conceptually it was - what you want to do is you don't want to flood - you didn't want to flood people downstream prematurely. In other words, you didn't want - if you knew you were going to have a flood happening in the Lockyer, what you wanted to do was let that Lockyer Creek flow pass by. And so whatever that peak flow was going to come up to, you would let it happen. And then as that passed by, you would start to ramp up the releases in Wivenhoe Dam on the back of the floods not to exceed the peak of the naturally occurring Lockyer, so you didn't - you know, you didn't inundate people earlier. Because if you inundate people early, they have less time to prepare and do the things they need to do to get ready for flood, and you didn't want to make it - you know, the mitigation benefit is don't make it worse than the flood that would have occurred as resulting from the flow that came down Lockyer Creek. So you want to keep it at the level of the Lockyer Creek.

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I understand all of that. But presumably there's a reasoning process why you didn't go to W2. You don't just say that's the flow there; therefore I can't. You say that's the flow there, so what will that mean-----?-- That's the flow there, and then if I ramped it down and you - if you kind of crunched it down in terms of ramp the flows down, are you going to exceed that seven day, which is a function of every strategy. Like, it's a key element. A key element that you have to get that drain down in terms of that sort of thing. And the other consideration is what's happening with the rainfall. Is it - it would be different - you might think a little bit differently, like, if the rain stopped upstream of Wivenhoe and we thought there, then you might say the drain is going to be maybe eight days, but it's worth it to thing. But conceptually the fact you're already releasing at that level means you've already - you've taken those people out. And as a rule you don't - during a flood, you don't want to bring people in and out of floods. You don't want to - if you take a bridge out, you want to just keep it out. You don't want scenarios where things are coming in and out of water, because from a safety perspective that creates a lot of risk, and you don't want to - if possible, you'd like the event to build, hold, and drop. You don't want to be putting riverbanks in

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and out of water and pulsing them, because there is a risk of a lot of dam failure and things like that. So they are the constraints in terms of the release rates and change rates are all factored on doing that. Now, there are other kind of other practical reasons about why you really don't want to sort of jump into that space readily.

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Thanks for that.

MR O'DONNELL: Just to follow on the Commission's questions, from where you're sitting towards the end of your shift on that Saturday morning, from the information in front of you it was obvious that the releases then from Wivenhoe exceeded the peak flows downstream, wasn't it?-- Correct, yes.

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And it would have been obvious to you without doing any calculations that if you reduced the releases from Wivenhoe to come under the peak flows downstream, you couldn't complete the seven-day drain down?-- That's correct, yes.

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You wouldn't have to do any calculation; it would be obvious from the figures, wouldn't it?-- See it was - yeah, it was obvious, yes.

And you recognised that during your shift, didn't you?-- Yes.

That W2 was simply - the words of the manual are "appropriate". W2 was simply not appropriate in the situation then under management of the dam?-- That's right. There was an earlier run that Terry had done for Burtons - of Burtons Bridge keep-open option which is around that threshold, which demonstrated that that wasn't possible.

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And for an engineer of Mr Ayre's qualifications and experience in flood management of Wivenhoe, you would expect it would also be obvious to him?-- That's right, yes.

You wouldn't expect him to sit down and do calculations or do any complicated exercise; it's just obvious from the figures in front of him?-- I believe it is, yes.

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You said also that when the water level crosses to 68.5, our emphasis shifts to protecting urban inundation?-- Correct.

That was your thinking during the January flood event?-- That's right, yes.

And had been for some time?-- Yes.

Can you say whether - are you able to say whether that was also the thinking during the January flood event of the other three flood engineers?-- I believe it would be, yes.

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Based upon your dealings with them, your work with them?-- Yes.

It's one of the fundamentals of managing-----?-- And given the - it is. And given it was sharply in focus because of -

there was a lot of publicity about it during the October event as well, so it was sort of always there in the forefront and there were probably even - because there hadn't been flows for a long time, there was a lot of sensitivity around about urban flooding, yes.

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There was a lot of media publicity about people complaining about inundation following the October 2010 flood event, wasn't there?-- That's right.

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The Lord Mayor, I think of Brisbane, had a number of quite strident things to say in the press about that?-- That's correct, yes.

So have you had actual experience with Mr Ayre and the other flood engineers of talking about when the water crosses 68.5, our focus shifts primarily to urban inundation? Or had you as of the January 2011 flood event?-- Had we-----

Had actual-----?-- Yes.

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-----discussions-----?-- Yes.

-----with them up to the January 2011 flood event that your primary focus shifts to urban inundation?-- It was in our focus, yes.

Can we come to the situation when you came on shift on the Sunday evening at 7 p.m.?-- Yes.

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Can you identify what was the situation at that time, and then I'll be asking you what was your primary consideration in managing the dam?-- Is this Sunday at?

Sunday at 7 p.m. Do you want to take a moment and refresh yourself what was the situation, the lake level, inflows-----Sunday, 7 p.m.?

Yes, please?-- I'll just read the situation reports. Yes.

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Tell us what was the situation then?-- The situation then was that the lake - we're in W3. The lake level at Wivenhoe is at 68.7 and it's rising. We've had fair bit - we've got 5000 coming down the Brisbane River. The dam is rising reasonably quickly.

What do you mean, 5000 coming down the Brisbane River?-- It's 5000 - it says the upper Brisbane River, which is the section at the top of the dam to the - that means excluding releases from Somerset, basically.

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The inflows to Wivenhoe were about 5000 CUMECS?-- Yeah, the inflows into Wivenhoe were 5000.

Which are greater than the releases at that stage?-- That's right, yes.

So the level is rising?-- That's correct, yes. It's

indicating the bridges downstream are impacted and that the Fernvale-Mt Crosby Bridge will be taken out in the next 24 hours strongly. And I guess the other important bit is it's just flagging that the following day, Monday, there's a fair bit of rain - there's going to be a fair bit of rain around to look at.

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You had had Terry Malone's email, I think, about 11 p.m. on the - 11 a.m. on the Sunday?-- That's right.

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Putting volume figures on the three-day forecast?-- That's correct, yes.

You said a moment ago when you came on duty you understood it was W3 that was in use?-- Sorry?

You said a moment ago - you referred to W3?-- Yes.

What was your understanding as to what strategy was being used for managing the dam when you came on duty?-- With these sort of inflows and the lake level where it is, we're managing - at that stage we were managing for the urban impacts. In other words, you're trying to use as much as we can of the flood storage, but - and release as much water to get that drain done within seven days.

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Do you have an actual recollection that was your thinking during that shift?-- It is, because that's what I did in the spreadsheets. You can sort of have a look at those, and you can see that that's - they are the things we were playing with about trying to get rid of the flood storage, but also balance off this issue that we had, that we had a saturated catchment downstream, so we didn't want to - you know, we wanted move in a pretty structured way not to have this chance with this rain that's coming down to trigger unnecessary flooding.

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Did you have an appreciation when you began that shift that this was not a small flood event; this is a quite substantial flood event?-- Yes. This was getting big. The flood at this point was getting big. I had had that experience in the '99 flood, so it's - at this stage it's not as big as the '99, but certainly I knew we - in '99 we had the benefit of the dam being somewhat drawn down at the start of the event, so we knew we were in - we knew we were in a really significant event at this point in time.

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Was your prior primary consideration at the start of this shift protecting against interruption to rural life just downstream of the dam?-- No.

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Or was it protecting against urban inundation?-- Urban.

Quite clear about that?-- Yes.

And you swear that's true?-- Yes.

Thank you. Did you have an appreciation as to - you said before W3. Did you have an appreciation that at that time the

releases from Wivenhoe made the W2 strategy inappropriate?--  
Yes, I believe I would have.

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Based upon what?-- Based upon the fact that if they weren't,  
we should have been shutting down at that stage and reducing  
them, and we weren't doing that.

If W2 was in use, you would have to constrain the flows out of  
Wivenhoe?-- That's right.

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To be below the naturally occurring peaks at Lowood and  
Mogill, wouldn't you?-- You would, yes.

No attention was given to that, was it, during your shift?--  
No.

There had been no discussion of that in the 3.30 p.m.  
engineers' conference?-- No.

It just wasn't in play, was it?-- There was no discussion  
about - there was no discussion about that, no.

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It just wasn't in play, was it?-- No.

It was obviously a W3 event, wasn't it?-- Yes.

One of the complaints made is that on a handover, no one tells  
the incoming flood engineer, "This is a W3 event." Now, I  
think you've said, or other witnesses have said, that's not  
normally discussed at a handover. Would it be fair to say  
that to an experienced flood engineer, the situation was just  
obvious?-- Yeah. At this stage it's very obvious what we're  
doing. We're managing for that downstream impact, and the  
focus and concentration then is on balancing off - balancing  
off those risks.

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Flood engineers don't just sit around talking about things  
that are obvious to them. They talk about vital information  
such as release rates, inflows to the dam, lake levels, and  
forecast rainfall?-- That's correct. But from a process point  
of view because it's such a dead easy thing to do, that it's  
silly it wasn't done, yeah.

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Can I take you to the situation report that issues about  
9 p.m. on the Sunday evening. Have you got the flood report  
there? I think you'll find it at page 21?-- This is the  
9 p.m. one?

That's right?-- Yes.

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Sunday evening, 9 p.m.?-- Yes.

So you're on duty?-- Yes.

This report is actually written by Malone, isn't it?--  
Probably is, yes.

I take it you would have seen it at the time?-- Yes.

Do you see below the heading, "Wivenhoe Dam, full supply level 67", the second paragraph, "The objective for dam operations will be to minimise the impact of urban flooding", and so on, and, "At this stage releases will be kept below 3500 CUMECS", and so on?-- Yes.

I think you were taken to the same wording that appears in the 1 a.m. the following morning-----?-- Correct, yes.

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-----situation report. It was put to you that essentially that was the strategy that was adopted halfway through the shift and-----?-- No, that's incorrect.

-----as I took down your answer, you said, "We had been doing minimising impact of urban flooding for quite some time"?-- That's right, yes.

For how long?-- For that shift, it was on for the whole shift, yes. But we'd been doing it since we transitioned into W3.

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On your understanding at that time, when had that occurred?-- That occurred on the Saturday morning.

When the water level crossed 68.5?-- 68.5.

You talk about the - close that up. Talk about the flood report for a moment. You were asked some questions about your role in the preparation of the flood report, and I want to go over that again. Part of your evidence, as I took it down, was that Mr Tibaldi wrote a number of the sections about what strategies were in use, and, when his draft was at a mature stage, provided it to you. You read it. You did some independent checking of it by reference to records in the Flood Operations Centre?-- That's right, yes.

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And by reference to your own recollections?-- That's right, yes.

And you reported back to him that it matched your recollection and looked reasonable?-- Yes. That I was happy with what was there, yes.

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The flood report says that the W3 strategy was used in the management of the dam over that weekend from the Saturday morning at 8 a.m. for the balance of the weekend. What's implicit in some of the questions put to you is that that's not true. The flood engineers have in fact only used W1. After the event finished, they made up the story that they had used W3 management of the dam. Can you respond to that suggestion?-- That's incorrect.

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What's your belief?-- I believe that we were in W3 from that morning. We didn't manufacture any story. We did our best to produce an accurate and honest document, and I believe that the process that we went through was a fair process to get to that assessment.

And do you believe that the flood report is correct?-- Yes.

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That the flood engineers actually used W3?-- Yes, I do.

Over that with you?-- Yes, I do.

Would you be a party to a flood report which asserted a strategy had been used, knowing it had not been used?-- No, I would not.

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So do you stand by the flood report today-----?-- I stand by the flood report.

-----as an accurate recollection of what actually occurred during that flood-----?-- Yes, I do.

Thank you, Commissioner.

COMMISSIONER: Mr Ambrose?

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MR AMBROSE: Mr Ruffini, I act for Sun Water and Mr Robert Ayre. In the preparation of the March report, is it fair to say that you took the approach that it was Seqwater's report moreso than DERM's?-- It's clearly under the requirements of the manual. It is Seqwater's report, yes.

You had other duties to attend to on behalf of DERM?-- That's correct.

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Your involvement in the preparation of the March report wasn't anywhere near as detailed as that undertaken by the other three?-- No, and nothing like my involvement in other reports that I've done previously for flood operations.

You agree that you did review sections, that was done at the Flood Operations Centre?-- Yes.

And that was done after a very substantial draft had been prepared and you - and perhaps others at the same time, perhaps not, perhaps just you and Tibaldi were in the Flood Operations Centre at your monitors and reviewing material?-- That's correct. Yes.

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Do you have a recollection of being in the Flood Operations Centre in the course of reviewing a draft or any part thereof with Mr Ayre, for a start?-- There would have been occasions perhaps where-----

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But you don't have a clear and specific recollection?-- No, but there - I'm sure, you know, I'm sure there were occasions when - because there were a number of monitors that, you know, I'm sure there were probably occasions when all of us were in there or some of us but I don't - not specific, no.

And if I were to put to you that you looked at a particular document, would you think now, looking back, would you be able

to say yes, I did look at that document at that time, reviewing the draft of the March report?-- I wouldn't remember those particulars. The report would have been continually updated. It was just, as I guess, a live digital one so I wouldn't - like I wouldn't - no.

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You were referred to, and perhaps you can be shown again, Exhibit 1,052?-- Which one was that?

It was the strategy summary spreadsheet?-- Yes. Okay. Yes.

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We've seen from emails that you've been taken to as well?-- Yes.

That that document at least was in the system at the Flood Operations Centre?-- That's correct. I received it and potentially maybe even emailed it but as I said this morning I don't have - I didn't prepare it.

I understand that?-- Yes.

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I guess what I'm asking you is this: is it possible in the course of reviewing a section or part of a draft of the March report that you and others, other engineers in the Flood Operations Centre, were shown or you brought up that document on your monitors and discussed the fact that it was wrong in some respects?-- It may be possible.

Thank you.

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COMMISSIONER: Mr MacSporran?

MR MacSPORRAN: Thank you, Commissioner. Mr Ruffini, just a couple of things. In terms of the lake height, the lake level?-- Yes.

Is it correct to say that that's one of the most important pieces of data a flood engineer needs to manage the dam?-- Yes.

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And is it also the case to say that that data is close at hand when you're in the Flood Operations Centre?-- Yes, that's correct.

And it's regularly updated?-- Yes, it is.

It's a very simple matter to look at your operational spreadsheet that's open on your console and ascertain at any given point in time what the lake level is?-- Yes, it is.

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And in your case you confirmed for us that your practice was to manually enter into the spreadsheet that was open, the lake level as it was relayed to you?-- That's correct. Yes.

So you couldn't avoid knowing what the lake level was?-- No.

And knowing the requirements of the manual, you would know that once the lake level went over 68.5, you are required to be in the next strategy?-- Yes. That's correct.

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You can no longer be in W1?-- No. That's correct.

It's difficult for an engineer to believe he is still in W1 strategy if he also knows the lake level is over 68.5?-- Yes. That's correct.

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The two are totally inconsistent, aren't they?-- Yes, that's right.

And can you confirm for us that the lake level, and the event that we're talking about, crossed the 68.5 threshold shortly before 8 o'clock on the Saturday morning, the 8th of January?-- That's correct.

And remained above that level right through until the 17th of January at 6 p.m.?-- That's correct.

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So for the whole of that period you necessarily had to be in either strategy W3 or above?-- Correct.

At no stage was the lake brought down below 68.5 at any point during those two areas - two times?-- No, I wasn't.

So when you cross over that level, which happened at 8 o'clock just at the end of your shift on the morning of the 8th of January, the consideration then becomes whether you are in W2 or W3?-- Correct.

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And as the Commissioner established with you earlier, you do have to consider that question?-- That's correct. Yes.

But in considering that question you look, firstly, at what the naturally occurring flows are in the Lowood and Moggill?-- That's right. Yes.

Which is easily ascertainable by looking again at your open spreadsheet, operational spreadsheet on your console?-- Correct.

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You see the figures for those two flows are on the spreadsheet?-- Yes.

You also know from the same spreadsheet what your release rate from Wivenhoe is at the same time?-- Yes. That's correct.

And then you have to decide whether - the decision you have to make is whether you ramp back the releases if they are, in fact, above the naturally occurring peaks at Lowood and Moggill to be in W2?-- Correct.

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Or whether you let them go if they're beyond that level and had you in W3?-- That's right. Yes.

But if you're an experienced flood engineer that's a judgment



call you can make in almost an instant, isn't it, by looking at that spreadsheet?-- Yes.

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In this case your releases as at the end of your shift on the 8th were up around eight cumecs to 900 cumecs from Wivenhoe, weren't they?-- Correct.

You could see by the late level, which was just below 68.5, that it was going - rising steadily and inevitably going to cross over 68.5?-- That's right. Yes.

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You knew again the peak flows in Lowood and Moggill were of the order of five and seven or 800 cumecs respectively?-- Correct.

So again you really understood, didn't you, at that time that it was extremely unlikely that you would go from W1 to W2, as opposed to W1 or W3?-- That's right. Yes.

It wasn't something you had to brood over or discuss in detail, it's something you virtually knew by looking at your spreadsheet?-- Yes. That'd be right.

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And the size of the event you were dealing with, even at that early stage, was such that you couldn't realistically contemplate granting back the releases to be in W2?-- No, not with the rainfall forecast.

Not if you wanted to maintain your drain-down phase within seven days?-- That's correct.

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Which is a significant objective when you're operating the dam, as a flood mitigation dam?-- That's correct. Yes.

The water comes in, you store it, you release it at a rate that's going to allow you to drain it down to full supply level within seven days and you manage it within those parameters?-- That's right. Yes.

So once you get into W3, you then need to manage the flows, the release rates within W3?-- That's right. Yes.

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And if you, as a flood engineer, claim, as you do here in your official report that you are, in fact, in strategy W3, you are acknowledging to anyone who looks that you have the capacity at any time during that W3 strategy to release up to a maximum of 4,000 cumecs from Wivenhoe?-- Correct.

So to be in W3, as you claim to be, but releasing less than 4,000 cumecs, you know you need to justify why you're holding back the water?-- That's right. Yes.

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So you're raising the bar for yourselves, aren't you, by saying you're in W3 as opposed to W1?-- Correct.

Because what you did here was you went into W3 necessarily was imposed upon you as engineers but then you desperately tried to hold back the release rate to, firstly, keep open the

bridges downstream, being the two main ones the Fernvale and Mount Crosby Weir, and all the while endeavouring to protect or minimise urban inundation?-- That's correct. 1

At a point, which has been identified in the evidence, you could no longer keep open those bridges and they were inundated as you gradually ramped up the releases from Wivenhoe?-- That's right. Yes.

And then you continued, as required, bearing in mind the forecast and other relevant features of the event, to ramp up the releases to try and maintain that drain-down phase rather than cross into the much more serious W4 strategy?-- That's right. Yes. 10

And you tried so hard to maintain W3 that you sought the exercise of the discretion from the dam safety regulator, Mr Allen, late on the Sunday night to cross over into the W4 threshold, which was late level above 74, in the belief that it might only have been for a couple of hours and you'd still be able to contain the event if it didn't escalate?-- Yes, but the rain continued and we lost that opportunity. 20

So despite that attempt the rain did continue and you were forced into W4?-- That's right. Yes.

With the very serious consequences that flowed for the inundation of Brisbane?-- Correct.

But that's something that was forced upon you, despite your best endeavours to stay in W3 from 8 o'clock Saturday morning right through until 9 a.m. Tuesday morning?-- That's right. But it's also something that when the rules were designed, it was envisioned that under this sort of scenario this would happen. 30

Yes. I was going to come to that now if I could quickly. You've mentioned at several points in your evidence today the fact that you were part of an extended study, flood study, into the operation of the dam back in the early 90s?-- That's correct. 40

As part of that did you, with others, namely Mr Allen and Mr Ayre, produce a report in October 1994?-- That's right, and there was a stakeholder group of the various councils that were involved in that project. They were in on the project and they were also in on the discussions about the various subjectives and they received all these reports as well.

All right. Could I show you this document, please. Mr Ruffini, do we have here, firstly, the front page of the report which is dated October '94 and it's headed "Brisbane River and Pine River Flood Study Report Number 24A"?-- That is correct. 50

"Brisbane River System Hydraulic Model Report Volume 1"?-- Yes.

That's the front page of the-----?-- Yes. "Wivenhoe Dam Failure Analysis". Yes.

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It's quite a large report?-- That's right.

That's the front page?-- Full volume report.

The second page gives the volume 1 main report heading and the authors being yourself, Mr Ayre and Mr Allen?-- Yes, and these were externally reviewed reports by a number of parties.

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And then do we have the last page of this compilation is simply an extract from the report, which is table 3.1, headed "Wivenhoe Dam design flood estimates, storm centred over Brisbane River catchment above Wivenhoe Dam"?-- That's correct. Yes.

Now, can you just explain if you would briefly, please, what this table represents, in terms of data?-- Okay. This table represents - and this is with the flood operations strategies that are implemented in developing up, this is the modelling that was done to test and confirm and check the rules out. So then-----

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When you say "rules", we're referring to the rules for the operation of the dam as set out in the manual, aren't we?-- The rules for the operation of the dam as set out in the manual. Obviously they're a little bit different because the bridges - there's one or two bridges that have changed and there's the fuse plug but in general within the range before the fuse plug initiates they're fairly similar, okay, to what was modelled in this particular study.

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So what you do is you put - you model various events. We see in the left-hand column starting with a one in-----?-- One in 10-year, one in 20-year, one in 50, one in 100, one in 200, one in 500, one in 1,000, one in 10,000 then, then the larger - what we call PMF study. The purpose of this study was to determine the risk of the spillway and to look at the balance between dam safety and the lower level flood objectives. There's also a series of flood maps which were associated with it. The maps go from Wivenhoe Dam all the way down to the mouth of the Brisbane River and they go up Ipswich as well, so they give you a risk profile from 10-year up to the failure modes of the thing, so there's levels and inundation maps, yes.

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And do these design floods assume optimal operation of the dam-----?-- That's right.

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-----in compliance with the manual?-- Optimal in a sense that - because this is using a simulation model. It also assumes, in calculating the strategies, that you know of a 24-hour window of the future, in terms of doing that. So that's to replace, if you like, the concept that is similar to the judgments that we have to make about what the forecast window is. It's replicated in these things with it. Now, the model that was used here evolve from the Hegerty & Weeks' work in

the early 80s and it included all the restrictions, in terms of rates of opening, closing and there was a slightly more sophisticated version.

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Now, relevantly for present purposes, if we look down the left-hand column we see a one in 200-year event?-- That's correct.

Now, these probabilities of the current level of these designed floods will have now changed, this is dated back in 1994?-- Yes.

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That data seems-----?-- It will have changed slightly but just in terms of what that exact ARI is, is probably shifted around a little bit, yes.

So we look at the magnitude, we're looking at a - for that event we're looking at a 48-hour storm duration event?-- Correct.

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Similar to what we had in January '11?-- Yes. That's right.

We had a peak inflow of over 1,000 cumecs?-- That's right.

Which is slightly less than the peak inflow for the event we're talking about in January?-- That's right. Yes.

And does this tabulation tell us that if the - with that peak inflow at 48-hour storm duration, for that magnitude of event, you'd expect to have peak outflows even with optimal operation of the dam under the manual of about - in excess of 7,500 cumecs?-- That's correct.

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And again that's not dissimilar to what we have in the January event; is that right?-- That's correct. And the lake level is pretty similar to what it got to as well.

So what do you draw from this comparisons of these design floods that you looked at back in 1994 to how the dam was operated by you and the other engineers in this current event?-- This is the template that set the rules. This is the design criteria for the rules, if you like. I think the event here is - well, not identical, is quite similar to the event. In fact, this probably isn't as bad because we've had a little bit more pre - pre-water - there's an early bump in this, whereas this probably just has the central bump, but you are getting a very similar outcome. So this is saying that the rules as applied, give the outcome for the rules as designed, as designed.

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All right. Now, just finally in preparation for this hearing-----

COMMISSIONER: Do you want to tender that, by the way?

MR MacSPORRAN: Yes, I'll tender that. Thank you, Commissioner.

COMMISSIONER: 1,079.

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ADMITTED AND MARKED "EXHIBIT 1079"

MR MacSPORRAN: I should note, Commissioner, the full report of which that is an extract is with the Commission. It was given over on the 8th of April pursuant to some requirement. So that's just a table extract.

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COMMISSIONER: Yes.

MR MacSPORRAN: Mr Ruffini, in preparation for giving evidence of this hearing, did you seek access to contemporaneous data, in particular the operational spreadsheets that you had reference to at the time you were managing this event?-- Yes, I did. When the requirement came and said - asked for contemporaneous data, I was aware of the spreadsheets that were used during the operation and I was aware they were preserved in the Flood Control Centre.

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And were you provided with a disc by Crown Law to look - access that data?-- Yes. That stuff had been provided to Mark when he did his review.

That's Mark Webster?-- Yes. That's right.

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Can I again just put on the record, Commissioner, that's Exhibit 524, attachment 34, which is on that disc.

COMMISSIONER: Thanks.

MR MacSPORRAN: And having accessed that data, did you confirm the sort of data you had regard to actually during the event when you were on-shift managing the dam?-- That's right. So in preparation for today I went through all my situation reports and looked at the spreadsheets again just to confirm in my own mind that everything - the conclusions I'd been drawing, in terms of preparing the report, were accurate and were still current, that I hadn't changed my view on it.

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And having done that exercise, do you still maintain that the official report, the Seqwater report of March 2011, is accurate when it refers to which strategy you were in at the times you were on shift?-- Yes, it is.

And do you still confirm that you had regard - that you personally had regard to those strategies in the way you've described at the time when you operated the dam?-- Yes, I did.

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All right. Thank you, Commissioner.

COMMISSIONER: Mr Callaghan.

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MR CALLAGHAN: Just one question about that statement which I tendered at the end of your evidence, Mr Ruffini?-- Yes.

You have exhibited some drafts of the March report which you received from John Tibaldi. Can I show you JLR19?-- I had those on - by "drafts" I mean they were - at the time when I was in the flood control room I - it was towards the end and we were reviewing it, reviewing the document, and I had to go home. So I just took a snapshot of whatever was on that - well, in the document directly I just took a snapshot home of that document and so I could just continue reading it at home because there was a lot of material that I hadn't been over and that, so that's what it was, yeah.

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You describe this in paragraph 30 of that statement-----?-- Yeah.

-----that I have just handed to you, is that right? Did you in fact take them home, the ones that you have exhibited here? These are the ones that you took home?-- Yeah, I had them on it.

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Sent home?-- Well, no, I didn't send it, I just copied it on to a data stick and took it with me, yes.

If we look at JLR19?-- Yes.

That's section 10 of that report. There are no track changes, I would suggest to you, on this copy whereas if we were to look at JLR20 - and you refer to this in your statement - you refer to the track changes in your statement?-- The track-----

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Sorry, I will just finish. JLR20 shows some track changes, is that right?-- Yeah, well, they - just whatever I had, yes. Yes-----

My question is are these your track changes?-- They are whatever was on the system. Look, the process was you could make some track changes on the system and some suggestions and then the editor would come along and do it. When I took the copy it would have just been - like, it wasn't - when I say "draft" it wasn't like a draft 19 or whatever, it was just whatever was currently live on the system. So they would have been - I may have made some of those edits or it could have been someone else but they would have just been the ones that had been proposed. If they weren't in track changes, then they would have either been accepted or rejected by the person doing the editing.

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You can't say now which of those track changes in JLR20 you made?-- No, no, because it was just - the whole process was - I was just - you know, the time frame for producing - the six weeks was coming up and it was really quick and I just couldn't get into the flood room and spend endless hours in there reading everything, so I took a few copies home.

Okay. Thank you. That's all I have.

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COMMISSIONER: You are stood down, thanks, Mr Ruffini.

WITNESS STOOD DOWN

MR O'DONNELL: Just before you adjourn, I wish to inspect some of the paper exhibits. I don't know if I need your leave, but if I do, I ask for it.

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COMMISSIONER: Take it that you have it if you do.

MR O'DONNELL: Thank you.

COMMISSIONER: You will need to talk to my associate, Mr O'Donnell. When do you need them, over lunch or later?

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MR O'DONNELL: I will just look at them now, before I go.

COMMISSIONER: Alright.

MR O'DONNELL: Ten minutes.

COMMISSIONER: Alright, you can speak to my associate, assuming they are all here. Adjourn till 2.30, please.

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THE COMMISSION ADJOURNED AT 1.05 P.M. TILL 2.30 P.M.

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THE COMMISSION RESUMED AT 2.30 P.M.

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COMMISSIONER: Yes, Ms Wilson.

MS WILSON: Thank you Madam Commissioner. The next witness is Robert Drury and he is already in the witness box.

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ROBERT JOHN DRURY, SWORN AND EXAMINED:

MS WILSON: Is your full name Robert John Drury?-- Yes.

You're employed by the Queensland Bulk Water Supply Authority otherwise known as Seqwater?-- Yes.

Can you tell us your role there?-- My role is Dam Operations Manager. That encompasses looking after all 25 dams, the operations, the maintenance, the release of water, the 48 weirs, five irrigation schemes and the 500 or so irrigators as well as some other sources and bore supplies in terms of operations, releases, maintenance, dam safety and part under that dam safety are the Flood Centre.

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That is your role today?-- Yes.

You were performing that same role during the flood event of December/January last year?-- Yes.

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December 2010, January 2011?-- Yes.

You provided one statement to the Commission sworn on the 6th of May 2011. Madam Commissioner, that is Exhibit 430. Have you got a copy of that statement there?-- Yes.

That statement comprises five volumes, is that the case?-- Yes.

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That first volume that you have got open, is that your statement?-- Yes.

Is there anything in that statement that you wish to add or amend?-- No.

That statement's true and correct?-- Yes.

In your employment history have you ever performed the role as a flood engineer?-- No.

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Have you ever worked in the Flood Operations Centre?-- I did probably in 1999 I think it was, about 12 or 13 years ago when the Flood Operations Centre was with DPI I believe and I did do some work as a data collector in those days, working with data, checking the gauging station, seeing if the data was correct. I can't say how long that was for. It was probably



for a year or so I think.

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When you were performing that role did you perform that role during any flood events at the Flood Operation Centre?-- There was one event I think in '99. I think I remember doing one shift, possibly two, something like that.

Who were the flood engineers at that point in time? You can't recall?-- I think it might have been Peter Allen. I'm not sure. I honestly can't remember actually who was there.

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You have given me a description of what the role of Dam Operations Manager is. Can you outline to me the role of Dam Operations Manager during a flood event?-- During event control is handed over to the Flood Operations Centre. They then control the dams, the releases, the operators. Hence I moved back. During that normally I would be liaising with the operators in terms of water releases, volumes required for water supply. During the event the Flood Operation Centre takes control, then mobilised and then operate the dams. Mostly my role then is a lot more in terms of people, it's still to do with all the other parts, the weirs, the water supply, the irrigation, operations and maintenance of everything else. The actual operations of the dams then go to the Flood Operation Centre.

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Does your role include or involve having any input into any operational decisions. For example, release rates or anything like that?-- No, the only time is at the end of a event where there's fish recoveries or things that happen once it's closed. Then certainly there might be some organisation of people. There was during the event in January, also getting food supplies and things like that but not operationally deciding on releases.

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One of your roles during a flood event is to operate almost as a communications intersection and what I mean by that is you get information given to you by the Flood Operation Centre and then you pass that information on to various agencies and departments, is that fair?-- During the January event there was a protocol which wasn't really in place prior to that and in the last recent event it's been changed but during that event there was a protocol that was developed after the event in late 2010 where there was some communications to the public that may have been conflicting and wasn't exactly clear. So the protocol developed then was trying to reduce the chance of that mis-public communication. So the protocol set up a process where the situation reports from the Flood Centre would be sent to councils and other people to make sure that there was some knowledge of what was happening and the councils and other people could reply if there was issues and improve and there is also a communication through our communications groups to improve that. So during the January event I was doing that Technical Situation Report under the protocol. Partly because, with the Flood Operation Centre operating I was available to take those information and pass it along.

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Is it the case that the councils weren't having direct with the Flood Operation Centre, were they?-- They were. I guess it was set up primarily for small events. The original protocol was mainly for small events where not so much an emergency process but just a communication so that everyone knew if there was releases, it was planned. What really happened in January, the Flood Centre sent everything to the councils as well. So there was a bit of a duplication but certainly did it regardless just to make sure there was continual communications. So the councils probably got the same information a couple of times to be honest.

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Just to be clear about the framework of the questions that I will be asking, I am ask actually asking about the flood event that occurred in December 2010, January 2010?-- Yes.

If we can just focus our mind on that. I am talking about communications with the Flood Operation Centre because between you and the Flood Operation Centre that could occur by various means; is that the case?-- Yes, it is.

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One of those means was telephone; ringing them up, asking them questions?-- Yes.

If you had any questions, you'd ring them up and ask them questions; is that the case?-- There was quite a few times I would check what was happening or contact them.

Preemptively as well. You just wanted to know what was happening, you would give them a call and-----?-- Well, yes, and to talk to the staff there just to see how they were all going, what was happening.

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Other contact of means of communication was e-mails?-- E-mails.

They would e-mail you sitreports?-- That was a primary means of information because the sitreps were what I turned into Technical Situation Reports under the protocols.

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Also e-mails in case of just any information that you were just seeking, you were just sometimes given an e-mail?-- If there was a need to find something out, yes.

What about in terms of telephone contact? We talked about that just previously. The purpose of doing that, was it to get further information than what was in the sitreps?-- Occasionally. Sometimes it was quite a while between sitreps. May have just rung to check what was happening, how people were going, is there any change looking ahead. It was really just to keep in touch with the staff there.

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If you received a sitrep and you needed to clarify anything, there was no problem about you giving them a call and you giving the Flood Operation Centre a call?-- I don't think I changed the sitreps very often. What they sent is what I, to be honest, took out, put into the Technical Situation Report and sent on. I can't recall very often trying to clarify or

interpret what they sent is what went on because they had already gone to the councils and to other people. It was really passing on that to make sure it got to the councils and others.

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But you would give them telephone calls if you had any queries about decisions or strategies, is that the case?-- Not really. What they sent in the sitrep is what I took and sent out. I certainly don't recall querying decisions or strategies. If I rang and asked about the release, it was really about - the main focus was releases and volumes and impacts I guess.

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What about strategies, did you have any conversations with any person in the Flood Operation Centre about strategies in the Wivenhoe manual, operational manual?-- If I had queried them about strategies it would have been release strategies, volumes, flows, and I guess that's the terminology I may have used with strategies, was releases, volumes, what was happening day-to-day.

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You are aware of the strategies in the manual of W1 to W4, aren't you?-- I am aware of them. I am not intimately knowledgeable with the manual but certainly aware of the strategies, yes.

You do hold a Bachelor of Civil Engineering and a Master of Engineering Science from the University of Queensland?-- Yes.

And you have read the manual?-- Yes.

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When they are talking about the operational manual for the Wivenhoe and Somerset Dam?-- Yes.

And you know when strategies are triggered, is that the case?-- Not intimately. As I said, through that event the real focus was not the W strategies.

I am not asking about that event. I am asking about are you aware of the strategies in the operational manual?-- I am aware of what the objectives of the strategies certainly are.

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W1 to W4, you are aware of what the primary considerations are?-- The primary objectives of those, yes.

The primary objective of those strategies you are aware of?-- I believe I do, yes.

You were aware of those primary objectives in January 2011, is that the case?-- To a degree, yes, I would have known the manual and that there were objectives to each of those strategies in the manual.

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Tell me, "to a degree", what does that mean?-- I am not intimately knowledgeable exactly when the flow rates or I couldn't even remember right off the top of my head the levels that they come in at. I could pick up the manual and read it but I certainly don't remember numbers off the top of my head.

Did you have a copy of the manual with you?-- I had it electronically available, yes, and certainly-----

Were you referring to that manual during this time in January 2011, the one that you-----?-- The only time I was referring was usually contact phone numbers. I certainly wasn't referring to the manual or monitoring the manual at all. That, as I said, was really flood centre's operational activities and mine was taking the Situational Reports and moving them on.

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Are you saying that your role was a post box?-- To a degree. If there wasn't the protocols in place I wouldn't have had a lot of contact, or pass the sitreps on, or anything like that. The protocols really - I took on the role of passing them on and to some respect it was moving the information under that protocol to the people that we had said we had sent it to.

You also moved this information on in TSR's and from what I can understand, the sitreps were converted to TSR's; is that the case?-- Basically, yes.

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So you would get a sitrep from the Flood Operation Centre and you would convert that into a TSR?-- Yes.

A TSR is a Technical Situation Report?-- Yes.

And interestingly about a TSR, a Technical Situation Report, your job was to make it less technical?-- I basically copied virtually the whole situation report into the Technical Situation Report.

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Then why don't you just forward on the situation report?-- There was a format and under the protocol there was a name for the Technical Situation Report and I guess it was just set up under that protocol, that it was a slightly separate process and a format to cut it into. It had some other comments at the bottom of the situation report saying it had been sent to councils and I guess that was the difference, is just that little addition to that situation report saying had it been sent to the councils, yes or no, and had the councils commented. And going back to the protocol, that was part of the original reason why it wasn't that - the new process is slightly different. It's been changed with the protocol to simplify exactly what you said to make it one process, one report, not two.

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In any event, you took care to ensure that all the information that you passed on was accurate?-- I never checked the situation report or if the numbers and the releases and the data in it - I wasn't changing anything or querying the numbers, it was really a process of whatever the situation report was, add some extra bits in as the protocol said and pass it on to make sure that got through to the councils.

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Perhaps I should ask you to which agencies were you passing on this information?-- Mostly the three councils, Brisbane, Ipswich, Somerset and the water grid manager and I think that was the main ones, and also internally, and I think some went to DERM and a few other people but primarily the councils and the grid manager.

These agencies would be making decisions based on the TSR or the information that you were passing on?-- Either they had made decisions or they - as I said, they also got the same information from the Flood Centre and would communicate with the Flood Centre. As far as I know, if there were concerns or issues, directly with them and that seems to be what happened. Very rarely was anything sent back to me but they did get the information through two venues; straight from the Flood Centre and straight from myself.

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What communication did you have with the water grid manager during this flood event that we are discussing?-- There was situation reports, there was a few phone calls and e-mails as we went along and various ones - predominantly the situation report's sent through.

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Was it the case that you were emailing TSR's to Mr Spiller?-- A lot of the time, yes. Yes, I think it may have gone to some other people but I think Dan was getting most of those. Mr Spiller.

What did you understand the role that Dan Spiller was performing during the flood event?-- Basically having that communications. There was the communications to the public and a lot of that was to make sure there was no misconceptions or council's communications were different to ours. I think that was probably where the main coordination of that from the grid manager was.

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You were emailing TSR's on to Mr Spiller but you were also in telephone contact with him?-- Occasionally there was some I think. I can't recall them but I am sure at some stage there would have been some.

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Was that to update him on information that you were receiving from the Flood Operation Centre?-- I can't recall really what - the conversations on the phone. There were a lot of calls. I don't recall ringing Dan, Mr Spiller, for certain things. He may have rung me, I - but there might have been some clarifications or comments.

Did you keep a log of any communications, any at all, communications that you were having with agencies?-- Only through the e-mails, any written communications, but basically the e-mails.

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Did you have any contact with Mr Burrows?-- Yes, there would have been some. I can't recall all through the event but there certainly would have been e-mails. I think some of the situation reports would have gone to Mr Burrows. There could

have been quite a few calls or e-mails. I can't remember them, I am sorry.

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If I can take you through some documents in chronological order so I can gain a better understanding of your communications that you had with certain people during this time. You have got your first volume there. I see it open?-- Yes.

So I will be primarily referring to that document but I will also be referring to Exhibit 23 which is the flood event log. When it comes to the time that I will refer to that I will give you a copy. You will also see, Mr Spiller, if it is more convenient for you - I think it will come up on the screen. You have got numbers on those pages in front of you for your exhibit. If I can take you to RD5123 and use that as a starting point. Now, Mr Spiller, if you want to refer me to any other document when I am referring to these documents, please do that so that I can gain a greater understanding of what's going on?-- Yes, I have got RD123.

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Sorry, yes, RD123. We will see these. This is just the sitrep which we will see many times during your evidence. This is a sitrep from of the duty engineer at 6.32 on the 8th of January 2011. When you see this sitrep, what information are you looking for out of this sitrep?-- Basically those categories of whatever the releases were, dam levels, volumes. Whatever the Flood Centre put in the sitrep was what I was passing on and it was really just what their current situation was.

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The current situation was?-- In terms of volumes or flows or rainfall.

And you would translate, change into the information in here into a TSR; is that the case?-- Basically copy that straight into the TSR, format and send on.

So we can see that you got this sitrep at 6.32. If I can take you to RD5127. Now, this is just setting up the process which I would just like to confirm. That's you getting a sitrep and turning it into a TSR which you then e-mail out to the parties that we can see on RD5127. Do you see that?-- Yes.

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If we can go to then RD5128 which is over the page, this sets out the Technical Situation Report. They're in chronological order. You've got a TSR number, you have got the date and the time of the release. Do you see that?-- Yes.

Are you at 128?-- Yes.

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The current objectives in this document, where do you get the information to put into the current objectives?-- They would have been straight from the sitrep. Again they were very broad, just to give an idea what was happening, and the strategies would have come straight from the sitrep to - just in terms of bridges or releases.

Does this reflect any of the primary considerations, that is, is as contained in the strategies in the manual?-- During the event I - the primary strategies just weren't a focus. I mean, the strategies there would have been releases, what's happening. To be honest, at no stage were the W strategies a focus. It was more or less what was happening and something there where Fernvale Bridge is clear, maybe - so I guess that was more release strategies, what was happening.

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You're passing this information on. What did you appreciate this to be? You are passing this information on to agencies who make decisions on this document. You have got an understanding of the manual?-- Most of this was purely from what the Flood Centre - as I said, it's from the sitreps from the Flood Centre that I used and passed on primarily to the councils, to give them information. The sitrep itself really provided all the details. If they needed further information or any concerns, they would ring the Flood Centre direct. I wasn't trying to interpret exactly all those words or what was happening in it, I wasn't trying to change it, I was just really trying to put what the sitrep said, getting it out to people and sending it on as the protocol said.

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Are you aware what the primary consideration is? Sorry, are you aware what the strategy is when the primary consideration is bridges?-- The rural areas downstream.

No, when the primary consideration would be in relation to Fernvale and Mt Crosby Bridge, are you aware which strategy that applies to or has any relevance to?-- As I said, the strategies there weren't necessarily W strategies.

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No-----?-- I am just saying they were strategies for releases.

I will let you finish, but perhaps if - I think that my question was confusing. I am asking you to consider the manual which as the W1 to W4 strategies and I am asking you to consider what your understanding was in relation to the Fernvale and Mt Crosby Bridges, where that fits into the strategies of the manual?-- Probably what I can say is I understand the W1 strategies are to do with the bridges and minimising rural disruption, the next objective of two and three is more urban - minimising urban flooding downstream and then dam safety. So I can't say which bridge - how they fall within that strategy I am sorry, I just can't.

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Is it the case that you knew that during January 2011, the distinctions between the strategies?-- I knew the general objectives. There were three general objectives basically but I wasn't really considering those in that, as I said, the main aim was purely flows, getting the information on, not considering W strategies at all and the sitreps tended to say purely releases and release volumes and flows.

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If I can now take you to RD5142. This is where we are just seeing the communication as it comes out of the Flood Operation Centre. You get a situation report, you put that

into a TSR, you send it to various parties and persons and then Dan Spiller then - and if I could call it the Spiller report - he then on-sends it to other people; is that a fair summary of the process of communication?-- I think that was happening. I can't say that was part of the protocols but it was certainly - the TSR's went through to Dan Spiller. I can't speak for where he sent it or what he had sent it to or who, at which times.

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Well, if we are on - let's just have a look at RD5142?-- That certainly was the case.

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We see that he sent it to Stephen Robertson, the Minister, this information, and you're cc'd in it. So you are getting what I could call the Spiller report which then also attaches the TSR that you have compiled. Do you agree with that?-- Yes, it looks like that TSR was attached, yes.

You were getting these e-mails from Dan Spiller during the flood event?-- Dan Spiller. There was a lot of emails and a lot of reports happening, yes. So that was probably one of them. It says it came to me, so I am sure it did.

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We can see that that's at 9 a.m.?-- Yes.

If we can just take it from those three documents that we've looked at. 6.32 a.m. you get a sitrep from the Flood Operation Centre, 7.46 you send the TSR to various parties and then at 9 a.m. the Spiller report goes out to more parties attaching your TSR. Was that about the time frames that was operating in the time of getting information?-- I don't think there were any time frames set or agreed beforehand. The only protocol was to send tactical situation reports out to - there was no process involved or time frames discussed before the event or part of the protocol that I can recall.

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Just to be clear, too, I am not just asking questions about protocols, I am actually asking questions about what actually happened during that time. So whether the protocol said it or not, we want to know what was happening at that point in time. If I can take you to Exhibit 23. This is the Flood Event Log. This is not one of your documents but I understand you have seen this document, the Flood Event Log?-- Yes. I haven't gone through it in detail but certainly I have seen it, the log, yes.

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Would you prefer a hard copy, Mr Drury?-- I can see it, yes.

If we can go to 10.50 a.m. on the 8th of January. Can you see that, Mr Durie?-- Yes.

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10.50 a.m., "Rob Drury rang RA". Who do you understand "RA" to be?-- Rob Ayre.

"Rob Drury rang. RA advised current status and strategy". Can you tell us about this conversation?-- I cannot remember any single conversation. There was a lot of them. That one I would have just rung to find out what's happening, what's the



current release strategy, what's the status, just to get an update and that could have happened quite a few times. I couldn't remember that one phone call, what was covered but it would have just been the same as throughout the whole event, what is the releases at the moment and what's happening.

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So to be clear, any time that there's reference to "strategy", when you are referring to the Flood Operation Centre, are you telling me that I should take that to mean not strategy out of the W1 to W4 in the manual but release strategies? Is that what you are saying?-- What I am saying is I don't - through that whole event, all the situation reports and all the strategy discussions were really release strategies and I have - the words there and other places, that there was no focus on the W strategies. It was really release strategies and it's probably maybe the wording but certainly was releases, flows. It was all operational, not the W strategies to be honest. It was purely what's coming out, what's happening and all those sitreps tended to say the same thing really.

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Was there any mention that the Flood Operations Centre was now operating at W3?-- I can't recall any discussions. I can't even recall every single phone call, but I do know that all the discussions and sitreps were releases, flows, volumes, and that was the whole aim for the release and what it was discussing, what information was being passed on, and I don't recall any sitreps really saying anything different. It was all where we're going, what's the status, what's the release.

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Mr Drury, if we can just concentrate on this 10.50 a.m. conversation. Was there any discussion of W3 at that point in time?-- I cannot remember the phone call discussion. There was a lot of phone calls. There was a lot of emails. I cannot tell you exactly. All I remember is if there were phone calls, it was really what's the status, what's the release, what are the changes or impacts, and that was really the main information required, and I can't tell you what that one phone call discussed.

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Are you aware how many times the dam has gone into W3 strategy?-- No, I'm not, to be honest. I could not honestly say how many times.

Now if we can then go to RD-5, 152. This is again a sitrep coming through to you at 12.16 on January 8. Do you see that you got that sitrep?-- Yes.

Then if you just go to RD-5, 154, two pages over, you see another sitrep?-- Yes.

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At 5.53 p.m.; Do you see that?-- Yes.

Now if I can take you to the forecast scenario?-- Yes.

If we can go down to, "The interaction with runoff from the Bremer River and Warrill Creek catchment is an important consideration, as the event magnitude will require the application of Wivenhoe Dam flood operation strategy W2." Do you see that?-- Yes.

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Transition strategy between minimising downstream impacts and maximising protection to urban areas?-- Yes.

You see there that there is a sitrep that specifically refers to the operational manual for Wivenhoe Dam?-- Yes, that's true.

You had conversations with Mr Ayre earlier that morning about strategy, which you say is release strategy, and then we're being told in this sitrep that is an important consideration as the event magnitude will require the application of Wivenhoe Dam flood operation strategy W2. In your discussions with the Flood Operations Centre, was this - was there any discussions about having to elevate to W2 from W1?-- Again I cannot say - recall what the phone call was about, but all I know is all the phone calls were purely what the releases were. I'm not sure whether they even rung - that was

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6 o'clock - the next one, whether they even noticed that strategy. All I can say is all the phone calls really were what's happening, what's the releases, and a catchup, and they were very - that might be one of the sitreps. I was just talking generally. Most of the situation reports were purely flows and releases, and that was the focus really.

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Mr Drury, let's just focus on this 5.53 one. Did that come as a surprise to you that strategies are being used in sitreps?-- No, I'm not saying that it was a surprise, but whether I even read or noticed that it was in there. What I'm saying is most of the sitreps were really flows, releases, where it was going, and that was the focus. I don't know whether that would have been a surprise or not. I may have read it, but it wouldn't - their strategies in the manual again is not my focus at the time.

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When read that then, did you think that they were going to elevate to W2 - that we were looking at an elevation of strategies?-- I could not tell you if, when I read it, what I thought at that time. There were a lot of situation reports, and really my thoughts were what was happening in terms of flows or what it might have meant, not what - the strategy the flood centre was using.

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Was there any discussion with the Flood Operations Centre about being in W3, having to go back to W1 in the future, and then elevate to W2?-- I don't remember any conversation that I had with them in terms of a phone call or why I would have even asked that. I guess I was asking other questions.

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You refer to the 6.15 a.m. sitrep. That's the next one. That's at 9 January 2011, if we can go there. Mr Drury, you'll signed that at 164?-- Yes.

And if we can then go to Exhibit 23. So you'll see a sitrep at 6.15 a.m., and if we can go to Exhibit 23, which is the flood event log, and if we can go to 6.50 a.m. on that day. You rang the Flood Operations Centre?-- Yes.

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Do you recall that?-- I cannot recall that phone call, but obviously I did. All I'm saying is there's a lot of phone calls, so I'm sure I did ring. It's in the log, yes.

We see there that "JT" - do you know who that is?-- John Tibaldi.

"Advised Rob on current release strategy based on recent heavy overnight rainfall"?-- Yes.

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Can you tell us what that conversation was about? What was the current strategy at that point in time at 6.50 a.m. on 9 January?-- I can't recite what was discussed, but again the words there were release strategy, which again is what I was asking about, what they thought of how volumes, timings, flow rates and impacts, and I'm assuming that's what I rang for, just to check the releases and what release was going to happen or where they were going.

Did you ever ask - well, did you ask in this conversation, "What's the primary consideration now, guys?"-- I don't believe - I can never remember asking that question. Again, the focus really was impacts, operations; not second guessing anything. It was really release strategies, not-----

But you wouldn't be second guessing if you asked, What is the strategy. What is your primary consideration?-- I don't recall asking that question or-----

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At any time?-- I don't recall that, no. As I said, the focus was releases, getting the sitreps, putting them out, and where the releases were going.

So at 6.50 a.m. you rang the Flood Operations Centre. If we can go to 7.26 a.m. on that day, you issued a TSR, which is TSRW32 and, Mr Drury, you will find that at 167?-- Yes.

You can see there that you sent that out; do you see that?-- Yes.

20

And you give some apologies, that you had meant to keep sending these through, but this is a good summary of where you're at; do you see that?-- Yes.

And if we can go to the TSR which you sent out to those people, we can see the strategy there refers to the releases - the current releases?-- Yes.

30

And also the strategy is to keep the Fernvale and Mt Crosby bridges clear?-- Yes.

Was that - did you obtain that from the sitrep, or was that also from your conversation with the Flood Operations Centre at 6.50 a.m. that morning?-- I can't recall where it came from, but it is in the sitrep where it says 1600 - the 116,000 megalitres a day was in the sitrep, so I may have cut and pasted it out of there, or maybe some of it was by the phone call. But certainly most of it would be out of the sitrep, keeping the bridges open.

40

Then we can go to-----?-- The sitrep, sorry, yes, does say Fernvale and Mt Crosby. So yes.

So that's at 7.26 you sent that to Dan Spiller, and then at 8.14 a.m. that morning you get the Spiller report, if I can call it that, and you will find that at RD-5, 193?-- Yes.

And we can see there on the fourth point down, "Releases are being made so as to avoid inundating the Fernvale and Mt Crosby weir bridges. Other flows may impact on the bridges should the forecast rainfall eventuate." Is that consistent with your understanding of the strategy that was being operated by the dam at that time?-- I would have to just read through the-----

50

Sure, read through it?-- -----what Dan said versus what was in

the technical situation report. I can't say that's exactly right. I mean, what the situation report says is that the current releases may change slightly, depending, and that this should keep the Fernvale and Mt Crosby bridges clear. Yes, they were the words. They are slightly different to what Dan Spiller has written, so I'm not sure. I would have to really think whether that reflects exactly what the situation report says. But it's slightly different wording, whatever was - what happened.

1

But you were certainly getting Mr Spiller's reports, weren't you?-- I was. I couldn't guarantee I was reviewing or checking that they were right, but he had the situation reports. He sent them out. I wouldn't guarantee I checked what he wrote to see if he was right. He was sending them out and they were already - they were his reports, not mine.

10

If we can keep on going through that day, and perhaps now we can go to about quarter to 5 that afternoon. And you will find a series of emails between you and Mr Spiller and, Mr Drury, you'll find that at RD-5, 215?-- Yes.

20

Now, you start off, "I would like to blame the computer system, but purely operator error." I think that relates to you sending a TSR, but failing to attach it yeah, I think it was some computer issues, yes.

Then we see an email from Dan Spiller to you: "Seems to have been a lot of rain in the catchments and more heading for Bris. Any changes to strategy dam?" Now, when you get that email, is that referring to strategy in terms of strategies from the manual?-- Sorry, I've just - again I would have been thinking release strategies.

30

Any changes to the release strategies?-- That's what's been used in quite a lot of places, the release strategies, yes. I'm not sure what Dan meant. I don't want to put words there. But I would have taken that to mean any change in what's happening.

40

Happened - happened in terms of changes of strategy of the manual, or changes of strategy of release rates?-- You might have to ask Dan Spiller what he meant, but I would have thought-----

Well, you're getting the email and you're going - he's asking you a question. So you've got to think how am I going to rely to that question? What's he thinking about?-- Thinking about what's changing in releases, how it's going, will it change significantly to cause issues, I guess.

50

Okay?-- Again, that was focus.

We can see your reply "Not yet" at 4.28. "Duty engineers meeting this afternoon to discuss strategies. Will advise if any change, but you are right; we're getting big inflows. Rob." Were you aware there was a flood engineers' meeting that afternoon at 3.30?-- I must have been aware that there

was a meeting. I can't remember the time.

1

Do you know how you were aware of that?-- No, I don't know whether it was in an email or a phone call, I can't remember. There might have been a log or someone told me.

Then we can see from Dan Spiller his email that he's appreciating any advice, especially from the Brisbane City Council about city flooding, because they anticipate they are getting out soon. That's just the importance of getting up to date information getting out to the parties. That's an example of that, isn't it?-- Again I'm sorry, which number are we on?

10

215, Mr Drury?-- Still.

COMMISSIONER: If you look at the screen, you'll see it?-- Thank you.

MS WILSON: Do you see that?-- Yes.

20

And then if we can go to RD-5, 219?-- Yes.

That's an email from you at 5.01 p.m.?-- Yes.

To the duty Seq or the Flood Operations Centre; is that the case?-- Yes.

And you addressed that to Terry. Who are you addressing it to?-- That would be Terry Malone, I would assume.

30

Yes. And we can all see - is that in front of you?-- Yes.

So you're asking too what the strategy is, and when you have a strategy, could you include some information?-- Yes, just asking for, as I said, the volumes, the stored inflows, size of event.

Isn't it the case that the email says when you guys have a strategy, could you include in that strategy volumes released already, volumes stored, peak inflows already managed, and flows expected, size of event?-- Yes, again the focus was on what is your strategy, and it's for releases and monitoring, how it's going. That was always the focus of - and that might have been four times a day, was always - the strategy wasn't what - it was really the volumes, the flows, and that's why I've got the list there. They are the kind of things in terms of information.

40

So when you were referring to a strategy, you were referring to when guys have a release strategy; is that what you're telling us?-- Yes.

50

You weren't saying when you guys have a strategy for - in relation to the manual?-- No, it was always to do with - the focus was really the volumes, the flows, the releases, through the event. That was the information I was requiring.

If we can now go to Exhibit 23, because we can see that that email was sent at 5.01. And then in Exhibit 23 at 5.40 we see that you phoned the Flood Operations Centre. Can you see that, Mr Drury?-- Yes.

1

"Rob Drury phoned TM for an update on the current situation"?-- Yes.

Do you have any recollection of that at all?-- No.

10

What was happening?-- No, again it would have been the same as all the other phone calls; situation update.

You knew that there was going to be an engineers' conference that - day earlier that day. Did you ask about what was the outcome of that engineers' conference?-- I cannot recall whether I asked that. What I was after was just an update.

Were you told that they were operating at the top of W1 and the bottom of W2?-- I cannot recall the details. Again, all I was asking for was a release situation update, rainfall, and what was happening.

20

Perhaps we could be clear about this. You never heard the initial "W" in front of any figure from the Flood Operations Centre; is that the case?-- The case is I can't recall discussing it or asking - as I said, the focus really is during the event flows, volumes, what's happening, how much is being released, rainfall. That really was the focus, and the discussions were really again what's happening, what's going on.

30

Mr Drury, perhaps if I can ask the question again. You never heard the initial "W" in front of any number of W1 to W4 from any time from the Flood Operations Centre; is that just your evidence?-- I'm saying I can't recall whether that was ever mentioned, but it certainly wasn't a focus or something that I asked about. It was again all to do with releases, flows. There was TSRs you showed that had a "W" in it, but again that was one. All the situation reports and all the information really related to flows and volumes, and that was the key concern.

40

If we can now go to 551, 11 minutes after this conversation. If we can now go to the sit report that you were sent, which was the 5 o'clock sit report. You'll find that, Mr Drury, at 224?-- Yes.

Mr Drury, could you go to "Impacts downstream of Wivenhoe"?-- Yes.

50

We can see there that there's a discussion about bridges. Is any of that consistent with the discussion that you had with the Flood Operations Centre eleven minutes previous?-- I cannot remember whether that was in the discussion. It certainly is in the situation report, so I'm sure that's what the engineers sent through. Whether that was in a phone call as such, I cannot remember one phone call discussion or what

was discussed in it apart from it would have been an update, and then they sent through the situation report.

1

Perhaps if we can just-----?-- Or they may have just said the situation report is coming soon. I cannot remember.

So is it the case that you have no independent recollection of any conversation that you had with the Flood Operations Centre?-- No, I'm not saying that. It's just there's so many of them, and it was through a very busy time and lots of calls asking for updates, I can't remember any one single discussion. Because there was a lot of other phone calls and discussions, I cannot say exactly what as in any one discussion.

10

You can't recall - is it the case that you cannot recall one independent conversation with the Flood Operations Centre?-- I can certainly see those where I would have rung-----

No, just thinking now, there was not one?-- If I thought through, there might be some that I can tell you exactly why I call. Most were purely situation updates. They would have told me what the situation was and that there's a report coming soon, and it probably was very similar to the situation report.

20

And you were ringing to discuss - we've seen that you contacted the Flood Operations Centre and you - about strategies. We've seen that from the event log and you've agreed that. There is no further information that you can add, is that the case, from the flood event log?-- In terms - I'm sorry, in terms of detail or discussions?

30

Mmm?-- Most of them all relate to those situation reports, and quite often it would have been probably the same information. If I rang and got an update, it would have been this is what's going to be in the situation report, or it would have been very similar information, because that's what I was asking about really, was to send out the next sitrep to go through a TSR to get sent out.

40

Could I ask this question then: Why were you ring being the Flood Operations Centre operation after all before you got the situation reports?-- A lot of the time was just to make sure I was getting the report. Anything that changed in between - the reports were only coming out, I think, a couple a day. Just to check in case there was anything changing, talk to the people there, and just to know what was happening. Rather than not knowing, then a situation report twelve hours later that's totally different. And of course there were staff in the flood centre. I rang some of the dam operators as well and certainly spoke to them to find out how they were going.

50

If you just turn the page, Mr Drury, you will see at 6.13, after you got that situation report at 10 to 6 or thereabouts, at 6.13 you're just telling Dan Spiller that you'll send an update in an hour or so?-- Yes.



That's just to continue to keep the information being fed down the line, just to know where he is so you'll get some more information?-- Yes.

1

If we can go to 231?-- 231?

Yes. It's an email from Mr Spiller to you at 8.56?-- Yes.

Just asking how you're tracking and that they are proposing to have a short teleconference tonight to start planning for impacts and communication?-- Yes.

10

Do you know who that teleconference was with?-- I cannot remember. I haven't got any notes of it. I think Dan Spiller would have given me the numbers to call in. I assume it was the group manager, but I honestly cannot remember exactly who would have been on-line. I can't even remember exactly what the discussion was. I haven't got any notes on that, sorry.

And they were going tonight to start planning for impacts. Were you aware of what - those impacts that he was referring to?-- No, I can't remember exactly what they were. I think it was more communications, where the situation was with bridges, flooding, communications. As I said, that was the - I guess the grid manager's area was that public communication.

20

Mr Drury, can you now go to RD-5, 232. Just turn the page. We see at 9.04 p.m.-----

COMMISSIONER: Just before you do that. That "advise upwards", what did you take from that? Did that have some meaning to you?-- Sorry?

30

In that last email, "I also need to advise upwards"?-- I assume reading that, Dan probably meant he was going to tell his boss, or superior, or Barry, or further on. I'm not too sure what he meant by that.

You mean Mr Dennien, do you?-- Yes, sorry, I apologise. Barry Dennien.

40

MS WILSON: We get a sitrep at - sit report - situation report, sitrep, at 9 p.m., the 9 p.m. one, which is - you receive at 9.04?-- Yes.

And if you can go across - turn the page, we see there, "The objective for dam operations will be to minimise the impact of urban flooding in areas downstream of the dam"?-- Yes.

This is the first time we've seen the objective, "The objective for dam operations was to minimise the impact of urban flooding"; do you see that?-- Yes, I can see that.

50

So to you as an engineer, does this have any importance on the words that are now being used?-- The importance is the flow rates of 3500 cubic metres per second.

Let's look at the words, "The objective for dam operations

will to be to minimise the impact of urban flooding in areas downstream of the dam"-- Yes, that's the objective the flood centre would have been working on. Well, from that sitrep I'm assuming that's what they are working under. 1

What do you understand that primary consideration to be in relation to the flood manual?-- I would - from what I remember, it's W2 and W3.

So does that have alarms ringing for you now? This is new, isn't it?-- No, what I'm saying is that sitrep said exactly what's happening and what flows are being released and what was happening. Like I said, it wasn't - the focus wasn't the W level or anything like that. It was really what is the flows and what was happening downstream. 10

What about what the objective was? What about the primary consideration?-- Yes, that is the primary consideration. And it's certainly an important consideration, but it's still not the focus. 20

So after receiving this situation report, six minutes later you called the Flood Operations Centre. We can see that at Exhibit 23. 9.10 p.m., That's consistent with - do you accept that you made a phone call to the Flood Operations Centre at 9.10 p.m.?-- Yes.

And you spoke with RA. That's - is that Rob Ayre?-- Yes.

And why were you calling the Flood Operations Centre then? Something to do with what's in the sitrep - situation report?-- Certainly I can only assume the situation report, when it's saying - if I could just dig that up. In terms of the flows and the releases, I may have rung just to double-check or talk to them. Certainly there's some issues then of higher flows and impacts downstream. 30

And again then you can't recall any strategy being referred to in relation to the operation manual?-- I can't, and it's not mentioned there. It was again discussing the impacts, DTMRs, Main Roads, volumes, and the situation report's gone out. Again it was impacts in the Main Roads discussions, if there was any concerns. 40

50

So at 9.10 you called the Flood Operations Centre and then at 9.18 you send out to your TSR and we can see that, Mr Drury, at 239?-- Yes.

1

You see from Rob Drury to Dan Spiller and others, see attached report W34 at 918?-- Yes.

And that is attached at RD5242. Now, we also can see that Dan Spiller referred to the technical report below and at 9.27 stated that there was a teleconference at 9.30. Do you know anything about that teleconference at 9.30?-- I can't recall whether I was involved in that. That was on the Sunday night.

10

No recollection?-- Sorry, I'm just seeing was that 9.30 that night in three minutes?

Did you participate in the teleconference at 9.30?-- I cannot remember whether it was that one, Sunday night. I know I did dial in at one stage to something but I can't recall that teleconference with Dan.

20

And-----?-- It's possible he didn't actually tell me where to ring into there, so I'm not 100 per cent sure I dialled in.

Sorry, could you just repeat that answer, I just missed it, Mr Drury?-- I don't recall whether I dialled in or not. I didn't see anything there, saying I'd dialled in or a number to dial into. So I cannot be sure whether I spoke into that teleconference or not.

30

Can we now go to the flood event log at Exhibit 23 and can we now go to 10.20. We see there that you called the Flood Operations Centre at 10.20, do you agree that that's what you did?-- Yes.

And you spoke with "RA", is that Rob Ayre?-- Yes.

The note says "Teleconference with Water Grid Manager and DERM was completed"?-- I may have spoken to them. I honestly cannot remember what the teleconference would have been about, apart from the same as the other one in terms of communications, releases and what it says there and bridges. Certainly I remember talking at one conference. I cannot remember whether it was the Sunday night.

40

And we see there "Explain 9 p.m. situation report". Is that you telling Rob Ayre that you explained the 9 p.m. situation report with the Water Grid Manager and DERM?-- Quite possibly. They may have asked some questions about it, if they hadn't read it or not seen it. I'm not too sure how many people would have seen it. I cannot recall what questions they would have asked at that teleconference.

50

Do you have any recollection of that teleconference at all?-- I can remember dialling in at one stage to a conference. I just cannot remember apart from there was a couple - there was another one that we mentioned before, I honestly cannot remember which teleconference or what was discussed. There

were so many phone calls and things happening. It would have been - looking at that, in terms of bridges and communications again. 1

How often do you have teleconferences with the Water Grid Manager and DERM?-- Not all that regularly but during the event there might have been a couple. There was certainly a lot of phone calls happening and a lot of communication.

And do you have-----?-- I have trouble remembering back a year exactly when they occurred, to be honest. 10

And was it a regular procedure to have teleconferences or did you have the teleconferences when there was something to discuss?-- I guess when the Grid Manager requested one or wanted to have one. I remember also in other events having some with Brisbane City Council and others. So yes, I'm sure they wanted to discuss media - well, what it says there, media releases. 20

They wanted to discuss, you explained the 9 p.m. situation report. What part of the 9 p.m. situation report did you explain to them?-- I cannot remember. They may have asked any questions about the volumes or flows or bridges.

Or can you recall whether it was discussed that the objective for dam operations will be to minimise the impact of urban flooding and areas downstream?-- No. I don't recall the discussions but they would have been more - I know the real issue is the bridges, the impacts, main roads. That's - I cannot recall the details of the discussion but that would have been more operational, I'm sure, what was happening and what the flows meant. 30

If we can just go over the page of Exhibit 23. We see that there was another phone call to the Flood Operations Centre at - 25 minutes later at 10.45, where again you spoke to Rob Ayre. Do you accept you made this call?-- Yes.

And that you would be contacting Dan Spiller to confirm closure of the Mt Crosby Weir Bridge?-- Yes. 40

Is there any reason why you were contacting the Flood Operations Centre to tell them that you'd be contacting Dan Spiller to confirm the closure of the Mt Crosby Weir Bridge?-- I would assume from the other log I rang the Main Roads. There was a contact I believe I probably had with Main Roads about the closure of the bridge and I spoke to them, reading that I probably rang to tell them yes, that Main Roads were closing the bridge because that was all it was. 50

And if I can just go back to the 9.30 conference that you rang and told Rob Ayre about it at 10.20. Can you just tell me who participated in that teleconference?-- No, I can't. I assume it was Dan Spiller and possibly I rang him back to tell him the bridge was closed because that came up in the conference but DERM was mentioned there. I honestly cannot remember who would have been on the line. I assume it was organised by the

Grid Manager.

1

Can we now go to RD5252 and we can see - have you got that there, Mr Drury?-- Yes.

We can see it's an email from Dan Spiller to you at 11 o'clock. He's saying, "Rob, got your message. Thanks. Can you please ensure that ICC is advised that the bridge is closed?"-- Yes.

10

And that seems to follow on from the conversation that you had with Rob Ayre at the Flood Operations Centre?-- Yes.

Was there anything else that you recall leaving in that message?-- The email?

Yes. The message that you left with Dan Spiller, anything else?-- Where I let him know that the bridge was closed?

Yes, was there anything else in the message?-- I can't recall. I mean, I'm working on that log that I rang him and left a message.

20

Okay. Can we now go to RD5247. I'm just trying to keep this in chronological order. There's an email from Dan Spiller to others and we can see who they are and that includes you?-- Yes.

It's got, "The latest advised from the Flood Centre attached". We can see that's your TSR report, you can see that over at 249?-- Yes.

30

And if I can take you to - and this is - what Dan Spiller did was he always gave a little bit of further information or packaging up the information that you sent him. We can see that, can't we?-- I assume Dan did, yes.

Okay. So we've got the email from Dan Spiller that you received and we can go down four paragraphs, "To date, the primary objectives for this event has been managing to prevent inundation at the Mt Crosby Weir and Fernvale Bridges", do you see that, Mr Drury?-- Yes.

40

"With the forecast volumes, this primary objective has been changed to minimise the risk of urban inundation", do you see that?-- I do.

You got this email?-- If it was addressed to me, yes, I'm sure it came.

50

And it's part of an exhibit attached to your statement?-- Yes.

So there's nothing surprising there for you, Mr Drury?-- The words don't seem exactly what was in the situation report. I can't say that at the time I would have read it or gone through what Dan set out in his emails. I certainly don't remember reading it but the words don't seem to necessarily

reflect exactly the situation report.

1

Was that discussed at the meeting that you had at 9.30, "To date the primary objective has been to manage to prevent inundation of the Mt Crosby Weir and Fernvale Bridges but the strategy - the primary objective has been changed". Do you recall that being discussed at 9.30?-- Not at all. All I could think of the discussion would have been the situation report or the closure of the bridge. I can't comment on what words are there.

10

You can't comment at all?-- Well, what I'm saying is they don't seem to match exactly what the situation report says.

Mr Drury, you're getting information in, you're getting information out. You are the intersection of information. This is the information that you're getting back from Dan Spiller who you had a teleconference with, included in a teleconference with at 9.30 and he's referring to the primary objective has now been changed. Is that all new to you or is that something that's been discussed before?-- That - I never even remember reading that email and what Dan sent out I wouldn't guarantee I had read it. What we would have discussed would have been the situation report, the closure of the bridges and I can't say I even read that email. As I said, the data given was the situation reports, what was happening, that was the primary objective was to get that information through.

20

And if we can keep on going at 11.15 you contacted the Flood Operations Centre asking them to advise council if Mt Crosby goes under, that's the Mt Crosby Bridge?-- Yes.

30

If we can now go to Exhibit 23. We see at 12.55 a.m. on the 10th that John Ruffini called you, so five to one in the morning of the 10th, very early on the 10th, do you see that?-- Yes.

"JR called Rob Drury to discuss Ken's view on damaging flow". Do you recall getting a telephone call from JR, who would you say that to be?-- John Ruffini.

40

Okay. He called you to discuss Ken's view on damaging flow. Do you recall this conversation?-- I recall talking to John but I'm sure that was one of the ones that I never recall discussing fuse plugs or-----

Okay?-- With John it was purely again the issue with flows and basically the situation again, what was happening and I think John rang just to discuss that.

50

Do you have any idea who is being referred to as Ken, who is Ken?-- I assume that's Ken Morris of Brisbane City that the Flood Centre was discussing with-----

And the conversation, did you say, centred on Ken's view of damaging flow, what was that view?-- I think the Flood Centre and the Brisbane City had some discussions on the level of

flows, what was in the manual versus what Brisbane City Council and I think that was ongoing discussions after that to-----

1

Ongoing discussions. Can you tell me a bit-----?-- I can't fill all the details in on what the discussions were, in terms of what the flow Brisbane thought was versus what the Flood Centre was working on. I think Brisbane may have mentioned a differing view of flows versus what was in the manual and I think there was some further discussions with Brisbane.

10

Okay?-- I can't say what was done but I'm sure there were some other discussions.

Well, John Ruffini called you to discuss Ken's view on damaging flow, what was your view?-- I think he just rang to say that there was a difference. He may even have wondered if anything had been discussed previously but I certainly couldn't add anything to whether Brisbane thought there was a difference version of volume to what was in the manual and John, I think, just rang to discuss - to talk about that. Certainly I had no - that I can recall, discussions with Brisbane about those different views and I think before the event it was all thought that it was clear but I can't add a lot of detail to that discussion.

20

If we can now go to RD5255 following the analogy through. We see at 1.14 a.m. you got a situation report, which was the 1 o'clock situation report and again we can see that the objective - we can see that on RD5256. Can we then go to RD5257. Now, this is an email from you to Dan Spiller and others, Barry Dennien, and we can see all the people that is listed there. Where you say, "Since earlier discussions, further rain and local flooding have closed Mt Crosby and Fernvale Bridges". Where did you get this information from?-- I'm not sure whether that was from a technical report or whether it was from the Flood Centre. When was that? 1.28. I'd have to review that. I see it's from the flood situation report, "Gate openings will be increased earlier Monday. Expected to at least 2600" and that the bridges are closed. I may have thought that was just an update, if it was necessary just to - a couple of notes that the situation report was saying.

30

40

"And the releases will now be ramped up overnight"?-- Yes.

"Rather than tomorrow, since these bridges are now closed"?-- Yes. I may have got that from the report, "Increased from early Monday morning. Both bridges are closed".

50

Okay. So that's at 1.30 on Monday morning?-- Yes.

If we can now go to the flood event log, Exhibit 23. If we can go to the entry at 5.05 a.m. on the 10th, which you called and received a situation update from JR?-- Yes.

That's John Ruffini?-- I would assume so, yes.

Can you tell us about this conversation at all?-- As I said, the context was there was a lot of phone calls. There was another situation update the same as most of my - I cannot remember any individual phone call exactly, what was asked apart from what's the situation update.

1

So that's at 5.05 and you can't assist us with any further details of that conversation?-- No. I'm sorry.

Okay. Is it the case that you'd be sure that strategies wouldn't be discussed?-- I would assume what I asked again was-----

10

Like W2 or W3?-- -----a situation update. Basically the same as what I would have asked lots of other times, what's the current situation, what's the releases. That sort of exchange.

And it was never a focus on you to ask what strategy the dam was being operated in, in relation to the manual?-- Again going back, the real aim was to get the reps - I don't know what the protocol was for this one but that was the primary aim of the information. So the information went back to the councils basically, also provided to the Grid Manager on the situation, that was again - otherwise with the protocols and if that information wasn't there, the emails wouldn't have been going.

20

We then go to 5.30 a.m., which we'll see 20 minutes afterwards, RD5263. We get the Stiller report where he's informing those persons. Basically the information that you provided to him?-- Yes.

30

And it also attaches the - includes the email where he refers to, "To date the primary objective for this event has been managing to prevent inundation". Did you see that email as a second opportunity to see that email, Mr Drury, did you see that one?-- This is from Dan Spiller at 5.30?

That's right?-- It certainly came to me.

40

Yes. Okay. You see that it's also included in the 11.07 p.m. email where he refers to the primary objective being changed. Do you recall getting that email, Mr Drury, and reading that?-- It sure came. It went to quite a few people. I cannot tell you I read it.

Didn't read that one?-- It certainly came through. I cannot remember on that day reading one individual email.

50

But this type of language hasn't been seen. We've gone through lots of documents before, "The primary objective for this event - the primary objective is being changed". That didn't at any time seem that interesting?-- I can't say I read what Dan wrote or reviewed or thought what he was writing or commented on. I cannot guarantee I read that email. I saw Dan sent something back, which was what was sent to him, some of that. His reports - and I cannot guarantee I reviewed them



or took any detail of every word that he had in his reports. 1

And then we can see at 5.55 a.m. that if you go to RD5265, Dan sends you an email replying to, I think, to an email that's significantly earlier, "Thanks, Rob. We will need more details soon for media and stakeholders". Just an example of the communication between the two of you and then can we go to 269 at 614. You see there that it's an email from you to Dan and others that you'll see below the Flood Centre report as at 1 a.m. and that you'll send a technical report - or when you get an update off the FOC, do you see that?-- Yes. 10

Now, there are some emails that go from various persons but if we can look at RD5299 at 6.38 a.m., if you can get to there. There's an email from Paul Bird to you looking at the accuracy of the following statement?-- Yes.

And "Can you please advise on the accuracy of that statement". Where do you get the information to advise on the accuracy of that statement?-- I'm sorry, you mean my comments on the next page about supposed to call? 20

You'll see that on the next page at 300 you say, "Paul took out the bit about impact on the Brisbane River as that is more council area and would leave what we say to just our releases and impacts on bridges"?-- I guess that would have just been my comment that the Brisbane River impact was more council responsibility.

You send out a TSR at 7.55 - 7.53 which we'll see at 3.08 and, in fact, actually you sent the wrong TSR and at 8.06 at RD5312 you sent a TSR, can you see that?-- Yes. 30

Now, if I can take you to 8.13 a.m., RD5319. It's an email from Dan Spiller to you, "Rob, are you now operating under release strategy W2 or W3? Dan"?-- Yes.

So has there been conversations previously with Dan Spiller about what release strategy you're operating under?-- I don't recall any and I answered to that one W2 purely thinking that was what I was no doubt thinking at the time. 40

You know what you've answered, don't you?-- Sorry?

You know what you answered, W2?-- Yes.

And we can see that at RD5321. So at 8.23, 10 minutes after you got, "Rob, are you now operating under release strategy W2 or W3?", your answer is "W2". Where did you get that from, Mr Drury, where did you get that information from?-- That would have been what I thought at the time. 50

So you made that up?-- I didn't make it up. I assume at the time I just thought that was what we were still on and to be honest it might have been from an earlier report or it may have been what I thought at the time.

What earlier report is that, Mr Drury?-- Well, looking back

there was one that had W2 in it but all I can think-----

1

That was sometime ago, Mr Drury. Where did you get this information W2 from?-- I would have just answered at the time I thought it was W2.

You thought it was W2. You sent an email back to Dan Spiller. You saw who his emails, you saw who he provides that information to, we can see that from the Spiller reports, can't we? They go to the Minister, they go to other people. It is important that that information is right, Mr Drury, isn't it?-- At the time, as I keep saying, W scales were not the focus. If I answered W2, that would have been what my mind might have thought at the time but again the real important-----

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What you might at the time-----

MR O'DONNELL: Well, he hasn't finished.

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MS WILSON: I'll let him finish.

MR O'DONNELL: He should be allowed to answer his question.

COMMISSIONER: All right. All right.

MS WILSON: I'll let him finish?-- The real important information was all in the situation reports, the flows, the volumes and that was what really was the issue not - and that's all I can say is that at the time I may have thought it was W2, but again that was not a focus of all the reports and all the volumes and all the impacts that were being reported on.

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MS WILSON: He's not asking you about volumes, he's not asking you about flows, he's asking you a simple question, "Are you now operating under release strategy W2 or W3?" Ten minutes later you reply "W2"?-- That's what I must have thought at the time it was W2 but again the priority really was the flows would have been in my mind and that was the releases of volumes-----

40

Did you check that?

MR O'DONNELL: He hasn't finished.

MS WILSON: Sorry. I apologise?-- I don't recall checking it. My main issue was the situation reports, passing them on under the protocols to make sure there was that information passed on.

50

According to the protocols that you wanted the information passed on?-- That was the whole reason, the technical situation reports and the reasons why all that information was being put through was for the protocols. If the protocols that came out of the event before Christmas weren't there, then it wouldn't have been that process or situation and the priority really was the flows and releases and the volumes and

that was the information that was required.

1

This is in response to a question, "Are you now operating under release strategy W2, W3?" Let's go break this down. You know what W2 he's referring to is, don't you?-- I knew he was referring to the manual.

The operational manual for Wivenhoe Dam, W2. You know what W3 is, don't you?-- I understood at the time they were very similar, same approach, same objectives and that was about all. Again the W really was not at the forefront of my mind. It was not the priority of releases, nor were necessarily what - and I had probably no conception of it was used elsewhere. Anyone could interpret that or utilise it, it was in the manual. It was not at the time a priority or a focus of all the reports, all the situational reports, it was the flows, the volumes and I would have answered just what I was thinking at the time.

10

What you were thinking at the time?-- I can only assume. I mean, I don't remember the email but certainly I had sent it back and I - whatever I thought at the time. Again those strategies were not at the forefront of all the situation reports and what all the information needed for anyone else and even whatever else came out. It was still the flows and the volumes that were the priority.

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There's a distinction though, isn't there, between W2 and W3?-- There is. I certainly haven't looked at it since but they have the same - as I understand, the same objectives.

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But there's a distinction. Were you aware of the distinction at the time when you just answered about W2?-- I can't say I was fully aware of exactly the distinction apart from there was really only three objectives at the time.

Well, he's giving you some options to look at, W2 or W3. Did you have a look at the manual to see what the distinctions were between W2 and W3?-- I don't think I did. I would have just said, as I said, what I thought at the time.

10

Do you have any actual recollection of responding to W2 or is this just something that you thought, "That's what would have happened"?-- I don't recall sending an e-mail but at the time if Dan just sent it through I would have answered what I thought at the time and again, at the time those W categories were not something that was operationally the focus of all those reports and all the issues and all the flows and all those phone calls and e-mails were the volumes.

20

So you don't think that there was any real significance in W2 or W3, it's more about flow rates and release rates; is that of the case?-- No, I am not saying that, I am just saying the focus through the event was the releases and the impacts and the volumes regardless of what W in. Certainly they are important but they are - the releases and flows, the volumes were the main issues being operationally managed.

30

Did you consider responding back, "Mate, don't worry about the W's, just look at the release rates and the flow rates because that's important"?-- No, as I said, I would have just sent back W2, if that's what I thought on the spur of the moment at the time. Again, there was so much information, all the situation reports, that was the focus, that was the aim.

So you just made it up, W2?-- No, as I said-----

40

What was it based on?-- At the time it must have been what I was thinking may have been that - the strategy at the time. I wasn't-----

May have been?-- I wasn't focussing on that. We were focussing on the situation reports, the flows and releases. These W strategies were not, to be honest, the focus.

So it's just W2 because you thought that was there at that time?-- I can only assume that was what I thought at the time and I sent the e-mail back to Dan.

50

COMMISSIONER: How did you know it wasn't W3?-- I can't say. I don't recall checking. If I said W2, it's probably what I thought at the time.

Well, why didn't you think W3?-- I can only assume I hadn't seen anything in writing or confirming the Situation Reports were specifying those. It was all releases and volumes. So I may have just assumed it was still W2. I hadn't gone through the Situation Reports or analysed the reports or picked up anything. I can only assume at the time that's what I thought.

1

What did you think Spiller wanted the information for?-- At the time I can't remember. He may have just asked. There was a lot of information going about. All the other reports were all - the Situation Reports, that one may have come out of the blue and I just answered. I can't recall thinking why he would want to know. Again it certainly wasn't at the forefront of any of the Situation Reports or what we had been doing up until then.

10

He's basically a communications conduit, isn't he?-- Basically. I'm not too sure what Dan's role is exactly. It was always providing him with Situation Reports. He certainly sent things on to other people. I don't know whether that was clarified prior during the protocols. It was always set up to go to the grid manager to track that the Situation Reports had gone to councils and there was a process in place and if we went to an emergency situation it would go more to the LDCC's but, yeah, I'm not a hundred per cent sure what Dan's role was in this. But prior to the event certainly we would send them to Dan. As things progresses, more and more communication happened.

20

He has no function, though, which would make him need to know W2 or W3 for his personal operations?-- At the time I wouldn't have thought that would have been a priority for two many. It was really again knowing what the releases were, where they were going, how they were changing because the priority for impacts on councils and bridges and people again what was what everybody I think would have needed.

30

Alright, but you must presumably have inferred that he wanted to tell somebody what the strategy was?-- I should have and I may have at the time. As I said, I'd sent him back an e-mail thinking it was W2. I certainly don't remember or see anything to say, "What did you want it for Dan," or, "Were you going to use it," or may not even have been concerned if it was in that again, it wasn't - the real knowledge needed was flows and volumes, what was happening.

40

I suppose it stands to reason from all you have been saying you didn't think to check it with anybody who might-----?-- I don't recall checking it. I don't recall that it even raised - that it needed to be checked I guess. It was not - the W strategies were in the manual but not so much operational. What was happening in all the different e-mails and Situation Reports and the volumes were as I said, they were the priority, in front of mind on everything.

50

Thanks.

MS WILSON: Do you recall participating in a teleconference seven minutes after you sent this e-mail W2 to Dan Spiller? You won't find it in your material Mr Drury?-- Oh, sorry.

1

If you could have a look at this. This is notes taken from a teleconference. It appears at 8.30, 10th of January, dam releases and flooding. Madam Commissioner, it can be found in Mr Spiller's third statement, which is yet to be tendered, at page 207.

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COMMISSIONER: Do you want to tender that now?

MS WILSON: I will tender that, yes.

ADMITTED AND MARKED "EXHIBIT 1,080"

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MS WILSON: If we can go back just to see the e-mail that that's attached to. You will see there it's from Lee Hutchinson and it's sent to Dan Spiller, Barry Dennien and others and you are not included in that e-mail attachment, email. Do you see that?-- Yes, yes.

If we can turn the page we can see that there is a teleconference at 8.30 on the 10th of January, dam releases and flooding. It sets out who was in attendance. Do you recall participating in a teleconference at 8.30 on the 10th of January?-- I don't recall the teleconference but again it's possible. There were quite a few discussions there with Dan and Paul and Peter. I can certainly remember discussing impacts on - there was some issuers with the creek plans and other things, so-----

30

So do we take it you do accept that you did participate in the teleconference at 8.30?-- I cannot remember it but there was a few things in here, certainly with the treatment plants and a few other things.

40

Do you accept that you did participate in a teleconference at 8.30?-- I cannot remember it. I have to be honest, I do not remember anything at 8.30, being in the teleconference.

We can see there is in attendance Barry Dennien. Do you know who he is?-- Yes, yes.

Dan Spiller?-- Yes.

50

Scott Denham, Michael Lyons, Lee Hutchinson, do you know all those people?-- Yes.

And from Seqwater we see Peter Burrows, Rob Drury, Paul Bird, Dan Stevenson?-- Yes.

Is it the case that you were not denying that you weren't there-----?-- Yes.

1

-----but at this point in time you have no recollection?-- That's right.

Maybe if we can go through it it might jog your memory about some thing's that were discussed. We can see there at 3.5 and 4 - do you see that dot point?-- Yes.

10

Is that how 3,500 and 4,000 CUMECS is sometimes referred?-- Not that I can remember but maybe that's what they meant, I don't know.

Do you see there the objective is to minimise urban impacts?-- Yes.

And then Barry: At 3,005 CUMECS, comfortable through Moggill, point between W2 and W3 is critical. Need to engage higher - we need to engage BCC at highest level when decision is made. Do you recall any discussion about W2 and W3?-- No, I don't.

20

Not at all?-- No, I cannot remember all the details. If that was a teleconference, I cannot remember all the details that were - I certainly didn't take any notes if I attended it.

The scenarios that are then discussed is W2, BCC second scenario, river at 3,500 CUMECS with local rainfall causing localised flash flooding. None of this jogs your memory at all?-- No. No. I honestly cannot remember all the discussions that were there or whether I was part of it or what time I came in.

30

Or if you were-----?-- I am not saying it didn't happen-----

Or if you were a part of it?-- Yes. I honestly cannot remember.

Is it the case that there's no point really me asking you any questions about this because you can't recall it?-- I certainly can't recall the details or whether Barry mentioned those things, if I was there. I couldn't say whether he did or didn't or whether that's exactly the way the discussion went or if the discussions were there. It certainly doesn't ring a bell with the treatment plant in Kenilworth and Mt Crosby.

40

Okay, well-----?-- Certainly, no, I cannot recall that. I mean, there were work going on with the grid manager. They had their own emergency centres set up which I wasn't part of. We were a bit separate in the dams area but I can't remember that or those comments or whether they were exactly what was said or whether they were mentioned.

50

Okay. If we can go to RD5323 of the report. We can see there that Paul Bird e-mails you at 9.29, to you. It's about COM's messages. That's communication messages. Is that the case?-- Yes.

In terms of the communication messages, you think "the key questions we will need to answer in terms of Wivenhoe are as follows". Do you recall the reason why you were getting such things like that, such e-mails like that?-- Purely to answer some of the COM's queries from Paul who was in the COM's team. Certainly the Flood Operation Centre was extremely busy, so I'm thinking most of the time Paul would have asked me, still asks me for comments now. It was really trying to get some information out with trying - without going through the Flood Centre.

10

We can see your response at RD5325?-- Yes.

Is that just referring back to some communication messages that have no relevance to anything else?-- I would think so with the seven days, inflows, downstream flows.

Then at 327, which is shortly after, you get the Spiller report?-- Yes.

20

Do you recall getting this e-mail?-- I don't recall but my name's on the list, so I would have received it.

Is it the case that you just didn't read Spiller's e-mails?-- I wouldn't have read them all or necessarily gone through every word to see if they were a hundred per cent accurate. There were so many e-mails and things happening but Dan had the Situation Reports - that Technical Situation Report. I may have just thought whatever was cut and pasted out of that, same as that - maybe a media release or something else. So I don't recall reading them or reviewing them to make sure Dan had - what was right to be honest.

30

Is it the case that you have no recollection of the third dot point as specified in the approved operational procedures: The primary objective is now to minimising the risk of urban inundation. Release strategy W2?-- No.

No?-- I cannot say I read Dan's e-mail or reviewed what he had written in it or checked whether he had - what was in it was right or exactly the same as the Situation Report. I wouldn't have thought it necessarily was any different. Certainly some of the numbers there, inflows, probably right, 140 per cent. I may not even have gone through all the details but again I wasn't reviewing what Dan was sending out or what communications or what other agencies were sending.

40

At 9.55 can we go to an e-mail from the duty engineer to you, RD5333. You are getting some notes from the Flood Operation Centre?-- Yes.

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Is that in response to anything?-- I don't recall whether I asked or whether there was anything there, whether they were just sending around. I don't know whether there was a phone call to the Flood Centre. I certainly don't recall ringing them but I may have rung for another situation update. I haven't looked at the log to see if I did. I certainly don't



remember whether I rang them or whether they just sent it down as there was some notes, the title of it was.

1

If we can go over to the next page at 334, it's an e-mail from you to Peter Burrows, Monday, the 10th 2011, 9.56. It just seems to be the notes that you got from the duty engineer?-- That's true, yes. It may have been that Paul asked for comments and I asked them for a comment and just passed it on. I don't recall doing that one.

10

You concede, though, that you've cut and paste the three dot points from the notes that the duty engineer got to you?-- Yes.

You can see that?-- Yes.

It appears that you have put a subject in, which is the answers to the questions from the teleconference. Is that the teleconference at 8.30 on the 10th of January?-- I don't know whether those notes were raised in that teleconference.

20

It's answers to questions from the teleconference?-- They could be. I don't know whether - as I said, I don't remember being at it but someone could have asked me for some comments on it. I can't see any e-mails of it but I assume there was were some dot points someone asked in relation to current operational strategy, rainfall and notice. Again, I am not sure where that came from, if someone asked me for answers to the teleconference.

30

You said that Peter could forward it to the WGM and that's the water grid manager, is that the case?-- Yes. It may even have been Peter or someone asking for some dot points I needed to send off, so-----

You are not sure why you got the notes of 33 from the duty engineer? I just want to make sure I understand your evidence?-- All I'm saying-----

You didn't request them?-- -----is I don't remember asking him for those dot points.

40

You've got no recollection of the context about why you asked for them?-- No, I don't. As I said, there was a lot of e-mails and phone calls. I cannot remember one of those requests of information because there was a lot.

That is at 9.56 a.m. If we can go to 337 at 9.57. It's an e-mail from Dan Spiller to you and Barry Dennien to you and Peter Burrows and Barry Dennien is included in it, "Rob and Peter, I am about to send a TSR to Colin Jensen for BCC input." Do you know what that's referring to, Mr Drury?-- I assume it was a Technical Situation Report.

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"Before doing so I have amended it based on my understanding of our conversation." What conversation was that, Mr Drury?-- I do not know.

No memory?-- I can't even see the amendments or what might have been changed.

1

He says, "Can you please confirm the changes reflect your strategy," and it appears that the W36 is attached. Have you got any idea about that?-- No, but I do see a bit further on I must have sent something back saying there was a slight change to the release rates.

Okay, no memory?-- I think it was - no, all I can assume is it was to check the release rates, that they were accurate.

10

Then if we can go to 342 we can see that you have sent an e-mail to Dan Spiller and Barry Dennien and it's that same e-mail about the answers to the questions from the teleconference?-- Yes.

And, "Peter Burrows asked me to forward these on" what's all that about, Mr Drury?-- Well, I think the previous e-mail, I had sent them through to Peter and he must have asked me to send them on to Dan Spiller.

20

No recollection of that?-- No. They were sent. Some comments. As I said, there was a lot of comments and a lot of e-mails sent 12 months ago. That was something Peter asked me to forward on.

Perhaps now we can now then jump to the 14th of January. Madam Commissioner, could the witness see Exhibit 25? It's an e-mail from Rob Ayre sent to the duty engineer account. Do you see that?-- Yes.

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It's also cc'd to you?-- Probably not my - it's not - "rob.drury" isn't my e-mail.

Isn't it?-- It's "r.drury", so that one wouldn't have-----

So you wouldn't have got that one?-- I don't think so, no.

That just wouldn't have hit your desk?-- No.

40

Okay. If we can go to the next day, the 15th of January. If we can go to Exhibit 23. It will come up on your screen, Mr Drury?-- Okay, thank you.

So this is the 15th of January. It's at 11.30 a.m. and you are ringing to request a summary of the operations manual for Wivenhoe?-- Yes.

And Terry to provide after checking with duty engineers. So do you accept that you made a phone call at 11.30 a.m to the Flood Operations Centre?-- Yes.

50

You were ringing to request a summary of the operations manual for Wivenhoe. Why was that done, Mr Drury?-- I am just trying to remember if that was on the 15th. Was it?

Yes, yes?-- I can't recall, unless it was for the phone hookup at 2 o'clock. So I think I'd probably been advised that Peter Burrows - I am not sure when I found out but there was a media conference at two and we needed to get some information together. So I can only thing I rang to start to get a bit of a summary together for that conference.

When you are asking for-----?-- Sorry.

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Sorry, I will let you finish?-- No, my apology.

Are you finished, Mr Drury?-- Yes.

When you are requesting a summary of the operations manual, were you asking for, "Well, can you just summarise what's in the operations manual," or were you asking for the strategies that were implemented pursuant to the operations manual?-- No, that would have been purely trying to condense the operations manual down to a page for discussion.

20

Sorry, I didn't quite get that, Mr Drury?-- To condense the operations manual. It was gazetted down to a short explanation, not fifty pages. It was more, as I recall, to just get a quick summary of the manual for discussion.

With who?-- I assume it was for the telephone hookup later that day just to - rather than have you go through the whole manual, just something very quick and easy.

30

I apologise because you may have said this before but I may have missed it, but who was that teleconference with?-- That was the 2 o'clock one, phone hookup with Peter Burrows, I think there was some DERM people. It might have been John Bradley. I can't remember. There was quite a few people on the line. I did it from a mobile phone and that was I think the 2 o'clock hookup.

You obviously spoke to Terry Malone, is that the case?-- The first one, yeah, I think that was just to get a - before that phone hookup, I can only assume just to get a quick few words together rather than the whole manual, just the outline of what the aim of the manual was.

40

Did Terry Malone provide you with anything, can you recall?-- I can't recall whether I had it then. I certainly wasn't at a computer at that stage. I think he may have sent it through later. It wasn't till later that afternoon that we started to put together a briefing note.

50

The question is did you get a summary of the manual?-- I believe so. I think I can recall seeing - I haven't got all the e-mails here. I have a couple of the pages, summary. Just a condensed version of the manual.

That was for the 2 p.m. conference?-- Yes.

Then we can see that at 12.12 that you rang to advise of the phone hookup with the Minister?-- Yes.

1

If I can take you to a document that's found at RD5884. I think that's volume 3?-- Yes. Yes.

We see that there is an e-mail at 1.02 p.m. from the duty engineer to the engineers and you are also cc'd?-- Yes.

Then we can all read what it says: Ask for a two page summary. Any comments prior to Rob Drury passing it on, JT bring out the red pen. Who are you going to pass it on to?-- Peter Burrows. I can only assume that was through - going back to Peter Burrows wanted a briefing note as I recall going - sorry, some of this is reconstructed in my memory from exactly the e-mails but Peter Burrows was asking for a briefing note and that summary was going to - at some stage to Peter Burrows.

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Then we've got the two-page summary that is attached to this. Did you send this on to - do you recall - to Pete Burrows?-- There was some discussions that afternoon. I don't think I would have sent it on that afternoon. Late that afternoon I went into the flood centre and started helping put together those pages with information for Peter Burrows.

This is the email that you were cc'ed in at 1.02 on the 15th which you said that was required for the 2 o'clock meeting. Was this the document that you sent on to Peter Burrows? Or did you send a document on to Peter Burrows?-- I can't remember whether I sent that on before the 2 o'clock meeting. It certainly was for the 2 o'clock meeting, but I'm just trying to remember whether that was - I sent it to Peter before or after. I honestly don't know when that-----

10

Did you read this document?-- This is the two-page summary?

Yes. Because this is the document that you're all going to be working off at the 2 o'clock meeting, isn't it?-- It was for the 2 o'clock meeting. It was just a summary background to it, yes.

20

So this is the - if we can go to the first page, and it gives the background of the manual, sets out the objectives, and those objectives are consistent with the manual, aren't they - of the strategies in the manual?-- I would-----

RD-5, 885?-- There it is, thank you. Again that was at 1.02. Whether that went around before the meeting, I can't say.

30

Did you see this document, Mr Drury?-- I would have seen it at some stage. Whether it was before the meeting such that - I did the teleconference on a mobile phone, so I wasn't at a computer looking at documents at that stage. So I can't say whether I was looking at it at that stage, but certainly it was emailed around. So if it existed, I would have seen it somewhere.

40

Have you got a Smartphone or Blackberry that you can read emails on?-- I could have, yes.

So that's what they were going to tell you, if it's okay, and then you could forward on that from your device to Peter Burrows?-- Yes.

Did that happen?-- I can't see any emails that I had sent it on prior to that meeting.

50

Mr Drury, let's go back to your memory. Did it happen?-- I can't remember doing it. If I did, it would have been through a Blackberry because I want at a computer.

Is your evidence that you have seen this document, or not?-- I will have seen it. It came to my email address, so I'm sure I would have seen it at some stage, yes.

Can you tell me when you did see it at some stage - when that some stage was?-- It might have been later that afternoon when I went into the flood centre where we were putting together the briefing note. 1

Let's go to page 2 of that document. It sets out W1, W2, W3, and it sets out when these stages were exceeded. So you do accept - are you accepting with me that you have seen this document, or not?-- I would have seen it. I would have had the email, and at some stage it would have been when I was in the flood centre, I might have seen that document. I was certainly emailed it so----- 10

Is this consistent with your understanding of when these strategies were exceeded during the flood event?-- I can't say. I would have to refer to the flood report and what happened. I can't say what my memory of the flood event was or whether that was correct at the time.

Did you sit down with any of the flood engineers and discuss this document?-- No. What we did later that afternoon is went to the flood centre. We put together some words at the front of a - for a briefing note. A table was attached to the back from the flood centre engineers, and then I believe that was how the briefing note got put together. 20

At the 2 o'clock meeting was this document brought out or a document of this nature brought out with or without JT's red pen?-- I don't believe so, because it was all by teleconference. So I certainly don't know whether that document was discussed, but the general event was on the teleconference, and the need for a briefing note was discussed. I can't say that document itself was discussed. But certainly the people on the line, one of the outcomes was a briefing note pulled together. 30

COMMISSIONER: Can I ask you this: In the log it talks about you ringing to say there is to be a meeting - a conference with the Minister, and then I think Mr Burrow ringing to say there's to be a conference with the Minister. But then when we get to the 2 o'clock conference, there's no mention of a Minister. So was it with the Minister or about the Minister?-- I'm not sure. I think - I'm trying to remember who was there. Peter Burrows, I thought; John Bradley. I can't remember exactly who was on the line. But I think the original request was either with the Minister or for, but the actual teleconference was organised, I assumed, through DERM. Who was invited or who was there, I don't really know----- 40

Don't know whether the Minister was or wasn't?-- I don't think the Minister was on the line that I recall listening in, but the invitation was with the Minister. But from my memory, I cannot remember - I think I might have remembered that, but I don't remember. Certainly there was half a dozen people all on the same teleconference line at the same time. 50

MS WILSON: While we're at that log, can we go to Exhibit 23. So you've received this document at 1.02 p.m., it appears, and

if we go to 1.15. "Rob Drury rang with some questions in the Wivenhoe flood manual summary." That is referring to this document, is it, that you received at 1.02 p.m.-- Yeah, quite possibly. As I said, if I was on a mobile phone, which I was, in a car, I may have rung up and asked some questions about it.

1

So can we take it from that entry that at 1.15 you read this document?-- I can't remember reading it, but I may have looked at it, as I said, on a Blackberry. I may have been able to read some of it, but-----

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What were the questions that you had?-- I cannot remember what the questions. Could have been as simple as, "Is it all there?" or, "Is there more to it?" I cannot remember the questions. I might have just asked for whether he had finished it or whether there was any changes. Look, I cannot remember.

Just speculation?-- It was just a telephone conference - teleconference, that was some notes, and it was all to do with developing a briefing note.

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And we can see at 2 p.m. that there's the phone hookup with the persons that are there?-- Yes.

It's to discuss a report for the Minister by the close of business Sunday?-- That's right.

So were the jobs allocated at that point in time about who will do what in relation to writing the ministerial brief?-- I don't recall allocations, but certainly it was left to the flood centre and myself to try to put it together. As I said, I arrived in the flood centre to help write the report, but I can't say I can remember anyone being allocated. It was more a briefing had to be pulled together for the next day.

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We can see that you did arrive at the Flood Operations Centre at 5 p.m., and it says in Exhibit 23 that you arrived to help write the report for the Minister briefing?-- Yes.

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How many reports have you written for a Minister briefing?-- There would have been a lot of documents. There would have been briefing notes and information. I've assisted with quite a lot over the time. Certainly a lot of briefing notes, there's been reports, there's been media releases and a lot of - continually, to be honest.

So you do write a lot of ministerial briefings?-- Not a lot of direct ministerial, but I certainly put information in or assisted or put some notes together.

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I imagine you would take great care for everything to be accurate that's going to the Minister?-- Any briefing note, you try. But again, in a very short timeframe - it had to be done by Sunday - certainly whatever information we pulled together was what was - at the time.

Can you tell me what you did do when you arrived at 5 p.m. to help write the report for the ministerial briefing?--  
 Basically, again going through the documents to refresh my memory was pull together the front end of that briefing note. There was some comments on what the manual really was about and what it did. I think I probably left around about 7. I think there was some tables then added to it at the end, and then it went off to Peter Burrows.

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Who wrote the part about when the strategies were exceeded?--  
 I think that was added - from what I can see of the thing, Tibaldi added those later that night. I think he probably sent it through about 9 o'clock.

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So it was John Tibaldi-----?-- The best I can see of the document. Again we were-----

So it was-----?-- Sorry, go on. It's in the flood centre on a Saturday night, and the event was still happening. The flood centre was still operating 24 hours a day, and we really only went there purely because it was operating and it was a way to get the document out in a hurry.

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So in relation to writing about when the strategies were exceeded, like we saw in the document from Terry Malone, was that John Tibaldi who wrote that?-- I think so from the things. He added to it later on that night.

So what was your role?-- I think that was one of his emails. Mine was more that front end, just putting it together. There's some words about the manual. Just to pull the words together that made a bit of a summary of the manual.

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So are you saying that you only wrote about the summary of the manual what W1 is, what W2 is, what W3, is what W4 is?-- Yeah, and I can't say I wrote it all, but I there was just pulling it together and probably formatting it. There was a few emails to Peter Burrows, and I can't remember when the last one was. Probably about 7 o'clock.

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Could you - Madam Commissioner, could the witness see Exhibit 1051. "John, Excel spreadsheet of strategies and directives for Wivenhoe." This is sent at 6.57 p.m., "Rob". Did you send this email?-- I don't recall that email whatsoever or why I would have sent it.

Did you or did you not send it?-- No, I don't recall sending it at all.

I just want-----?-- I just do not.

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I just want to be clear: you can't recall sending it, or you didn't send it?-- I can't recall sending it or why I would send it. I certainly was in the flood centre using one of the flood centre computers, but certainly don't remember why I would send that or even know why I would send it, and certainly don't recall. Unless someone asked me to send something. But I do not recall ever sending that.



Are you saying you did send it, but you can't recall?-- No, I'm saying I have no recollection why - me sending that, and I certainly don't remember ever sending it.

So you're saying it's more likely than not that you didn't send it?-- Yes.

Can we open this document up then. Have you seen this document before?-- I saw it in the documents.

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You saw it in the documents; what do you mean by that?-- When I saw it recently just looking through all the documents there. I have even it. I don't remember it from that night.

You don't recall seeing it that night at all?-- No, I don't. I cannot remember seeing it that night. I can remember all the other bits and pieces, but I just can't recall seeing that.

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So is it the case that - well, tell me when you can recall seeing this document?-- I recall when I looked through all the documents the other day, and there's another email that was - that had that attached sent to me, but that was after the fact. Like I said, the main aim of the ministerial briefing was that front end and the words, and that's what I was doing until I left. I certainly don't know whose document it is or-----

You don't know who made this document?-- No. I think it goes for pages of spreadsheet. Certainly I didn't create it, and it looks like a summary.

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COMMISSIONER: Any clue who might have created it?-- No, I honestly cannot say who, or the accuracy, or who created that document. I mean, there's quite a lot of data there. As I said, I was there for two hours pulling together the words for the ministerial briefing.

MS WILSON: Can we have a look then at RD-5, 1677. I think this is in volume 5 of your statement. This is the material that you provided to the Commission. Have you got that document, Mr Drury?-- Yes.

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Have you seen this document before?-- I think that's the same document, I'm assuming.

Yes?-- I think that was emailed at one stage with a heading "If you need information". Again that was when I've been going through these documents.

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So you only saw this document when you were preparing your statement?-- I would have received it. I can't say I ever opened it or looked at it. I think it was - and there's also pages and pages of dam levels and details. So no, I can't say I ever opened it, or really used it, or looked at it, or considered it.

It's fair to say the only time that you saw this when preparing your statement is this document; is that the case?-- I cannot recall seeing it that night. As I said, I think I left just after that email about 7 o'clock, or I sent a note to Peter saying, "I'm departing soon." So I certainly didn't use that document, or remember looking at it, or using it.

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So your answer is that you didn't see it that night and you didn't see it for any time afterwards?-- I can't recall seeing it. When I looked at it the other day, it was - certainly-----

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Was it-----?-- -----looked new to me. I just could not recall seeing it. I certainly didn't create it or use it for anything.

Can we go to 7.12 p.m., RD-5, 899. This is an email sent at 7.12 p.m. to Peter Burrows and you're cc'ed in it?-- Yes.

"I'm at the flood centre with John, Terry and Rob Ayre, but finishing up soon." It discusses that you'd put together a fair bit of the briefing note, that "John, Terry and I will meet you tomorrow morning at 8.30 to run through if we are covering everything." Signed "Rob". Did you send this email?-- Yes, that would be me. And I think later that night John sent through a further document. I'm struggling to remember whether we met with Peter Burrows the next morning, but certainly there's other emails with that briefing note going around and ending up going out.

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When you say that you put together a fair bit of the briefing note, had you seen what had been put together?-- That front end, there was one document there that I - the front end words. I think the first I saw of the others was when it was sent through later that night with some - further bits and pieces on the end. 1

Then if we can go to 9.10 p.m. and, Madam Commissioner, can the witness see Exhibit 1053?-- Yes. That was the later one that John sent through with further details on it. 10

Can we open up this document then. So you remember getting this document?-- I'm not sure I remember getting it at 9 o'clock that night. It certainly went through to me and it went further on, that was the briefing note, where it went.

Okay. If we can just scroll down. You recall reading this document then, the document that John Tibaldi sent you through?-- I would have looked at it at some stage, yes. 20

When you say "at some stage", was it before the meeting that you had the next day?-- I doubt it, to be honest. I cannot recall reading it that night or 10 o'clock that night.

Just if you just pause there-----?-- I had gone home at that stage.

Is this what you wrote, "Strategy 1, W1, strategy W2, strategy W3"?-- Some of that would have been cut and pasted from what Terry sent. Primarily the beginning bit, as I said, some of it would have come from Terry, more the words from the manual. 30

Can you identify to me what you did write in this document?-- No. I couldn't remember what each bit and piece I wrote.

Okay. Keep on scrolling down?-- At least that early part there were some words but I can't guarantee which part or where it stopped.

Keep on scrolling down. If you could just stop there, please, if you could just go back. Page 8, I'm informed. That information is wrong. If you could go up a bit, I think. Yes. Keep on going, please, and can we go - keep on going up. Okay. If you could stop there. Do you see at 15.30 you recall reading this that - we can all see what's written there in that event at 9 of January 2011?-- Yes. 40

That it had progressed to W2. This document that we've got here, did you ever sit down with the flood engineers and discuss this document with them?-- No, but I mean that bit was what was added from the Flood Centre. I certainly would never have - I don't recall ever thinking it through or asking or questioning or preparing or considering. It was - what the data came out from the briefing note. 50

And there was - in the email that we saw at 7.12 p.m., there was a meeting that was going to occur at 8.30 the next day with John, Terry and yourself with Peter Borrows. Do you

recall that meeting?-- Again I don't remember whether we caught up with Peter or what was discussed. Again I don't recall ever discussing any of the detailed data or information. That was all straight out of the Flood Centre. I would have assumed that was the information.

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So is it the case that in your discussions with the flood engineers in preparing this report, you can't recall any discussions with them about when the strategies were exceeded?-- The discussions would only have been about can we get in addition to their data - their information or some information to go with the briefing note that they added or John added or someone added to do the briefing note, to try and get it down by tomorrow. Certainly not discussing strategies or what was in it but just what information they added on to the end. It was not a discussion, more of putting together whatever they could.

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So is it the case that in your discussions with the flood engineers at any time in assisting to prepare a report for the Minister, there was no discussions that you could remember or recall about when strategies had been triggered, the times and dates?-- No. It was all about - we were only there for a couple of hours to put together the words. They tacked some numbers and tables on the end but certainly no sitting down discussion through the event. It was still during the event. It was still operating 24 hours a day. It was putting together a note, that was all it was. It was certainly not a discussion or consideration. It was putting together words and the table was added at the back.

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And do you know who wrote that part about where we can see there, it's 3.30 on the 9th of January 2011 and the operations strategy had progressed to W2?-- No, I don't know who wrote it. It was attached on John's email later that night. That was probably the only thing I can say, the first time I saw it. It was-----

Did you read the document that was provided to the Minister?-- I would have at some stage glanced through it. I can't say I would have gone through the details of that because that was purely technical from the Flood Centre that I wouldn't have queried or questioned, in terms of accuracy or data - or checked to make sure it was right.

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But you were aware of the term W2 because you'd used it in your communications with Dan Spiller. Did you check to see, I wonder if we were in W2?-- No. As I said, I - whatever came out of the Flood Centre, in terms of information and the table, I certainly wouldn't have queried or commented or thought of going back to check. It was, that's the information that was provided.

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COMMISSIONER: Can I just ask you this, Mr Drury, as you can imagine I'll be keen to get to the source of that strategy log, that summary, strategy summary document and you've been nominated as a candidate. So what are the reasons that you wouldn't have been the person who did it?-- I never worked in

the Flood Centre at any stage through the event and I only went in for two hours at that time to put together the words for the thing. There's just no way to write - that whole spreadsheet would have taken days or weeks to write. That was the first - apart from a few hours one other time, really I had nothing to do with the Flood Centre or where all the information was, where all the data was, all the files. There was just no - I just could not have put that together or had a need to. It was really - the Flood Centre had all the information.

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Could you get your hands on the flood event log and cut and paste from it perhaps?-- If I had all the information, all the directives and had a day or two to spend, I suppose anybody could, but I certainly never created that event log. I'm not in the Flood Centre. I'm not working there. Certainly had nothing to do with creating a file like that or would even know where to find all the data. As I said, I don't recall sending that. I certainly don't think I did. It's certainly not the email address I was using at the Flood Centre that night. I think I was on a different email and I certainly had nothing to do with creating a file that would take quite a long time to try to pull everything together so - and there was just no reason for me to do it. All the ministerial was for some words pulled together and to get a table was added to the end. So certainly - no. There's just no reason or I doubt if I would be capable to find where all the information was on the SunWater Systems at the time to put it all together, or the time it would take to create it.

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COMMISSIONER: Thank you.

MS WILSON: Madam Commissioner, I'm about to go on to another subject matter. Would that be a convenient time?

COMMISSIONER: Yes. 9 o'clock tomorrow.

THE COMMISSION ADJOURNED AT 4.58 P.M. TILL 9.00 A.M. THE FOLLOWING DAY

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